

# The Battle for Middle Earth™ by EA Games

## Basic Modification Guide

### by Meneldil

#### Overview

The original **THE BATTLE FOR MIDDLE EARTH™** is an enjoyable game; however, there are times where you might desire additional capabilities or features. Fortunately, you can make modifications to the game to better suit your specific tastes, thereby bringing new life to the game. The purpose of this document is to explain some basic methods for modifying TBFME 1. Essentially, this is a guide for mod making principles that use only existing artwork. Examples are provided to illustrate key concepts. I started this primarily as a reference for myself because I may go a long time before returning to this game and therefore may not remember certain procedures. Even though there are existing modding tutorials, I am humbly submitting this to *The Third Age* forum since there are lots of different learning styles. I'm not an expert, but I have figured some things out. Perhaps this will help someone where other tutorials have not. Further, there are tutorials here that I don't believe you will find elsewhere. Here is a summary of the key points covered in this guide (not necessarily in this exact order).

- Creating a shortcut for your modification using the “- mod” command
- Resolving game crashes resulting from playing mods that have different factions than your mod
- Converting the original `lotr.csf` text file to `lotr.str` for easily changing game text descriptions
- General game changes (command points, starting cash, etc.)
  - Creating a new game data file
  - Command point limits (skirmish and campaign)
  - Turning off all start-up videos
  - Starting cash (skirmish)
  - Enabling/disabling house colors
- Methods of disabling start-up videos
- Changing the shell map music
- Reinstating the select all heroes hot key
- Modifying the faction (house) colors
- Adding Sam and Frodo to skirmish play
  - Build cost
  - Build time
  - Bounty value
  - Text descriptions & hot keys
  - Typical files used for modifying a hero's special abilities (general list)
- Restoring Sam's “Frying Pan Bonk” ability
  - Changing the Palantir command button image
  - Auto-ability capability
  - Text description
  - Keeping upgrades under control (general topic)
  - Enabling at level 2
  - Adding sound effects
  - Modifying weapon damage
- Adding other powers to Sam's Palantir
  - Passive leadership at level 6
  - Summon an eagle at level 8
  - Changing a hero's starting level (general topic)
  - Button images (general topic)
  - Typical radius cursor listing (general topic)
  - Typical special effects listing (general topic)
  - Typical sound effects listing (general topic)
  - Summon elven aid at level 10, including Elrond
- Adding Elrond (skirmish and campaign)
  - As originally coded in the game

- As a temporary summoned character
- As a recruitable, levelable character
- Voice additions
- Armor & weapon upgrades
- Passive leadership
- Palantir powers (e.g., reapplications of Gandalf's Istari Light and Word of Power)
- Elven cloak and One Ring reapplication
- Auto-healing of nearby allies and structures
- Adding sword glow and blade master special effects
- Creating temporary foundations
- Adding Elven barracks
- Adding Elrond to the good campaign
- Creating new units and hordes from existing objects
- Creating "Child Objects" for units, hordes, and structures
- Adding armor and weapon upgrades automatically to units and hordes
- Changing the formation of a horde
- Adding to and modifying Frodo's Palantir powers
  - Phial of Galadriel at level 2
  - Mithril coat at level 4
  - Passive leadership at level 6
- Causing damage if Frodo is caught by the Eye of Sauron while wearing the One Ring
- Adding to and modifying Pippin's Palantir powers
  - Palantir map view at level 4
  - Armor and other upgrades at level 8 (e.g., negative troll leadership)
  - Summon soldiers at level 9
  - Summon Ents at level 10
- Adding a permanent health upgrade
- Adding special effects for when summoned units or hordes disappear
- Changing hobbit damage amount
- Adding to and modifying Faramir's Palantir powers
  - Athelas spell at level 2
  - Blade master at level 4
  - Summon cavalry at level 8 when mounted
  - Summon rangers at level 10 when on foot
  - Experience amount granted via "Captain of Gondor"
  - Glorious charge at level 8 (a restoration of War Speech)
  - Passive leadership modifications
  - Ability to transport a hobbit when mounted
- Adding a second command set
- Adding to and modifying Boromir's Palantir powers
  - Change Horn of Gondor level requirement to 1
  - Blade master at level 2
  - Summon banner carriers at level 3
  - Modifications to passive leadership and Captain of Gondor abilities
  - Summon reinforcements at level 10
- Modifying Gandalf's Palantir powers and other abilities
  - Increased bounty value
  - Added a healing aura
  - Ability to transport a hobbit when mounted
  - Passive leadership modifications
  - "Gandalf the White" modifications
  - Miscellaneous text modifications
- Modifying leadership special effects
- Preventing certain hordes from combining or enabling hordes to create new combinations

- Creating a new combo horde (Tower Guard – Fighter)
- Adding toggle formations to a combo-horde (or combo-battalion)
- Adding the ability to split a combo-horde (or combo-battalion) back into single hordes or battalions
- Adding new toggle formations to a single horde or battalion
- Reapplying the porter as a creator of speciality items
  - Temporary firestone equipped trebuchet escorted by Gondor swordsmen
  - Temporary firestone equipped trebuchet escorted by Gondor spearmen
  - Temporary healing well that heals at 3x normal rate
  - Temporary statue that slows down and weakens nearby enemies
  - Ruined tower for garrisoning troops (up to 4 units or battalions)
  - Totem that grants an increase in rank for a unit or battalion
  - Temporary pillar that explodes as either a mine or as Gandalf’s Word of Power
  - Temporary Sentry Tower Foundation
  - Temporary Building Foundation
  - Permanent Outpost Foundation
- Allowing citadels and keeps to be garrisoned
- Modifying a Spell Book Power (Last Alliance in place of Elven Allies)
- Modifying the number of power points required for a spell book power
- Adding unique projectiles and tracer colors for unit, horde, and structure bows
- Adding or modifying unit, horde, and structure bow weapons
- Adding weapons to level 3 farms and forges
- Listing of damage, damage fx, and death types found in the weapon.ini file
- Adding a dual economy plot choice for Gondor (farm or forge)
- Creating a modified structure bow that gives the appearance of transforming enemies into animals
- Changing the starting units or hordes in skirmish mode using FinalBIG or WorldBuilder
- Modifying the AI so that Elrond, Frodo, and Sam are automatically spawned
- Modifying the AI so that Elrond, Frodo, and Sam automatically use their new powers
- Creating summoned objects that are only utilized by the AI (not available to human player)
- Fixing or modifying existing AI scripts for other Gondor heroes
- Modifying the AI so that summoned Gondor banner carriers automatically combine with level 1 battalions
- Adding and recruiting new teams for the game AI
- Modifying the AI so the new Gondor horde formations are better managed
- Adding new objects to the game AI
- Modifying the AI so that Gondor uses the “Last Alliance” spell instead of the “Elven Allies” spell
- Modifying the AI to force the Gondor Marketplace and Stonemaker to execute upgrades
- Modifying the AI to improve the rate of Gondor battalion upgrades
- Modifying the AI to increase the amount of starting money for enemy factions
- Changing the damage, experience, and/or production multipliers for enemy factions
- Miscellaneous Gondor faction modifications
- Adding extended map view capability for each faction

What’s not covered here are creating new artwork (e.g., skins), making or editing maps, adding factions, or other more advanced subjects.

I originally intended to keep AI modification examples to a minimum for this document. However, once I got started, it was hard to stop (even though I feel I was just touching the surface). My apologies if you feel that I overextended myself for what is intended to be a basic modding tutorial for TBFME 1. You’re probably right.

## **Assumptions**

This document assumes you have a legal copy of TBFME version 1.03 as well as Internet access for downloading additional programs needed for game modification.

## **Getting Started**

The best web site I have found for providing modding help is <http://www.the3rdage.net/>. There's lots of useful stuff here, including links to some great mods that you might like to play. Go to <http://www.the3rdage.net/prelist?type=1> if you want to head straight to mod articles. There is also a forum section that is a good place to start; someone else probably has asked the same question you have (always check to see if your question has been posted before you post your own). Go to <http://forums.revora.net/forum/1018-battle-for-middle-earth-1-modding/> to learn more.

## **Tools**

You'll need some software in order to make modifications. The file extension for EA's program files is "big" – you need a program to edit this file type. For this, I use FinalBIG. This program, written by Matthias Wagner, can be found at his website <http://wagnerma.de/downloads.php>. After you download and extract the program, I recommend you associate the ".big" file types with this program so that it runs automatically whenever you open a ".big" file.

You'll need a CSF editor to modify the original `lotr.csf` file. This contains the text descriptions for the game. More on that later. You can download it from the 3<sup>rd</sup> Age at [CSF Editor](#).

You'll also need a hexadecimal editor. The most current version of the one used here can be downloaded from <http://www.chmaas.handshake.de/delphi/freeware/xvi32/xvi32.htm>; alternatively, you can download it from the 3<sup>rd</sup> Age at [Hex Editor Download](#).

If you prefer to use colors when editing your files, check out <http://www.the3rdage.net/item-1> for another method (colorINI).

It's helpful to be able to view DDS (Direct Draw Surface) or TGA (Truevision Targa) files. If you have Photoshop, you can download this plugin (<http://www.the3rdage.net/item-353?addview>) or this DDS viewer/converter (<http://www.the3rdage.net/item-49?addview>) from the 3<sup>rd</sup> Age.

Finally, we'll make use of the "WorldBuilder" software that came with your game. Specifically, we'll use it to change the default hordes, battalions, or units that come with each faction when the game starts as well as to change or create some AI parameters.

## **Miscellaneous**

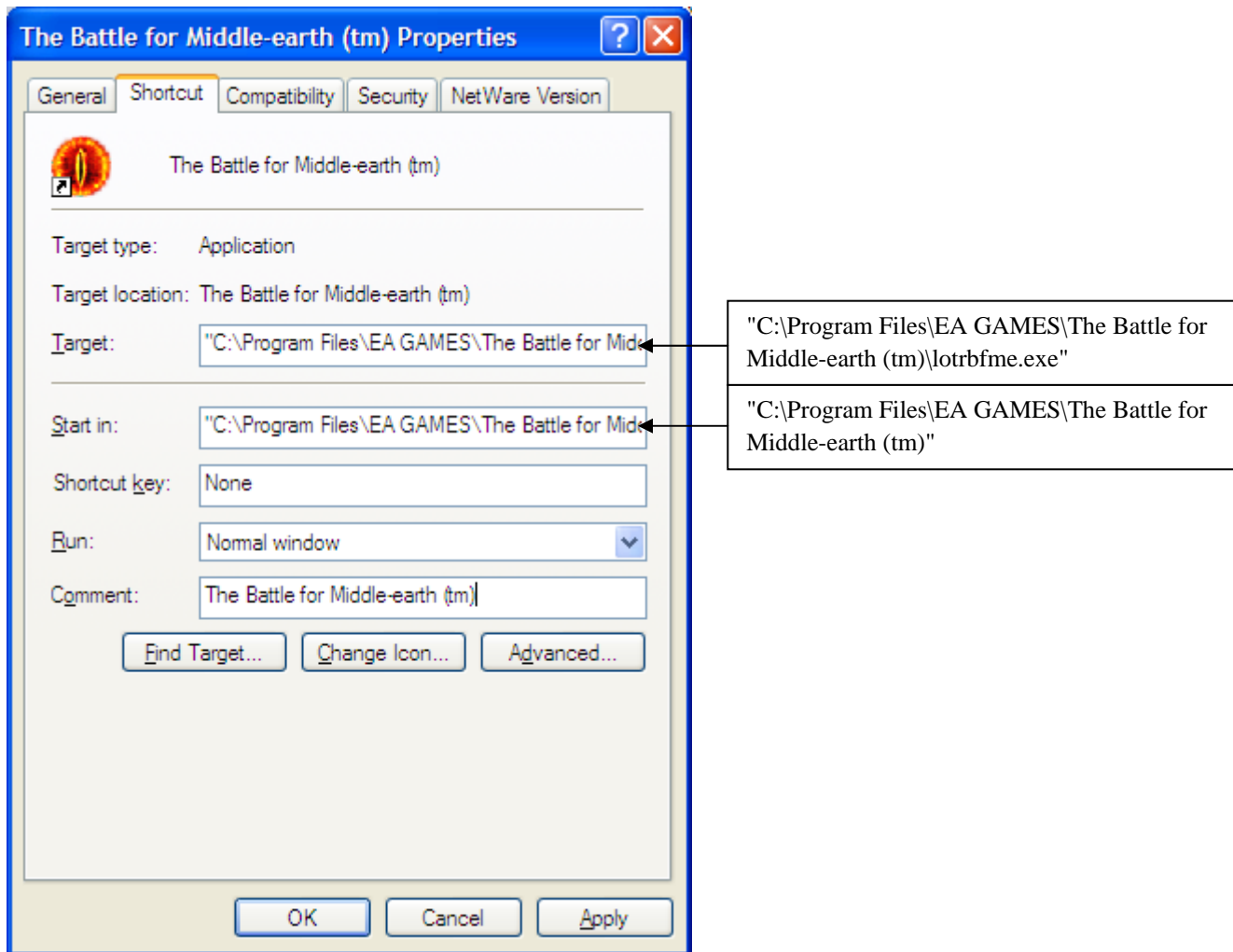
1. I've made every effort to be accurate. However, it's possible some errors exist since this has been done periodically over a long period of time. Please let me know if you find an error so that I can correct it. Further, if you feel you have related material or a better method that you would like to see included, please let me know. I will credit you. I can be reached via the 3<sup>rd</sup> Age website.
2. You can use this guide to create your own mod using exactly what's here. That's fine, but you would be missing the main point. The idea here is for you to create your own unique mod using some of the methods described in this document.
3. There are a number of modifications that are presented here more for learning purposes than for actual use in a mod. Use your judgment.

I hope you can learn something you didn't already know and reapply it to your own mod.

**PLEASE NOTE: THIS IS A FIRST DRAFT COPY. I HAVE FOCUSED ON THE GONDOR FACTION FOR NOW. AS I HAVE TIME, I WILL UPDATE THIS DOCUMENT TO INCLUDE ADDITIONAL TOPICS FOR THE OTHER FACTIONS (ASSUMING THIS GUIDE IS WELL RECEIVED).**

## Preparing Your INI File for Modification

It's best not to modify the original game. This allows you to still play the original, plus you have a fallback in case you make a program error you can't recover from (otherwise, you may have to reinstall the game). When you play TBFME, a folder called "My Battle for Middle-earth Files" is created. This folder contains the stats from your saved games, among other things. The path should look something like this: C:\Documents and Settings\username\Application Data\My Battle for Middle-earth Files, where "username" is the name you use when logging on to your computer. This is based on a Windows XP OS; the path may be different on Vista or Windows 7. For example, C:\Users\username\AppData\Roaming\My Battle for Middle-earth Files. Next, copy the game's original INI.big file to this folder. If you did a standard game installation, the file is located in C:\Program Files\EA GAMES\The Battle for Middle-earth (tm). Of course, you can place the INI file in whatever folder you want; this is just a suggestion. Rename your copied INI file something like "MyMod.big." You can call it what you like, just don't have any spaces in the name. Finally, you need to create a shortcut to launch your mod. The easiest way to do this is to start with a copy of the original game's shortcut and then modify it. Below is the original shortcut.

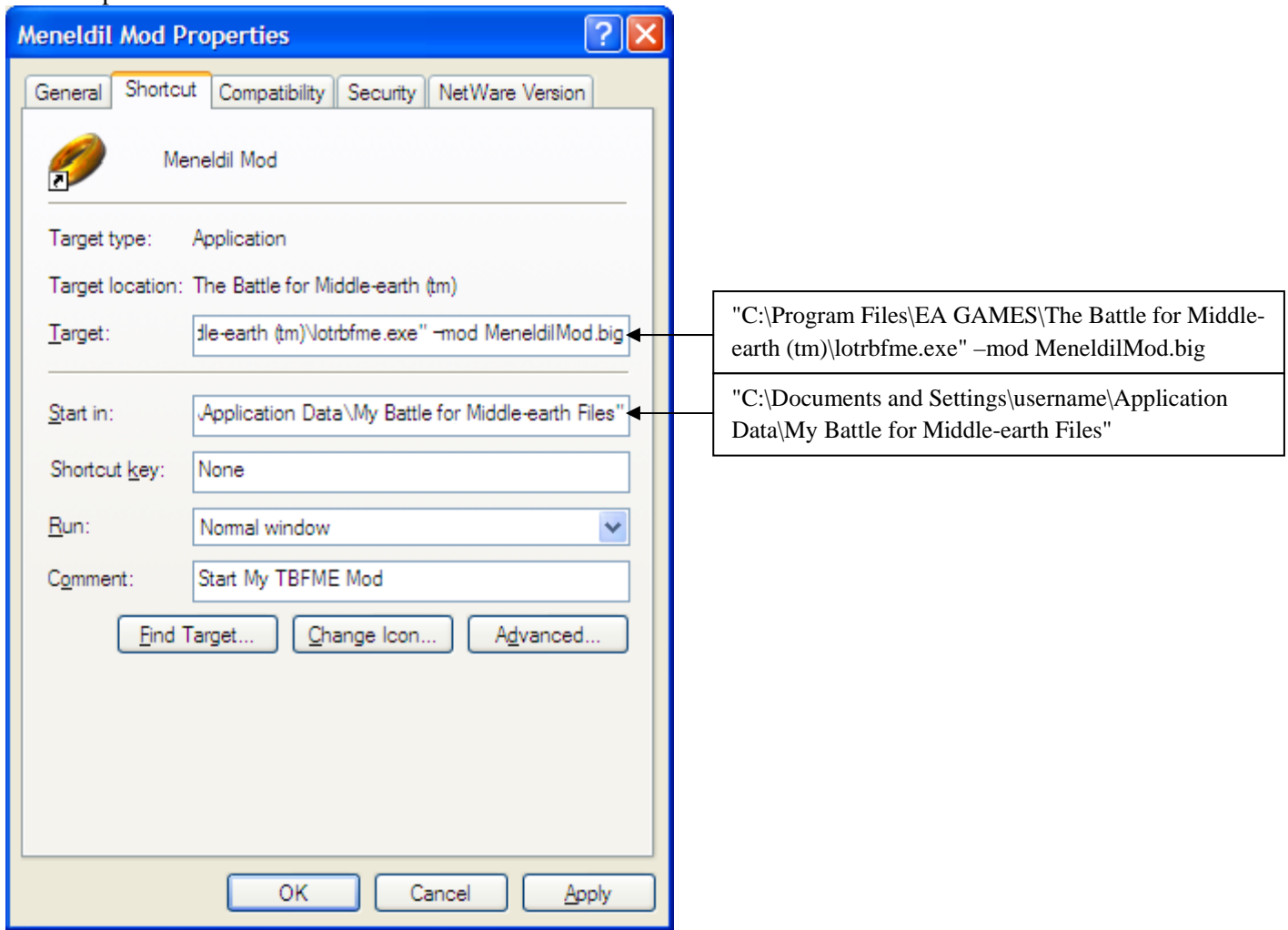


In order to make your shortcut work for your mod, do the following.

- Change the "Target" description to:  
"C:\Program Files\EA GAMES\The Battle for Middle-earth (tm)\lotrbfme.exe" -mod YourExactModName.big  
where "YourExactModName.big" is the exact name of your modified INI.big file. The easiest way to do this is to select your mod, hit F2, then CTRL-C to copy the name. Again, note that there are no spaces in the name.
- Change the "Start in" description to:  
"C:\Documents and Settings\username\Application Data\My Battle for Middle-earth Files"  
where "username" is your account name. This assumes your modified INI file is located in this folder.

- Change the “Comment” description to better describe your mod (optional).
- Change the icon to something else to better differentiate your mod (optional).

An example of a new shortcut for a mod is shown below.



Before going further, take the time to test your shortcut to make sure it works. At this point, it’s just a direct path to the original game. Once you have verified that it works, you are ready to continue.

I recommend that you also read this helpful post from “Ganon:” <http://www.the3rdage.net/item-602?addview>

### **Fixing Skirmish Crashes Resulting from Playing Mods with Different Factions**

If you play a number of different mods, particularly those with factions that don’t exist in the original game (e.g., Elves), you may find that the game crashes when you try to play skirmish mode with a different mod (or the original version). This is because the game looks for the faction that you last played and if it doesn’t exist, it crashes. I found this fix from “GothmogtheOrc” to be very helpful: <http://www.the3rdage.net/item-178?addview>

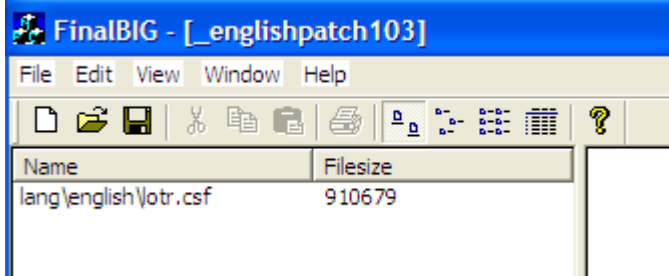
I’ll paraphrase it here in case you don’t have an Internet connection when you want it.

Go to "C:\Documents and Settings\username\Application Data\My Battle for Middle-earth Files" and open up the “skirmish.ini” file. I do something a little different than what’s recommended. I know I’ll always have a “Meneldil” player profile, so I just replace the top line with `CurrentUserName = M_00e_00n_00e_00l_00d_00i_00l_00` and I’m good to go. Alternatively, use the recommended `CurrentUserName = t_00e_00s_00t_00_20_00l_00`. You can then delete the `test 1SkirmishStats` file that is created when you start the game (if you wish – it doesn’t hurt anything if you leave it).

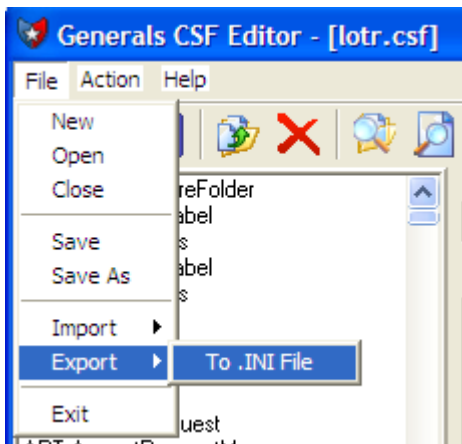
## Converting lotr.csf to lotr.str for Easy Text Modification

As you modify the game, you'll want to change or add text descriptions. For example, if you create a new horde or spell, you'll want to provide an in-game description for it. For TBFME 1, EA uses a "csf" file extension for its text file. This is not very user friendly. In the beginner modding section of the 3<sup>rd</sup> Age, there is a tutorial by "Hostile" that explains how to convert a CSF file to a STR file. It's a bit dated and I struggled a bit with it, so I'm taking the liberty of providing a slightly different version of it here. Refer to <http://www.the3rdage.net/item-59?apage=71#page> for the original information. Assuming you have version 1.03 of the game, you'll need to open "\_englishpatch103.big" with your editor. If you did a standard game installation, the file is located in C:\Program Files\EA GAMES\The Battle for Middle-earth (tm).

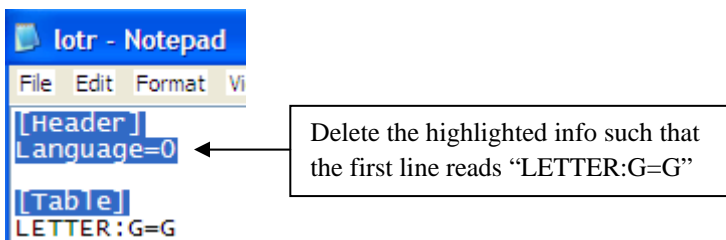
Using FinalBIG to open \_englishpatch103.big, you should see this in your window:



Don't click on the file itself, since you'll probably just bog down your computer's CPU only to see gibberish. Instead, go directly to Edit -> Extract All. Select "Yes" from the subsequent dialog box. Save to a folder of your choice. I recommend that you create a folder called something like "My TBFME Mods" so that you have a defined place for keeping your work. Tip: Keep a shortcut here for your "My Battle for Middle-earth Files" folder as it will come in handy. You'll see that you created the following folders and file: lang -> english -> lotr.csf. This file contains all of the informational text used in the game. We'll now convert this to a ".str" file for use in your mod. This file can be opened in any text program and is easily edited. More importantly, TBFME can read this format, too. Open lotr.csf (with the editor indicated above). Export this to a new ".ini" file as shown below. Be sure to save this in your mod folder. Remember, never alter any of the files in the original game directory.



Now open the file you just created. It should open directly with Notepad; use another text editor if you like. Delete the [Header] through [Table] lines (no space at top) and save the file, but don't change the file type.



Now open the file with your hex editor. You'll need to replace the following, in this sequence.

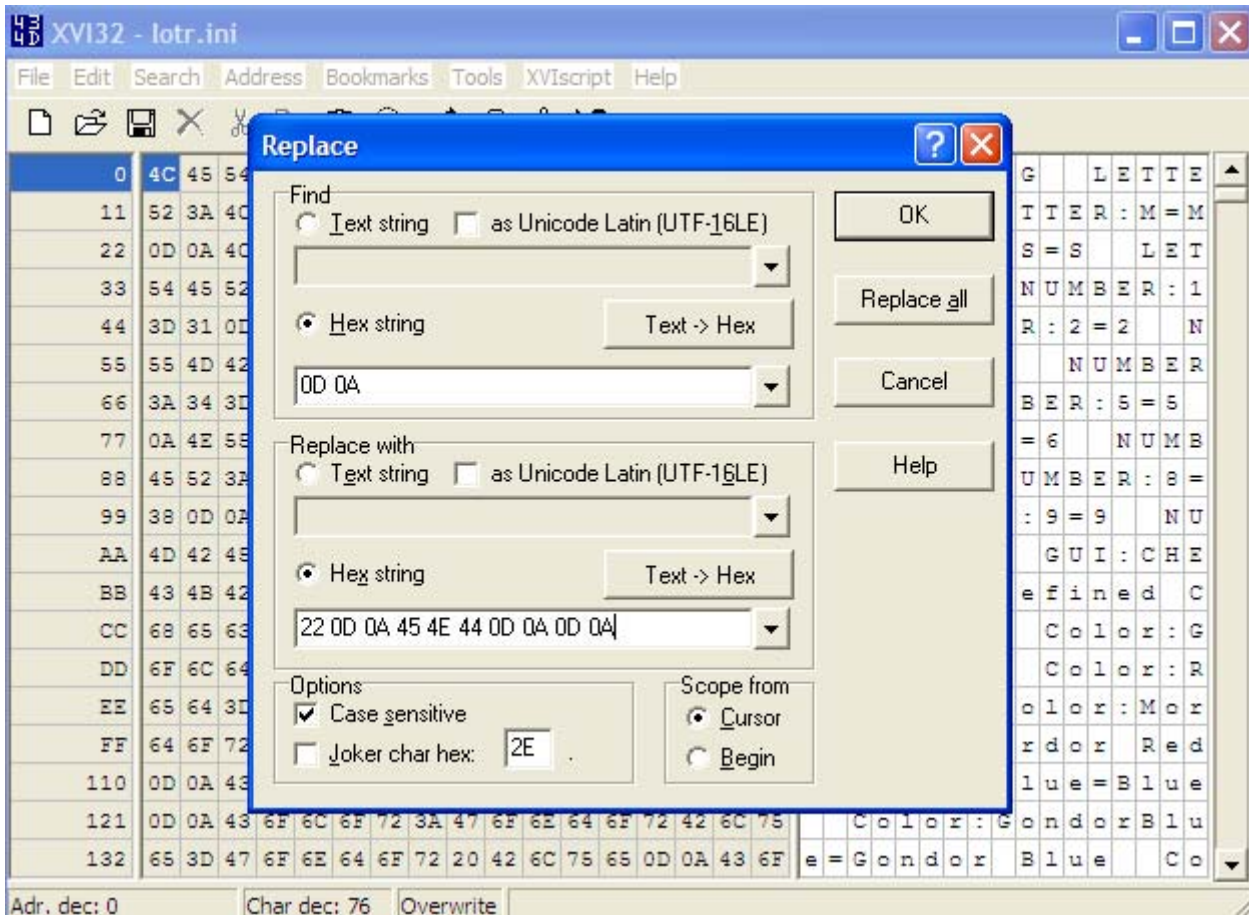


**Change all 0D 0A to 22 0D 0A 45 4E 44 0D 0A 0D 0A**

**Change all 3D to 0D 0A 22**

**Change all 7C to 5C 6E**

You may need to scroll back to the top of your editor each time you do a search and replace. Here is an example screen (using the XVI32 hex editor listed above) showing the first hex string replacement.

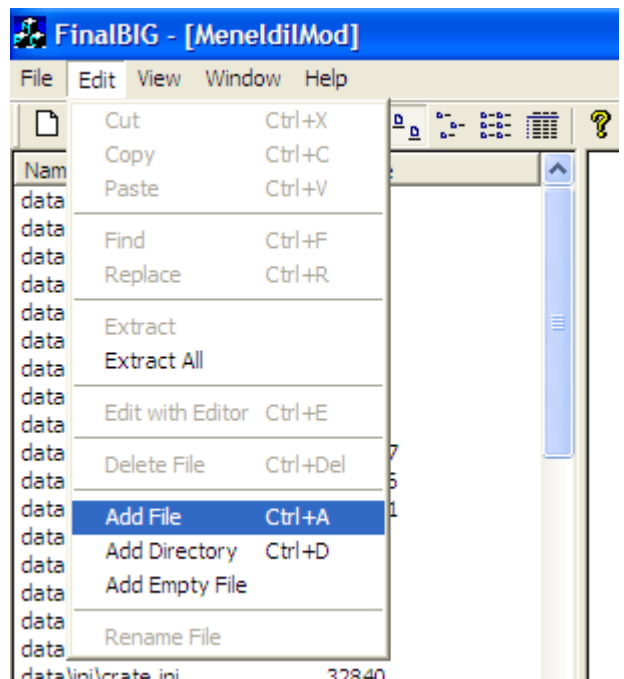


When you are done with this, save the file as a “.str” file in your mod folder. I recommend saving it as “Original 1.03 lotr.str” or something similar so that you have a file you can go back to in case you mess up your mod or wish to make a different mod. Open it once more in Notepad, delete the last two lines of code shown below, and resave the file.

"  
END

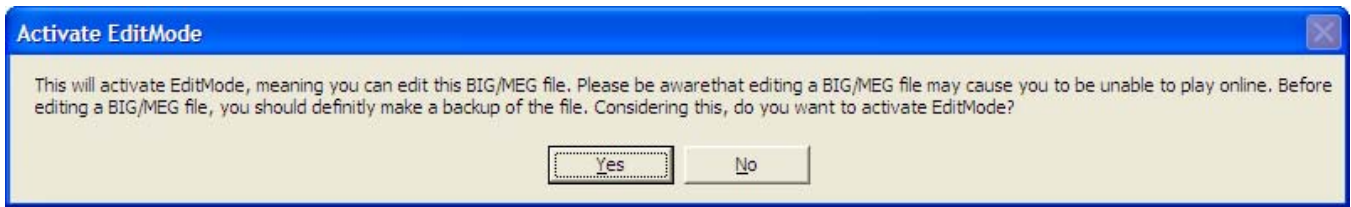
← Delete these last 2 lines

Now that you’ve done this, you shouldn’t have to ever do it again (unless you don’t back up your computer). Now make a copy of it for your new mod and call it something like “MyModName datalotr.str” in order to differentiate it from the original. Plus, if you have more than one mod, you’ll want to keep track of which text file goes with which mod. The reason the word “data” has been inserted will be explained soon.

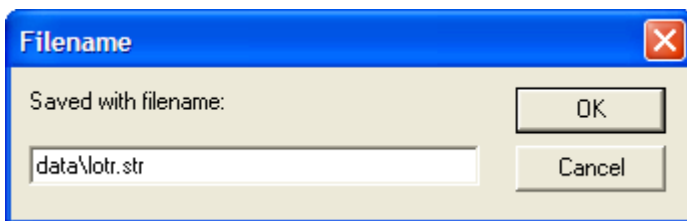




Creating the lotr.str file is fine, but it won't do you any good until you add it to your INI file. Here's how to add it. Open your INI.big file with the FinalBIG editor. Select "Add File" as shown in the above picture. You'll then be prompted with a confirmation window. You'll see one of these the first time you try to make a change after opening a ".big" file. Pay attention to what it says. Always keep a backup of your work. Save periodically, particularly if you are making lots of changes. Keep in mind that there is no "undo" command. Click "Yes" to continue.



When prompted, select your lotr.str file and click Open. Recall earlier that I asked you to name your lotr.str file as MyModName datalotr.str. You don't want all of that in your INI file. Eliminate all of the text in front of "data" and then place a backslash between "data" and "lotr" as shown below. Click OK to place this file in your INI file. Save your INI file.



I have placed a copy of the original version 1.03 lotr.csf file on the forums saved as a string file (lotr.str) in case you wish to just skip these steps and download the file. Here is the link:

<http://forums.revora.net/topic/85099-bfme1-file-request-lotrstr-103-english-file/>

When you open your INI.big file, you'll see a list of files within it. There's nearly 250 individual files! Fortunately, you will most likely only modify a relatively small number of these files. Also, your modified INI file only needs to contain the files you have modified. If the file isn't included in your modified INI, the version located in the original INI file will be used in its place (with one major exception, which we'll get to later). This allows you to create a smaller mod by not using unneeded files. However, adding artwork, maps, sounds, and voices can significantly add to the size of this file.

It could be argued that it is better to start with an empty BIG file and add just the files you need. That approach also works. You decide what's best for you.

Keep track of the files you modify. When you're done with your mod, you can delete the ones you didn't change.

At this point, I should mention a method of mod learning that has worked well for me. When I first started doing this, I went to the forums looking for easy answers. Sometimes that works, but to really understand the programming, you need to look at how something works in the original game. That means going through the relevant data files. It can be time consuming, but it is generally worth it. As you learn and practice, the more efficient you become. I recommend starting with existing code first, then looking through the posted tutorials, then searching the forums for similar areas of interest. Looking at other mods can also be instructive. Then experiment yourself to see if you can get what you want to work. If you're still hitting a wall, post a forum question. Be as specific as you can, explaining exactly what you have tried and what went wrong. I posted some very basic questions early on that I could have answered for myself had I worked at it. I've learned a lot more since then.

All of this so far has been just preparation. Now comes actual game modifications.

The first modifications discussed here have to do with basic operating parameters of the game such as start-up videos, command points, selecting all heroes, and faction colors.

## Gamedata.ini File

Go to the gamedata.ini file (specifically, data\ini\gamedata.ini) and scroll through it. You'll see that it covers a lot of diverse parameters, such as command points and defined values for cost & upgrade values. The thing about this file is that modifying it in your INI file will have no effect because it will not override the original (because the original gamedata.ini file is always read). This is the major exception I referenced previously. As far as I know, this is the only file like this. To get around this problem, you need to create a new file in your INI with a different name and location path in order to capture game parameters such as command points. Further, if you plan to make changes to the defined constants or add new ones, they may not work here. For example, if you want to add a new bow range for a hero here, the weapon.ini file may be read before your file. If that happens, the game crashes right there because it can't find the defined name (it's not smart enough to wait for all of the other data files to load). As a result, you may need to add the new definition directly to the top of the file that it is being referenced in (e.g., the bow range in the weapon.ini file). Further, if you are using a defined name already used in the original gamedata.ini file, you will get a duplicate entry error (because both files will be read) that will also crash the game. Therefore, you need to slightly tweak the name of your defined variable so that it is different from what is in the original gamedata.ini file so that it doesn't create a read error. This is why it may be easier to just enter your desired value directly in your mod instead of using the defined name. Keep this in mind as you do your modding.

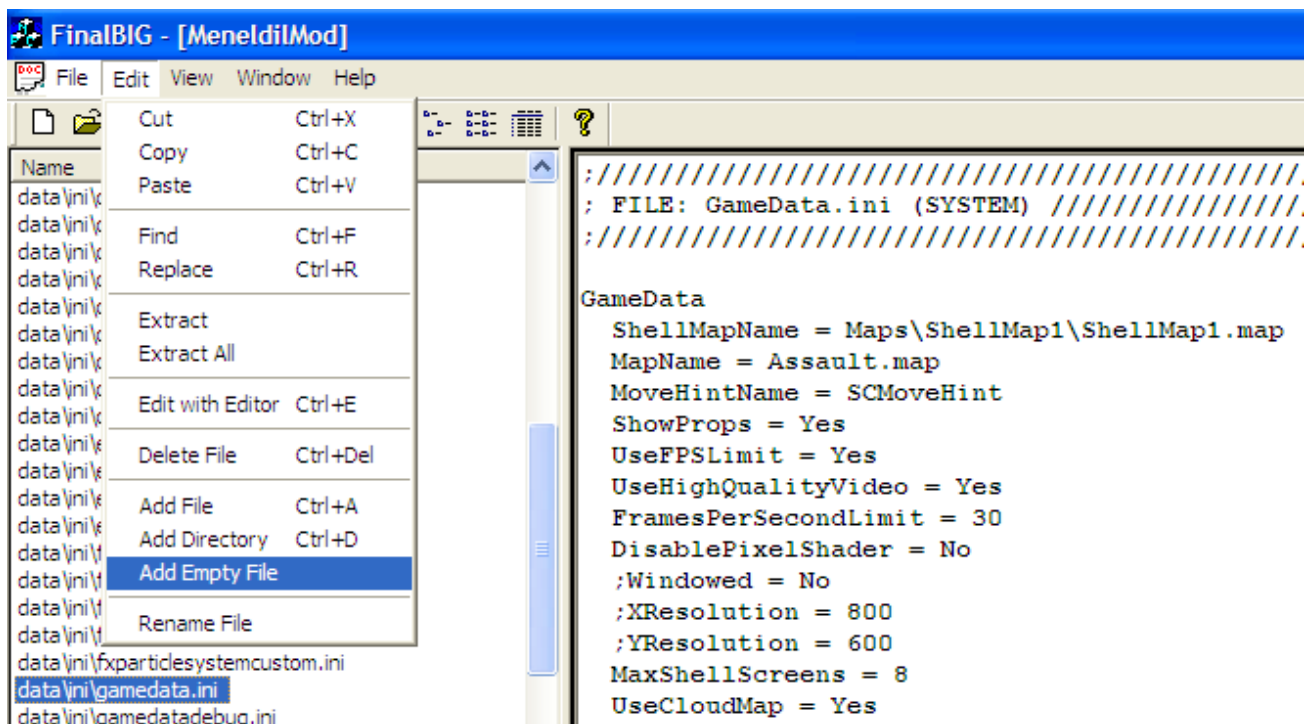
## Creating a New Game Data File

For now, let's focus on variables we can change without a problem. We'll use FinalBIG to create a new file in a different location, as indicated below:

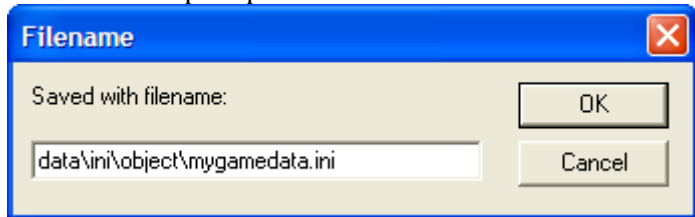
- Original file & location: **data\ini\gamedata.ini**
- New file & location (in your modified INI file): **data\ini\object\mygamedata.ini**

Note that the file is now in the object folder. I have tried using "data\ini\mygamedata.ini" but have run into errors where the program reads variables referenced here before they are defined, causing a crash. It's also a good idea to rename it to differentiate it from the original (although you don't have to use the name I used). On the positive side, you only need to include from the original game data file any parameters you have changed. Once you have done that, you can delete the original gamedata.ini file from your INI file. To start, let's create a copy of the gamedata.ini file in the new location.

Within FinalBIG, select "Add Empty File" from the menu as indicated below.



You'll then be prompted for the file name. Here's an example entry.



You now have an empty file ready for new code data. Paste the following from the original gamedata.ini file to the new mygamedata.ini file. Note: I changed the header to read "MyGameData.ini" instead of the original "GameData.ini" header.

```
;/;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; FILE: MyGameData.ini (SYSTEM) /;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
;/;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
```

GameData

Your code here

End

You now have to decide what to put between "GameData" and "End." Copy the appropriate sections from the original gamedata.ini file here and then modify them to suite your tastes. Remember, putting original game defined variable names here may cause an error. More on that later. For now, let's work on other parameters.

### Changing the Number of Command Points

If your computer can handle it, you can increase the number of command points available for both campaign and skirmish modes. This can make the game more enjoyable because you have a greater breadth of resources to work with. Here is an example "mygamedata.ini" file. Experiment yourself to see what works best for you.

```
;/;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; FILE: MyGameData.ini /;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
;/;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
```

```
;THIS FILE CREATED BY MENELDIL
;THE DATA IN THIS FILE SUPERCEDES THAT IN THE DATA\INI\GAMEDATA.INI FILE LOCATED IN
THE ORIGINAL INI.BIG FILE
```

GameData

```
PlayIntro = No; added by Meneldil so as to skip all movies at game start-up
DefaultStartingCash = 1000; initial cash when game starts (included here in case
I want to change from original 1000 for mod testing)
EnableHouseColor = No; If no, then the team color will only appear on the map,
not their armor. Default is Yes.
```

```
DefaultCameraMinHeight = 40; Meneldil changed from original 120.0; The
minimum height of the camera relative to the terrain.
DefaultCameraMaxHeight = 300; The maximum height of the camera relative to
the terrain.
DefaultCameraPitchAngle = 37.5; The pitch angle of the camera off top down
view.
```

```
;;; CAMPAIGN BONUS CAPS
GoodCommandPointLimit = 400; Meneldil changed original 300
EvilCommandPointLimit = 800; Meneldil changed original 600
```

```

PowerLimit = 60
ResourceMultiplierLimit = 5.0

;;; COMMAND POINTS FOR MULTIPLAY ;;;
GoodCommandPointsMP2 = 400 ;2 players modified by Meneldil (originally 200)
EvilCommandPointsMP2 = 800 ;modified by Meneldil (originally 400)

GoodCommandPointsMP3 = 325 ;3 players modified by Meneldil (originally 150)
EvilCommandPointsMP3 = 650 ;modified by Meneldil (originally 300)

GoodCommandPointsMP4 = 250 ;4 players modified by Meneldil (originally 150)
EvilCommandPointsMP4 = 500 ;modified by Meneldil (originally 300)

GoodCommandPointsMP56 = 175 ;5-6 players modified by Meneldil (originally 100)
EvilCommandPointsMP56 = 350 ;modified by Meneldil (originally 200)

GoodCommandPointsMP78 = 100 ;7-8 players modified by Meneldil (originally 80)
EvilCommandPointsMP78 = 200 ;modified by Meneldil (originally 160)

```

End

### **Other Changes to Your Game Data**

In the above code, you'll see that I've added some other things.

- **DefaultStartingCash** is just what it says – how much money is available to the factions at startup. The default amount is 1000. You can change this to a different value if you like (e.g., for testing your mod or for a faster game play). Note that the `playertemplate.ini` file has a “StartMoney” entry for each faction. The default setting is zero. If you change this value, it will override the “DefaultStartingCash” entry.
- **EnableHouseColor** allows you to turn on or off the colors associated with your faction. Enabling it colors the armor, clothing, feathers, etc. of your troops to match the assigned house color. This can be helpful if you decide to fight the same faction. On the other hand, it takes away from the appearance by making things look a bit gaudy. This is even more evident if new, more detailed or colorful skins have been created. The default setting is “Yes.”
- Camera settings are a bit odd. All I've done is to decrease the minimum camera height so that I can better see some details. Increasing the maximum camera height or camera pitch angle here does nothing except alter the appearance of the background video (the one with the tower and Mt. Doom in the background). The game play is not affected. You would need to go into World Builder and alter the AI and/or maps in order to make additional camera viewing changes.
- If you want to modify the values of defined variables (e.g., build times, build costs, experience awards, damage amounts, etc.), your best bet is either to add the new definition to the file that will be using it or to directly enter the numerical value you want to use in its respective file (thereby overriding the existing defined name). In general, I've had good luck adding new variable names to the `weapon.ini` file.

Refer to <http://www.the3rdage.net/item-61?addview> for another tutorial on editing game data.

## Disabling the Start-up Videos

When I first started playing this game, it didn't take long for me to get annoyed waiting for all of the start-up videos. If you simply want to get rid of all start-up videos, add the following code to your "mygamedata.ini" file:  
**PlayIntro = No**

When you add/modify code, it's a good idea to comment it so that you know what changes you've made and why. Add a semicolon after the code line followed by your comment. For example,  
**PlayIntro = No; added by Meneldil so as to skip all movies at game start-up**

Ideally, if you are modifying existing code, try to maintain the original code by commenting it out so that you can restore or reference it later if needed.

Here I'll make an exception to the rule of modifying the original files. If you are sure you want to eliminate start-up videos with your original game, then make this change to the original gamedata.ini file instead. Because this file is always read, it will also prevent start-up videos from playing with any mod you use.

Perhaps you want to keep just the background story movie. If you know you want the same thing done in your original game, adjust the movie folder files. Again, assuming a standard installation, this folder is located at C:\Program Files\EA GAMES\The Battle for Middle-earth (tm)\data\movies. Create a new folder (e.g., Null Movies) and move the following into it: EALogo.vp6, Intel.vp6, NewLineLogo.vp6, and THX.vp6. This will eliminate those start-up video sequences, except for the story background, because if the game can't find the file, it moves on. Just hit the escape key if you want to end the start-up movie while it's playing. Because you didn't delete the files, this is easily reversible. FYI, the big start-up movie file name is 242.vp6.

Another approach is to modify the data\ini\video.ini file, as shown below.

```
; FILE:      Video.ini ////////////////////////////////////////
; This INI file holds all our video tracks
; ////////////////////////////////////////////////////
; ////////////////////////////////////////////////////

; Modified by Meneldil to skip start-up videos
Video EALogoMovie
    Filename = SkipEALogo; Meneldil added the word "Skip" to the movie name.
    ; Comment = "This is the EA logo screen"
End

Video EALogoMovie640
    Filename = SkipEALogo; Meneldil added the word "Skip" to the movie name.
    ; Comment = "This is the EA logo screen"
End

Video NewLineMovie
    Filename = SkipNewLineLogo; Meneldil added the word "Skip" to the movie name.
    Comment = "NewLine company logo"
End

Video IntelLogo
    Filename = SkipIntel; Meneldil added the word "Skip" to the movie name.
    Comment = "Intel logo movie"
End

Video THXLogo
    Filename = SkipTHX; Meneldil added the word "Skip" to the movie name.
    Comment = "THX Logo movie"
End
```

If you want to also skip the background story video, then search for “242” and change its name so it gets skipped as well. Alternatively, you can comment out each of the appropriate code lines for the same result. This approach of not playing videos via programming changes is the way to go if you want to share your mod with other people, since you can’t expect them to modify their own game files.

If you want to add a video to your start-up, here’s what I’ve seen done with other mods (I’ve not done it myself). First, you need a video in the vp6 format. In the video.ini file above, change the EOLogo name to the name of the movie. Finally, copy the movie into you INI file as data\movies\moviname.vp6 and you should be good to go.

### **Changing the Shell Map Music**

The music that plays after the game loads can be changed if you like. Extract the mp3 songs from the music.big file (located in the program folder) and listen through them until you find one you prefer to the original. Alternatively, you can add one of your own mp3 to your INI file. Look in your music.ini file for “ActionEdit03.mp3” – that’s the original start-up theme music. Change it to something else if you prefer. Here’s an example.

```
MusicTrack Shell; Meneldil note: this is the background music file that plays after
the game loads (refer to music.big)
  Filename = exevil02_f07.mp3; Meneldil changed original ActionEdit03.mp3
  Volume = 55
End
```

For additional information regarding the names in the music.ini file, refer to <http://www.the3rdage.net/item-87?addview> (provided by “GothmogtheOrc”).

### **Select All Heroes**

With Version 1.03, the ability to select all heroes with a hot key (the letter “O”) was disabled. I’m not sure why this was done. My guess is that on computers that don’t have a number key pad (e.g., laptops), you have to use “Num Lock” to allow you to rotate the screen with dual letter/number keys. The letter “O” (equivalent to “6” when “Num Lock” is activated) is one of the keys used to rotate the screen. This can cause a conflict with selecting all of the heroes with the same key.

Go to the data\ini\commandbutton.ini file and search for SelectAllHeroes. You’ll find this code:

```
CommandButton NonCommand_SelectAllHeroes
; TextLabel = CONTROLBAR:SelectAllHeroes
  DescriptLabel = CONTROLBAR:SelectAllHeroesDescription
End
```

As you can see, the text label is commented out so that it doesn’t work correctly. Remove the semicolon to reinstate it. The TextLabel and DescriptLabel codes have to do with text descriptions, so that means we get to go visit our lotr.str file we created earlier. Open your mod’s lotr.str file and search for SelectAllHeroes and you’ll find this section of code:

```
CONTROLBAR:SelectAllHeroes
"Select All Her&oes"
END
```

```
CONTROLBAR:SelectAllHeroesDescription
"Click here to select all hero units on the map"
END
```

Note the ampersand above. The letter immediately after the ampersand becomes the hot key. You need to be careful when creating or modifying hot keys. For example, a hero may already have the same letter assigned to another power and you don’t want to duplicate it. Also, certain letters are already assigned to functions such as “A” for attack, “E” for selecting duplicate units (press once to select all visible units on the screen, press twice to



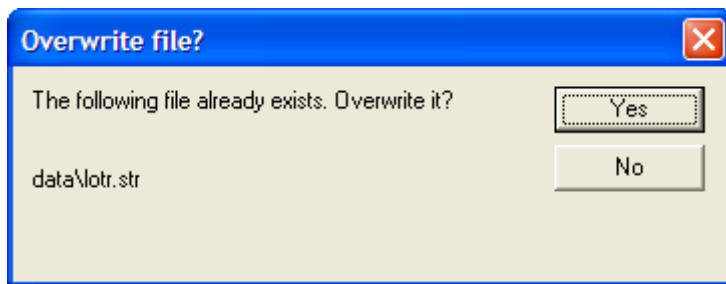
select all the same units under your control regardless of where they are), “G” for guard, “H” for home location, “S” for stop, and “Q” for selecting everyone.

Unfortunately in this case, all of the letters in “Select All Heroes” are either used for basic game functions or for hero powers. The way to get around this is to change the text such that another letter becomes available. I’m not aware of the letter “Y” being used for anything that would cause a problem (it’s used for building the Rohan Armory, but that’s not a problem unless a Rohan building foundation is selected and even then, you can change the Armory hot key to another letter). Search your lotr.str file for “&y” to verify this doesn’t exist. To resolve this, we’ll change “Select All Her&oes” to “Select Ever&y Hero.”

In your lotr.str file, relocate the ampersand so that it immediately precedes the letter ‘Y’ in the new text, as shown below.

```
CONTROLBAR:SelectAllHeroes  
"Select Ever&y Hero"  
END
```

Save the file. Now you need to add this file to your INI file. You don’t need to delete the existing data\lotr.str file; just copy over it. You will see the following window when you do this. Select yes. Save your file when done.



Now when you play your game, you can select all your heroes by hitting the “Y” key. Note, however, that if a hero is already selected and uses this letter for one of his powers, you’ll activate that hero’s special power instead. You can now adjust the “Select All Heroes” function as you see fit (e.g., change the text description and pick a different letter to use). Also, while playing the game, make sure you understand the difference between the two “Controlbar” codes above. You should now have a better understanding of how to make text description changes to the game.

In the future, when you want to make changes to your text file, modify your MyModName datalotr.str file and add it to your INI, overwriting the existing lotr.str file. Tip: Don’t save changes to your INI file while the game is running or you may crash the game.

### **Changing the House Colors**

These are the colors you see on the players and structures for each faction as well as on the map. Perhaps you want to change or add to the color choices for your factions. To do this, you need to modify the multiplayer file (data\ini\multiplayer.ini). Here is the existing code block that determines the player colors.

```
MultiplayerColor ColorGold  
  RGBColor = R:174 G:189 B:76  
  RGBNightColor = R:174 G:189 B:76  
  TooltipName = Color:Gold  
End
```

```
MultiplayerColor ColorRed  
  RGBColor = R:157 G:56 B:43  
  RGBNightColor = R:157 G:56 B:43  
  TooltipName = Color:Red  
End
```

```
MultiplayerColor ColorMordorRed
  RGBColor = R:178 G:102 B:138
  RGBNightColor = R:178 G:102 B:138
  TooltipName = Color:MordorRed
End
```

```
MultiplayerColor ColorBlue
  RGBColor = R:68 G:91 B:156
  RGBNightColor = R:68 G:91 B:156
  TooltipName = Color:Blue
End
```

```
MultiplayerColor ColorGondorBlue
  RGBColor = R:89 G:134 B:171
  RGBNightColor = R:89 G:134 B:171
  TooltipName = Color:GondorBlue
End
```

```
MultiplayerColor ColorGreen
  RGBColor = R:60 G:178 B:69
  RGBNightColor = R:60 G:178 B:69
  TooltipName = Color:Green
End
```

```
MultiplayerColor ColorRohanGreen
  RGBColor = R:62 G:153 B:128
  RGBNightColor = R:62 G:153 B:128
  TooltipName = Color:RohanGreen
End
```

```
MultiplayerColor ColorOrange
  RGBColor = R:207 G:135 B:68
  RGBNightColor = R:207 G:135 B:68
  TooltipName = Color:Orange
End
```

```
MultiplayerColor ColorSkyBlue
  RGBColor = R:207 G:175 B:73
  RGBNightColor = R:207 G:175 B:73
  TooltipName = Color:SkyBlue
End
```

```
MultiplayerColor ColorPurple
  RGBColor = R:154 G:115 B:182
  RGBNightColor = R:154 G:115 B:182
  TooltipName = Color:Purple
End
```

```
MultiplayerColor ColorPink
  RGBColor = R:203 G:160 B:187
  RGBNightColor = R:203 G:160 B:187
  TooltipName = Color:Pink
End
```

```
; Well it is more Grey now...so it can be seen.
MultiplayerColor ColorBlack
  RGBColor = R:100 G:100 B:100
  RGBNightColor = R:100 G:100 B:100
  TooltipName = Color:Black
End
```

If you wish to alter this, you first need to decide what colors you want and what to call them. You should also give some thought to the above color names since the game assigns certain colors to the different factions. I use Excel to choose my RGB colors, but you can pick whatever program works best for you. Here's an example of new faction colors.

**;Meneldil's Color Preferences**

```
MultiplayerColor ColorGold
  RGBColor = R:230 G:225 B:0
  RGBNightColor = R:230 G:225 B:0
  TooltipName = Color:Gold
End

MultiplayerColor ColorRed
  RGBColor = R:200 G:0 B:0
  RGBNightColor = R:200 G:0 B:0
  TooltipName = Color:Red
End

MultiplayerColor ColorMordorRed
  RGBColor = R:150 G:50 B:30
  RGBNightColor = R:150 G:50 B:30
  TooltipName = Color:MordorRed
End

MultiplayerColor ColorBlue
  RGBColor = R:35 G:35 B:200
  RGBNightColor = R:35 G:35 B:200
  TooltipName = Color:Blue
End

MultiplayerColor ColorGondorBlue
  RGBColor = R:100 G:150 B:180
  RGBNightColor = R:100 G:150 B:180
  TooltipName = Color:GondorBlue
End

MultiplayerColor ColorGreen
  RGBColor = R:60 G:190 B:60
  RGBNightColor = R:60 G:190 B:60
  TooltipName = Color:Green
End

MultiplayerColor ColorRohanGreen
  RGBColor = R:60 G:155 B:100
  RGBNightColor = R:60 G:155 B:100
  TooltipName = Color:RohanGreen
End

MultiplayerColor ColorOrange
  RGBColor = R:245 G:135 B:15
  RGBNightColor = R:245 G:135 B:15
  TooltipName = Color:Orange
End

MultiplayerColor ColorSkyBlue
  RGBColor = R:50 G:180 B:200
  RGBNightColor = R:50 G:180 B:200
  TooltipName = Color:SkyBlue
End
```

```

MultiplayerColor ColorPurple
  RGBColor = R:185 G:75 B:215
  RGBNightColor = R:185 G:75 B:215
  TooltipName = Color:Purple
End

MultiplayerColor ColorGreyGreen
  RGBColor = R:100 G:135 B:100
  RGBNightColor = R:100 G:135 B:100
  TooltipName = Color:GreyGreen
End

MultiplayerColor ColorBlack
  RGBColor = R:150 G:150 B:150
  RGBNightColor = R:150 G:150 B:150
  TooltipName = Color:Black
End

MultiplayerColor ColorWhite
  RGBColor = R:255 G:255 B:255
  RGBNightColor = R:255 G:255 B:255
  TooltipName = Color:White
End

```

You get the idea. Adjust this to meet your own needs as desired. There is also a tutorial for this in the forums. Refer to <http://www.the3rdage.net/item-184?addview>.

So far, we've only made some general game modifications. Let's get into specific faction modifications. We'll start with Gondor.

**NOTE: AS INDICATED PREVIOUSLY, THIS DOCUMENT DOES NOT SPECIFICALLY ADDRESS THE OTHER FACTIONS. I WILL ADD FURTHER DETAILS AS TIME AND INTEREST ALLOWS.**



Looking under Sam's Engineering Parameters you'll see there are no build cost or time codes, so we'll reapply from Pippin's file. You could use the same build cost code used by Pippin if you like. However, note that Sam has 50% more starting health points than Pippin. Therefore, I'll choose to increase Sam's cost by 50% over Pippin. I added the following under Sam's Engineering parameters in the same relative place as Pippin's code.

```
BuildCost = 150; HOBBIT_BUILD_COST; added by Meneldil for skirmish
BuildTime = HOBBIT_BUILD_TIME; added by Meneldil for skirmish
```

It's important to put the new code in the right positions. It's usually written that way for a reason and altering where you put the code could result in errors.

Now reapply to Frodo's file what you just did for Sam. Since Frodo has twice the starting health points of Pippin, I'm doubling his cost relative to Pippin.

Under Frodo's Design Parameter's:

```
BountyValue = ROHAN_FRODO_BOUNTY_VALUE
DisplayName = OBJECT:RohanFrodo
RecruitText = CONTROLBAR:RohanFrodoRecruit; added by Meneldil for skirmish
ReviveText = CONTROLBAR:RohanFrodoRevive; added by Meneldil for skirmish
Hotkey = CONTROLBAR:RohanFrodoHotkey; added by Meneldil for skirmish
```

Under Frodo's Engineering Parameters:

```
BuildCost = 200; HOBBIT_BUILD_COST; added by Meneldil for skirmish
BuildTime = HOBBIT_BUILD_TIME; added by Meneldil for skirmish
```

Since we added text and hotkey coding, we need to go back to our lotr.str file. Searching for "RohanPippinRecruit" yields the following:

```
CONTROLBAR:RohanPippinRecruit
"Hero Unit. Recruit a loyal hobbit to fight for your cause"
END
```

```
CONTROLBAR:RohanPippinRevive
"Revive the fallen Hero, Pippin"
END
```

```
CONTROLBAR:RohanPippinHotkey
"&Pippin"
END
```

If you search further, you won't find similar code for Sam or Frodo, so let's add it. I'm also including a slight change to Pippin's recruit text in order to illustrate the flexibility you have for changing descriptions. I replaced the above text code with the following:

Modified:

```
CONTROLBAR:RohanPippinRecruit
"Hero Unit. Recruit this adventurous Took to fight for Gondor."
END
```

```
CONTROLBAR:RohanSamRecruit
"Hero Unit. Recruit Frodo's faithful servant."
END
```

```
CONTROLBAR:RohanFrodoRecruit
"Hero Unit. Recruit the bearer of the One Ring."
END
```

```
CONTROLBAR:RohanPippinRevive
```

```
"Revive the fallen Hero, Pippin"  
END
```

```
CONTROLBAR:RohanSamRevive  
"Revive the fallen Hero, Sam"  
END
```

```
CONTROLBAR:RohanFrodoRevive  
"Revive the fallen Hero, Frodo"  
END
```

```
CONTROLBAR:RohanPippinHotkey  
"&Pippin"  
END
```

```
CONTROLBAR:RohanSamHotkey  
"&Sam"  
END
```

```
CONTROLBAR:RohanFrodoHotkey  
"F&rodo"  
END
```

In case you're wondering why I gave Frodo the letter "R" for his hot key, Faramir already has the letter "F" for his hot key. Save your `lotr.str` file and add it to your INI file, overwriting the existing `lotr.str` file. Save your INI and start the game. You'll see that Sam and Frodo now cost time and money to build. Also, their text descriptions and hot keys are correct. Adjust to suite your preferences.

When you were looking at Sam's file, did you see a reference to "**SamFryingPanBonk?**" Sam has the ability to use a frying pan to smack enemies, so why is it not enabled? It turns out that a number of various game capabilities are disabled, usually because the code is incomplete in some way. I believe cost and/or schedule pressure forced a number of things to be scaled back from what was originally planned; however, you can build on unused code to restore or add certain game features to your mod. I'm going to show one way to restore Sam's Frying Pan Bonk ability. This provides a good opportunity to outline how special powers work for heroes. Note that "Celegin" also did this in his Elven Alliance mod with excellent results.

### **Typical Files Used for Hero Special Abilities**

In general, one or more of the following files are used when modifying or creating hero abilities.

<code>armor.ini</code>	<code>objectcreationlist.ini</code>
<code>attributemodifier.ini</code>	<code>soundeffects.ini</code>
<code>commandbutton.ini</code>	<code>specialpower.ini</code>
<code>commandset.ini</code>	<code>upgrade.ini</code>
<code>experiencelevels.ini</code>	<code>voice.ini</code>
<code>fxlist.ini</code>	<code>weapon.ini</code>
<code>fxparticlesystem.ini</code>	<code>lotr.str</code>
hero's ini file	

I recommend creating a template file that lists the objective of the modification along with the above files. Then provide the code blocks for each heading. When you're done, you have a file you can refer back to you. It also facilitates using search/replace commands for reapplications. For this example, we'll start with what currently exists and then modify accordingly. Note: You may have to search multiple key words to find what you're looking for (e.g., frying, pan, bonk, RohanSam).



## Restoring Sam's Frying Pan Bonk Ability

**Objective:** Show Sam's Original Frying Pan Bonk Code

### data\ini\armor.ini

Nothing

### data\ini\attributemodifier.ini

Nothing

### data\ini\commandbutton.ini

```
CommandButton Command_BonkEnemyWithFryingPan
    Command          = FIRE_WEAPON
    WeaponSlot       = SECONDARY
    Options           = NEED_TARGET_ENEMY_OBJECT
    TextLabel        = CONTROLBAR:FryingPan
    ButtonImage      = HSEomerThrowSpear
    CursorName       = Bombard
    ButtonBorderStyle = ACTION
    DescriptLabel    = CONTROLBAR:ToolTipFryingPan
    InPalantir       = Yes
End
```

### data\ini\commandset.ini

```
CommandSet RohanSamWithFrodoPowersCommandSet
    1 = Command_ToggleFrodoWeapon
    2 = Command_SpecialAbilityElfCloakSam
    3 = Command_SpecialAbilityPhialOfGaladrielSam
    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard
End
```

```
CommandSet RohanSamCommandSet
    1 = Command_ToggleHobbitRockThrow
    2 = Command_SpecialAbilityElfCloakSam
; 3 = Command_BonkEnemyWithFryingPan
    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard
End
```

### data\ini\experiencelevels.ini

Nothing

### data\ini\fxlist.ini

Nothing

### data\ini\fxparticlesystem.ini

Nothing

### data\ini\object\goodfaction\units\rohan\sam.ini

```
; *** ART Parameters ***
```

Search for the word “pan” and you will find a number of model references. This indicates that the graphics are in place for Sam to visually use his frying pan. I am not going to list them here, though.

```
; ***DESIGN parameters ***
Side = Rohan
```

```

EditorSorting = UNIT
ThreatLevel = 4.0
ThingClass = CHARACTER_UNIT

DisplayMeleeDamage = HOBBIT_SWORD_DAMAGE
DisplayRangedDamage = HOBBIT_ROCK_DAMAGE

HeroSortOrder = 70

TransportSlotCount = 1
WeaponSet
    Conditions = None
    Weapon = PRIMARY    HobbitSword
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
;
    Weapon = SECONDARY  SamFryingPanBonk
;
    AutoChooseSources = SECONDARY NONE
End

;
WeaponSet
;
    Conditions = CONTAINED
;
    Weapon = PRIMARY    SamRockThrow
;
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
;
End

WeaponSet
    Conditions = WEAPONSET_TOGGLE_1
    Weapon = PRIMARY    SamRockThrow
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
;
    Weapon = SECONDARY  SamFryingPanBonk
;
    AutoChooseSources = SECONDARY NONE
End

```

**data\ini\specialpower.ini**

Nothing

**data\ini\upgrade.ini**

Nothing

**data\ini\weapon.ini**

```

Weapon SamFryingPanBonk
    LeechRangeWeapon    = Yes
    AttackRange          = 20.0
    MeleeWeapon          = Yes
    PreAttackType        = PER_SHOT ; Do the delay each time we attack a new
target
    DelayBetweenShots    = SAM_PAN_DELAYBETWEENSHOTS                ; time
between shots, msec
    PreAttackDelay       = SAM_PAN_PREATTACKDELAY
    FiringDuration       = SAM_PAN_FIRINGDURATION

    ClipReloadTime       = 10000
    ClipSize              = 1
    AutoReloadsClip      = Yes

    DamageNugget         ; A basic Nugget that just does damage
    Damage                = SAM_PAN_DAMAGE
    Radius                = 0.0
    DelayTime             = 0
    DamageType            = HERO
    DamageFXType         = CLUBBING

```

```
DeathType = NORMAL
End
```

```
End
```

### data\lotr.str

```
CONTROLBAR:FryingPan
"Frying Pan"
END
```

```
CONTROLBAR:ToolTipFryingPan
"Powerful melee attack \n left click then right click on target"
END
```

As you can see, quite a bit of information is already present. Let's see what can be adjusted to make this work. In the command button code block, you'll see that the button image calls for the Palantir image used for Eomer's spear throw command. Before settling for an existing button image that is not ideal, check to see if something better might already exist. To do this, look in the data/ini/mappedimages ini files. The mapped image files contain many of the pictures used by the game. Since we're talking about Sam, first look in data\ini\mappedimages\aptimages\heroui\hssam to see what exists. Searching for "frying" yields the following:

```
MappedImage HPSamFryingPan
Texture = HSSam_001.tga
TextureWidth = 256
TextureHeight = 256
Coords = Left:192 Top:0 Right:256 Bottom:64
Status = NONE
End
```



This implies an image exists for the frying pan bonk ability. If you look in the Textures.big file located in the C:\Program Files\EA GAMES\The Battle for Middle-earth (tm) folder, you'll find a hssam\_001.dds file. Extract and open it with the Photoshop plugin or DDS Converter referenced above and you'll see the adjacent image.

Now we know there is a valid button image for the frying pan. The key learning here is that it pays to search and reapply (unless you have the time, skill, and desire to make your own images).

As you look through other command button codes, you'll see something called "Autoability." This command indicates whether or not to make the ability auto-functioning. That is, when you right-click on the button in the palantir, it highlights its perimeter, indicating it will function automatically when called for. I generally like to have this ability, so I added this line to the code as well.

There's also a reference to the text description (FryingPan) that you can find in your lotr.str file. Adjust the text if you wish. Note that adding a "\n" causes a new line of text to be created.

Now let's look at the command set codes. First, you'll see that there are two versions of Sam. There's the usual one plus the special case when he's alone in Cirith Ungol with Frodo's sword Sting and Galadrial's Phial. There's no reason both versions can't have the pan bonk ability as well. This is easily fixed by uncommenting the "**BonkEnemyWithFryingPan**" line in the one and copying it to the other.

Now look at Sam's INI file. You'll see that some code has been commented out:

```
; Weapon = SECONDARY SamFryingPanBonk
; AutoChooseSources = SECONDARY NONE
```

Remove the commenting (i.e., the semicolons) in both locations.

Everything appears OK with the weapon code. If you want to see what the definition values are (e.g., **SAM\_PAN\_DAMAGE**), refer to the original gamedata.ini file. If you want to make changes, remember not to change the original file. I recommend changing the values by overriding the variable name (comment out the original in case you need it again) or by creating new variable names in the weapon.ini file (more on that later). Save your changes and load the game to see what happens. If you followed the directions correctly, you will find that Sam can now bonk enemies with his frying pan. Let's say you want Sam to have this ability at level 2 instead of right away. What would you do different? In order to have abilities become active at certain levels, you need to modify the experience and upgrade ini files.

### **Keeping Upgrades Under Control**

I want to address one particular thing at this point. After adding a lot of upgrades in my own mods, I noticed that after a while I would get game crashes or other errors. Usually the upgrade simply didn't work. I struggled with this for a long time, thinking I was making some strange programming error. I experimented around for a while and discovered that the game allows only so many upgrade names to exist, which is very frustrating. Instead of creating unique upgrade descriptors, I changed the coding in my upgrades.ini file such that generic names were used. This fixed the problem. Later, I found this excellent post by "Lauri" that summarized the issue: <http://www.the3rdage.net/item-560?addview>. I wish I would have known this much earlier!

If you are going to add upgrade abilities to your characters, then I recommend adding something like this to the bottom of your upgrade.ini file.

```
Upgrade Upgrade_NewAbility1; added by Meneldil as generic upgrade tag
    Type      = OBJECT
End
```

```
Upgrade Upgrade_NewAbility2; added by Meneldil as generic upgrade tag
    Type      = OBJECT
End
```

```
Upgrade Upgrade_NewAbility3; added by Meneldil as generic upgrade tag
    Type      = OBJECT
End
```

```
Upgrade Upgrade_NewAbility4; added by Meneldil as generic upgrade tag
    Type      = OBJECT
End
```

A given character can't have duplicate upgrade references. I'm assuming here you won't have more than 4 new upgrades per character (i.e., for a given hero, infantry, cavalry, etc.). Add additional ones as appropriate. By taking this approach, you shouldn't have to make any further changes to your upgrade.ini file. You'll also be able to have a lot more upgrades at your disposal. When examples of code changes are provided in the proceeding pages that call for the upgrade code, it is only to remind you; don't add duplicate lines of code to your upgrade.ini file!

*Note: I may not reference the upgrade.ini file henceforth. I'm assuming you have copied the above code to your upgrade.ini file. If not, much of the following codes will not work.*

So, if you want to make Sam's pan bonk become active when he reaches level 2, add the following highlighted code to the experience.ini file under Sam's level 2 code, as follows:

#### **data\ini\experiencelevels.ini**

```
ExperienceLevel  SamLevel2
    TargetNames           =      RohanSam
    RequiredExperience     =      HOBBIT_LVL2_EXP_NEEDED
    ExperienceAward        =      HOBBIT_LVL2_EXP_AWARD
    LevelUpFx              =      FX:GandalfLevelUp1FX
    ;LevelUpOCL            =      OCL_GandalfLevelUp1OCL
```

```

    Upgrades = Upgrade_NewAbility1; added by
Meneldil for pan bonk ability
    Rank = 2
    AttributeModifiers = HobbitLevelUpDamage1
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
End

```

You'll also have to modify the commandbutton.ini file to include the following:

```

Options = NEED_UPGRADE NEED_TARGET_ENEMY_OBJECT
NeededUpgrade = Upgrade_NewAbility1

```

This tells the game to look for an upgrade by the name of NewAbility1 before granting it. You should know enough now to add or reposition an ability to take place at the desired level. If you wanted to make this happen at level 3, could you do it?

Here are the other code blocks for enabling Sam's frying pan bonk ability.

#### data\ini\commandbutton.ini

```

CommandButton Command_BonkEnemyWithFryingPan
    Command = FIRE_WEAPON
    WeaponSlot = SECONDARY
    Options = NEED_UPGRADE NEED_TARGET_ENEMY_OBJECT
    NeededUpgrade = Upgrade_NewAbility1
    TextLabel = CONTROLBAR:FryingPan
    ButtonImage = HPSamFryingPan; Meneldil changed original
HSEomerThrowSpear
    CursorName = Bombard
    ButtonBorderType = ACTION
    DescriptLabel = CONTROLBAR:ToolTipFryingPan
    InPalantir = Yes
    AutoAbility = Yes; added by Meneldil
End

```

#### data\ini\commandset.ini

```

CommandSet RohanSamWithFrodoPowersCommandSet
    1 = Command_ToggleFrodoWeapon
    2 = Command_SpecialAbilityElfCloakSam
    3 = Command_SpecialAbilityPhialOfGaladrielsSam
    4 = Command_BonkEnemyWithFryingPan; added by Meneldil
    5 = Command_OneRing; added by Meneldil
    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard
End

CommandSet RohanSamCommandSet
    1 = Command_ToggleHobbitRockThrow
    2 = Command_SpecialAbilityElfCloakSam
    3 = Command_BonkEnemyWithFryingPan; restored by Meneldil
    13 = Command_AttackMove
    14 = Command_Stop

```

15 = Command\_Guard  
End

### data\ini\object\goodfaction\units\rohan\frodo.ini

Under Child Object “RohanSamWithFrodoPowers” look for Sam’s weapon set and modify the following as indicated:

```
WeaponSet
    Conditions = None
    Weapon = PRIMARY    Sting
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI; Meneldil
added
    Weapon = SECONDARY  SamFryingPanBonk; Meneldil added
    AutoChooseSources = SECONDARY NONE; Meneldil added
End
```

```
WeaponSet
    Conditions = WEAPONSET_ONE_RING_MODE
End
```

```
WeaponSet
    Conditions = WEAPONSET_TOGGLE_1
    Weapon = PRIMARY  SLSamRockThrow
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI; Meneldil
added
    Weapon = SECONDARY  SamFryingPanBonk; Meneldil added
    AutoChooseSources = SECONDARY NONE; Meneldil added
End
```

### data\ini\object\goodfaction\units\rohan\sam.ini

Under “\*\*\*ART parameters \*\*\*” modify the following as indicated:

```
;;----- SELECTED -----
-----
AnimationState                = SELECTED
    StateName                  = STATE_Attention_Rocks
    Animation
        AnimationName          = RUSam_ATNB
        AnimationMode          = LOOP
    End
BeginScript
    ;CurDrawableHideSubObject("pan"); Meneldil disabled
    Prev = CurDrawablePrevAnimationState()
```

Just below that under “IDLE STATE” there are two additional entries of “CurDrawableHideSubObject(“pan”).” Comment both lines out as well. This allows the frying pan animation to be used. Credit for this goes to “Celegin” since I simply copied what he did for the animations.

Under “\*\*\*DESIGN parameters \*\*\*” modify the following as indicated:

```
WeaponSet
    Conditions = None
    Weapon = PRIMARY    HobbitSword
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
    Weapon = SECONDARY  SamFryingPanBonk; Meneldil restored
    AutoChooseSources = SECONDARY NONE; Meneldil restored
End
; WeaponSet
```

```

;           Conditions = CONTAINED
;           Weapon = PRIMARY      SamRockThrow
;           AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
;           End

WeaponSet
    Conditions = WEAPONSET_TOGGLE_1
    Weapon = PRIMARY      SamRockThrow
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
    Weapon = SECONDARY SamFryingPanBonk; Meneldil restored
    AutoChooseSources = SECONDARY NONE; Meneldil restored
End

```

### data\upgrade.ini

```

Upgrade Upgrade_NewAbility1; added by Meneldil as generic upgrade tag
    Type      = OBJECT
End

```

### data\lotr.str

```

CONTROLBAR:FryingPan
"&Frying Pan"
END

```

```

CONTROLBAR:ToolTipFryingPan
"Required: Rank 2 \n Use Sam's frying pan like a club\n Right click to auto-
activate or \n Left click then right click on target"
END

```

What else can we do with this ability? You can add a blast back effect when Sam hits with the pan (look for Boromir in the weapon.ini file as an example). Refer to the weapon.ini file excerpt below for the code. In addition, you can add sound effects. For this example, I'm going to use sound effects located in the EnglishAudio.big file. I recommend extracting all of the sounds from it and looking for one or more that apply (search keyword "Sam" in this case). Here are the relevant code blocks for adding the desired sound effects.

### data\ini\fxlist.ini

```

; ----- added by Meneldil
FXList FX_SamFryingPanHit
    Sound
        Name = ImpactFryingPan
    End
End

```

### data\ini\soundeffects.ini

```

AudioEvent ImpactFryingPan ; added by Meneldil
    Sounds = gusamwi_voiatcd gusamwi_voiatce gusamwi_voiphia gusamwi_voisebr
gusamwi_voisebz mgamonh_sam008 mgmoria_sam003 mgshelo_sam030
; refer to C:\Program Files\EA GAMES\The Battle for Middle-earth
(tm)\EnglishAudio.big
    Control = random
    Priority = normal
    Volume = 130
    Type = world shrouded everyone; allows everyone nearby within fog of war to hear
(world shrouded player only allows you to hear)
    SubmixSlider = SoundFX
End

```



## data\ini\weapon.ini

```
-----  
Weapon SamFryingPanBonk  
  LeechRangeWeapon      = Yes  
  AttackRange           = 20.0  
  MeleeWeapon           = Yes  
  PreAttackType         = PER_SHOT ; Do the delay each time we attack a new  
target  
  
  DelayBetweenShots     = SAM_PAN_DELAYBETWEENSHOTS; time between shots, msec  
  PreAttackDelay        = SAM_PAN_PREATTACKDELAY  
  FiringDuration        = SAM_PAN_FIRINGDURATION  
  
  ClipReloadTime        = 10000  
  ClipSize              = 1  
  AutoReloadsClip       = Yes  
  
  DamageNugget          ; A basic Nugget that just does damage  
  Damage                = 200; Meneldil doubled the original SAM_PAN_DAMAGE  
  Radius                = 0.0  
  DelayTime             = 0  
  DamageType            = HERO  
  DamageFXType          = CLUBBING  
  DeathType             = NORMAL  
End  
  
;Meneldil added the following to provide frying pan impact sound effects and blast  
effect  
  FireFX                = FX_SamFryingPanHit  
  MetaImpactNugget      ; A Nugget that throws things back with force  
  HeroResist            = 0.25  
  ShockWaveAmount       = 25  
  ShockWaveRadius       = 8  
  ShockWaveArc          = 120  
  ShockWaveTaperOff    = 0.5  
End  
End
```

As you can see, this wasn't very difficult to do. More importantly, you should have a better understanding of how a hero's powers work.

## Adding Passive Leadership

Now let's see what else we can do for Sam. Let's provide him some passive leadership and the ability to summon allies. What is passive leadership? Passive leadership is when a hero provides additional capabilities (called attributes) to other units or hordes (e.g., speed, armor, damage, etc.) just by being within a defined range.

We'll reapply Boromir's passive leadership (we could also have chosen Faramir or Gandalf; the same principle would apply). Go to the `attributemodifier.ini` file and read the comments at the top. It provides a good overview of how this file works. Now search for Boromir's passive leadership and you'll find the following codes:

### data\ini\attributemodifier.ini

```
ModifierList BoromirPassiveLeadership
    Category = LEADERSHIP
    ;Modifier = ARMOR 50%          ; Additive. Sum of these are subtracted from
all entries in Armor.ini
    Modifier = DAMAGE_MULT 160% ; 200%          ; Multiplicative. Damage
multiplied by this, will compound in multiple bonuses
    ;Modifier = EXPERIENCE 300% ; Multiplicative. All exp gained mult by this
Duration = 3000          ; Matches RefreshRate of giving module
FX          = FX_GenericLeadershipLvl1
FX2         = FX_GenericLeadershipLvl2
FX3         = FX_GenericLeadershipLvl3
MultiLevelFX = Yes
End
```

### data\ini\commandbutton.ini

```
CommandButton Command_SpecialAbilityBoromirForGondor
Command          = SPECIAL_POWER
SpecialPower     = SpecialAbilityFakeLeadership
Options          = NONPRESSABLE
TextLabel       = CONTROLBAR:Leadership
ButtonImage     = HSFaramirLeadership
RadiusCursorType = TRAINING
ButtonBorderStyle = ACTION
DescribeLabel   = CONTROLBAR:ToolTipBoromirLeadership
InPalantir      = Yes
End
```

### data\ini\commandset.ini

```
CommandSet BoromirCommandSet
1 = Command_SpecialAbilityBoromirForGondor ;
2 = Command_SpecialAbilityHornOfGondor
3 = Command_SpecialAbilityCaptainOfGondorBoromir
;
3 = Command_BoromirLastStandFakeButton
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
End
```

### data\ini\experiencelevels.ini

```
ExperienceLevel BoromirLevel4
TargetNames          = GondorBoromir
RequiredExperience   = BOROMIR_LVL4_EXP_NEEDED
ExperienceAward      = BOROMIR_LVL4_EXP_AWARD
AttributeModifiers   = HeroLevelUpDamage3
Rank                 = 4
LevelUpFx            = FX:GandalfLevelUp1FX
;LevelUpOCL          = OCL_GandalfLevelUp1OCL
Upgrades             =
Upgrade_BoromirForGondorSpeech
```

```

; Upgrades = Upgrade_HeroRadiateFear
SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 1
End
END

```

### data\ini\object\goodfaction\units\gondor\boromir.ini

```

Behavior = AttributeModifierAuraUpdate ModuleTag_BoromirLeadership
    StartsActive = No ;If no, requires upgrade to turn on.
    BonusName = BoromirPassiveLeadership
    TriggeredBy = Upgrade_BoromirForGondorSpeech
    RefreshDelay = 2000
    Range = 200
    ObjectFilter = ANY +INFANTRY +CAVALRY -STRUCTURE -BASE_FOUNDATION
-HERO
End

Behavior = UnpauseSpecialPowerUpgrade ModuleTag_UnpauseLeadership
    SpecialPowerTemplate = SpecialAbilityFakeLeadership
    TriggeredBy = Upgrade_BoromirForGondorSpeech
End
Behavior = SpecialPowerModule ModuleTag_BoromirLeadershipUpdate
    SpecialPowerTemplate = SpecialAbilityFakeLeadership
    UpdateModuleStartsAttack = No
    StartsPaused = Yes
End

```

### data\ini\upgrade.ini

```

Upgrade Upgrade_BoromirForGondorSpeech
    Type = OBJECT
End

```

### data\lotr.str

```

CONTROLBAR:Leadership
"Leadership"
END

```

```

CONTROLBAR:ToolTipBoromirLeadership
"Required: Rank 4 \n Leadership bonus to nearby troops \n +60% Damage \n Passive
ability"
END

```

Now let's reapply this to Sam such that at level 6 he gives a 20% damage bonus to other friendly hobbits if they are nearby (we'll include Merry to allow for Campaign mode in addition to Skirmish mode). I'm also including some of the other changes we've made so far. Note that new code blocks for the attributemodifier.ini, commandbutton.ini, commandset.ini, and lotr.str files can be placed at the end of their respective files since their locations are not critical (they are essentially lists of code blocks).

Here is a summary of the code changes for Sam's passive leadership ability. Other miscellaneous changes are also included.

### data\ini\attributemodifier.ini

```
ModifierList SamPassiveLeadership; added by Meneldil for Sam
    Category      = LEADERSHIP
    Modifier       = DAMAGE_MULT 120% ; Multiplicative
    Duration       = 3000                ; Matches refresh rate of giving module
    FX             = FX_GenericLeadershipLvl1
    FX2           = FX_GenericLeadershipLvl2
    FX3           = FX_GenericLeadershipLvl3
    MultiLevelFX  = Yes
End
```

### data\ini\commandbutton.ini

```
CommandButton NonCommand_SelectAllHeroes
    TextLabel     = CONTROLBAR:SelectAllHeroes; Reinstated by Meneldil
    DescriptLabel = CONTROLBAR:SelectAllHeroesDescription
End

CommandButton Command_SpecialAbilitySamLeadership; added by Meneldil for Sam
    Command       = SPECIAL_POWER
    SpecialPower  = SpecialAbilityFakeLeadership
    Options       = NONPRESSABLE
    TextLabel     = CONTROLBAR:Leadership
    ButtonImage   = HSFaramirLeadership
    RadiusCursorType = TRAINING
    ButtonBorderType = ACTION
    DescriptLabel = CONTROLBAR:ToolTipSamLeadership
    InPalantir    = Yes
End
```

Note: The above codes are in different sections; use the search command to find it.

### data\ini\commandset.ini

```
CommandSet RohanSamCommandSet
    1 = Command_ToggleHobbitRockThrow
    2 = Command_SpecialAbilityElfCloakSam
    3 = Command_BonkEnemyWithFryingPan; restored by Meneldil
    4 = Command_SpecialAbilitySamLeadership; added by Meneldil
    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard
End
```

### data\ini\experiencelevels.ini

```
ExperienceLevel SamLevel6
    TargetNames      = RohanSam
    RequiredExperience = HOBBIT_LVL6_EXP_NEEDED
    ExperienceAward   = HOBBIT_LVL6_EXP_AWARD
    LevelUpFx        = FX:GandalfLevelUp1FX
    ;LevelUpOCL      = OCL_GandalfLevelUp1OCL
    Upgrades         = Upgrade_NewAbility2; added by
Meneldil for leadership upgrade
    Rank             = 6
    AttributeModifiers = HobbitLevelUpDamage5
    SelectionDecal
        Texture      = decal_hero_good
        Style        = SHADOW_ALPHA_DECAL
        OpacityMin   = 50%
```

```

OpacityMax           = 100%
MinRadius            = 40
MaxRadius            = 200
MaxSelectedUnits     = 40

```

End

End

### data\ini\object\goodfaction\units\rohan\sam.ini

Under "\*\*\*\*DESIGN parameters \*\*\*\*" add/modify the following:

```

DisplayName = OBJECT:RohanSam
BountyValue = ROHAN_SAM_BOUNTY_VALUE_NEW; Meneldil appended "_NEW"
RecruitText = CONTROLBAR:RohanSamRecruit; added by Meneldil for skirmish
ReviveText  = CONTROLBAR:RohanSamRevive; added by Meneldil for skirmish
Hotkey      = CONTROLBAR:RohanSamHotkey; added by Meneldil for skirmish

```

under "\*\*\*\* ENGINEERING Parameters \*\*\*\*" add/modify the following:

```

BuildCost = 150; HOBBIT_BUILD_COST; added by Meneldil for skirmish
BuildTime = HOBBIT_BUILD_TIME; added by Meneldil for skirmish

```

```

;-----Sam Leadership-----
; added by Meneldil
Behavior = AttributeModifierAuraUpdate ModuleTag_SamLeadership
  StartsActive      = No; If no, requires upgrade to turn on.
  BonusName         = SamPassiveLeadership
  TriggeredBy      = Upgrade_NewAbility2
  RefreshDelay     = 3000
  Range             = 200
  ObjectFilter      = ANY -INFANTRY -CAVALRY -STRUCTURE -HERO +RohanFrodo
+RohanPippin +RohanMerry; +HOBBIT doesn't work
End
Behavior = UnpauseSpecialPowerUpgrade ModuleTag_UnpauseLeadership
  SpecialPowerTemplate = SpecialAbilityFakeLeadership
  TriggeredBy = Upgrade_NewAbility2
End

Behavior = SpecialPowerModule ModuleTag_SamLeadershipUpdate
  SpecialPowerTemplate = SpecialAbilityFakeLeadership
  UpdateModuleStartsAttack = No
  StartsPaused = Yes
End
;-----

```

Note that some of the above code already exists; it's included to make it easy to find where to make changes. I'll do this frequently throughout this document.

### data\lotr.str

```

CONTROLBAR:RohanPippinRecruit
"Hero Unit. Recruit this adventurous Took to fight for Gondor."
END

```

```

CONTROLBAR:RohanSamRecruit
"Hero Unit. Recruit the faithful servant of Frodo."
END

```

```

CONTROLBAR:RohanFrodoRecruit
"Hero Unit. Recruit the bearer of the One Ring."
END

```

CONTROLBAR:RohanPippinRevive  
"Revive the fallen Hero, Pippin"  
END

CONTROLBAR:RohanSamRevive  
"Revive the fallen Hero, Sam"  
END

CONTROLBAR:RohanFrodoRevive  
"Revive the fallen Hero, Frodo"  
END

CONTROLBAR:RohanPippinHotkey  
"&Pippin"  
END

CONTROLBAR:RohanSamHotkey  
"&Sam"  
END

CONTROLBAR:RohanFrodoHotkey  
"&Frodo"  
END

CONTROLBAR:ToolTipFryingPan  
"Required: Rank 2 \n Use Sam's frying pan like a club \n Right click to auto-  
activate or \n Left click then right click on target"  
END

CONTROLBAR:ToolTipSamLeadership  
"Required: Rank 6 \n Nearby hobbit allies deliver 20% more damage \n Passive  
ability"  
END

## Summoning Aid

Now let's provide Sam the capability to summon aid; in this example, an eagle. I picked summoning an eagle because it provides an example of summoning an existing entity, which simplifies the coding. Here's an example of what the code would look like. I've highlighted name references that need to be duplicated (additional details provided below).

### Objective:

Provide Sam the capability to summon an Eagle at Level 8 every 9 minutes. You can choose between an eagle with a limited lifetime or one without one.

### data\ini\commandbutton.ini

```
CommandButton Command_SpawnWingSupport; added by Meneldil for Sam
  Command      = SPECIAL_POWER
  SpecialPower  = SuperweaponSpawnWingSupport
  ButtonImage  = SBGood_EagleAllies; UCEagle_Swoop
  Options      = NEED_TARGET_POS CONTEXTMODE_COMMAND
  RadiusCursorType = EAGLE_ALLIES
  CursorName   = Bombard
  InvalidCursorName = GenericInvalid
  ButtonBorderType = ACTION
  InPalantir   = Yes
  TextLabel    = CONTROLBAR:SummonWingSupport
  DescriptLabel = CONTROLBAR:ToolTipSummonWingSupport
End
```

*Note: I added this to the bottom of the file.*

### data\ini\commandset.ini

```
CommandSet RohanSamCommandSet
  1 = Command_ToggleHobbitRockThrow
  2 = Command_SpecialAbilityElfCloakSam
  3 = Command_BonkEnemyWithFryingPan; restored by Meneldil
  4 = Command_SpecialAbilitySamLeadership; added by Meneldil
  5 = Command_SpawnWingSupport; added by Meneldil
  13 = Command_AttackMove
  14 = Command_Stop
  15 = Command_Guard
End
```

*Note: There's no point in adding the eagle summons to Sam in Cirith Ungol.*

### data\ini\experiencelevels.ini

```
ExperienceLevel SamLevel8
  TargetNames      = RohanSam
  RequiredExperience = HOBBIT_LVL8_EXP_NEEDED
  ExperienceAward  = HOBBIT_LVL8_EXP_AWARD
  LevelUpFx        = FX:GandalfLevelUp1FX
  ;LevelUpOCL      = OCL_GandalfLevelUp1OCL
  Upgrades         = Upgrade_NewAbility3; added by
Meneldil for eagle summons
  Rank             = 8
  AttributeModifiers = HobbitLevelUpDamage7
  SelectionDecal
    Texture        = decal_hero_good
    Style          = SHADOW_ALPHA_DECAL
    OpacityMin     = 50%
    OpacityMax     = 100%
    MinRadius      = 40
    MaxRadius      = 200
```



```

        MaxSelectedUnits = 40
    End
End

data\ini\object\goodfaction\units\rohan\sam.ini
;-----Summon Wing Support-----
; added by Meneldil
    Behavior = UnpauseSpecialPowerUpgrade ModuleTag_WingSupport; actual name not
important but must be unique
    SpecialPowerTemplate = SuperweaponSpawnWingSupport
    TriggeredBy = Upgrade_NewAbility3
    End

    Behavior = OCLSpecialPower SummonWingSupport; actual name not important but
must be unique
    SpecialPowerTemplate = SuperweaponSpawnWingSupport
    OCL = OCL_SpawnWingSupportEgg
    TriggerFX = FX_HordeResurrection
    CreateLocation = USE_OWNER_OBJECT
    StartsPaused = Yes
    SetModelCondition = ModelConditionState:LEVELED
    SetModelConditionTime = 8.1
    End
;-----

```

*Note: This goes in the engineering parameters section with the other behaviors.*

### data\ini\objectcreationlist.ini

```

;-----
; Summon an eagle ; added by Meneldil for Sam
ObjectCreationList OCL_SpawnWingSupportEgg
    CreateObject
        ObjectNames = GondorGwaihir; use GondorGwaihir_Summoned for timed support
        Count = 1; how many do you want?
        FadeIn = Yes; allows for transition
        FadeTime = 5000; in milliseconds; how long to transition
        IgnoreCommandPointLimit = Yes
        Disposition = LIKE_EXISTING
        Offset = X:15 Y:15 Z:15; Z-axis is zero for ground units
    End
End

```

*Note: I added this to the bottom of the file.*

### data\ini\specialpower.ini

```

;-----
SpecialPower SuperweaponSpawnWingSupport; added by Meneldil for Sam
    Enum = SPECIAL_SPAWN_OATHBREAKERS
    ReloadTime = 540000; 9 minutes (number in milliseconds)
    PublicTimer = No
    InitiateAtLocationSound = SpellEagleAlliesSummon
    RadiusCursorRadius = 90; make this big enough to cover what you are
summoning
End

```

*Note: I added this to the bottom of the file.*

## data\ini\upgrade.ini

```
Upgrade Upgrade_NewAbility3; added by Meneldil as generic upgrade tag
    Type = OBJECT
End
```

*Note: I added this to the bottom of the file.*

## data\lotr.str

```
CONTROLBAR:SummonWingSupport
"&Wing Support"
END
```

```
CONTROLBAR:ToolTipSummonWingSupport
"Required: Rank 8 \n Call on an eagle to assist you \n Left click to activate"
END
```

*Note: I added this to the bottom of the file.*

To test whether this works, temporarily put the “Upgrade\_NewAbility3” code in Sam’s level 1 code. This will enable the capability as soon as Sam is created (so you don’t have to wait for him to reach level 10). In fact, since we’re going to add 4 upgrades to Sam, just go ahead and put them all in his level 1 code, as shown below. Just remember to comment them out when you are done so that they activate at the right level.

```
;----- SAM -----
ExperienceLevel SamLevel1
    TargetNames = RohanSam
    RequiredExperience = 1
    ExperienceAward = HOBBIT_LVL1_EXP_AWARD
    Rank = 1
    Upgrades = Upgrade_NewAbility1; added by
Meneldil for pan bonk test (see level 2)
    Upgrades = Upgrade_NewAbility2; added by
Meneldil for leadership test (see level 4)
    Upgrades = Upgrade_NewAbility3; added by
Meneldil for eagle summon test (see level 8)
    Upgrades = Upgrade_NewAbility4; added by
Meneldil for elven summon test (see level 10)
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
End
```

An alternative method to testing new summoning abilities is to just create your hero at level 10. That way, all potential abilities will be present. To do this, add or modify the following code in the hero’s ini file (in the Engineering Parameters section).

```
Behavior = ExperienceLevelCreate ModuleTag_MPLevelBonus
    LevelToGrant = 10; (level 1 to 10)
    MPOnly = Yes; Multi-player (skirmish) mode only
End
```

Look at Sam's eagle summons code above. I have highlighted codes that usually need to be repeated in order for this to work. You can use pretty much whatever names you like; just repeat it as shown above. However, be sure you do not duplicate any module tag names or you will get an error. I generally use a template for creating this kind of code; I use the search/replace command feature with MS Word to make sure I get the correct repeat pattern.

I have added some comments to further help explain things. Here are some other tips relating to this kind of code.

### Button Images

There's lots of these; too many to list. In general, think of what you want to show and then seek out and reapply. Don't forget that there may be some unused images in the Textures.big file located in the The Battle for Middle-earth (tm) folder. I created a directory (data\ini\mappedimages\aptimages\myimages.ini) to hold miscellaneous texture files for use in my mod. For example, the adjacent image appears in the Textures.big file.



I plan to use this for a button image later on, so I'll add it to my directory, as shown below.

```
; -----
; Images for art in Lord of the Rings
; File created by Meneldil
; Reference Textures.big file located in C:\Program Files\EA GAMES\The Battle for
Middle-earth (tm)
; -----
MappedImage StarBurst
  Texture = exstarbursth.tga
  TextureWidth = 256
  TextureHeight = 256
  Coords = Left:0 Top:0 Right:256 Bottom:256
  Status = NONE
End
```

Note that if you use existing game artwork, you don't need to create a new assest.dat file. If you add new artwork, then you do.

### Radius Cursor Types

The following radius cursors (from the commandbutton.ini file) all work. You can create new ones if you like. I've never tried it, but you can find information about it in the forums.

ARCHERY_TRAINING	EAGLE_ALLIES	GUARD_AREA	PALANTIR_VISION
ARMY_OF_THE_DEAD	ELVEN_ALLIES	HEAL	ROHAN_ALLIES
ARROWSTORM	ELVEN_WOOD	INDUSTRY	SPEECH_CRAFT
ATHELAS	ENT_ALLIES	KINGS_FAVOR	SUMMON_BALROG
CAPTAIN_OF_GONDOR	EYE_OF_SAURON	LEAP	TAINT
DEVASTATION	FIRE_BREATH	LIGHTNING_SWORD	WAR_CHANT
DOMINATE			

## Special Effects

There's lots of these (look in the fxlist.ini and system.ini files); too many to list here. Here are some you may want to check out.

FX_Anduril	FX_HordeResEvil
FX_BalrogSummoningFinish	FX_HordeResurrection
FX_BalrogSummoningStart	FX_HornOfGondor
FX_BalrogUnsummonInitial	FX_Industry
FX_BannerCarrierSpawnUnit	FX_LevelUp
FX_Berseker	FX_LightningThunderStrike
FX_Birds	FX_Resurrect
FX_BoromirHorn	FX_Resurrection
FX_CatapultFlamingProjectileExplosion	FX_RohirimSummon
FX_Devastation	FX_RohirrimAlliesUnsummon
FX_DevastationFlare	FX_SarumanFireBallExplode
FX_ElendilGlow	FX_SpeechCraft
FX_ElvenAlliesSummon	FX_SpellWarChant
FX_ElvenCloakOn	FX_SplatDust
FX_ElvenWoodSpellFX	FX_SummonAOD
FX_ExplosiveMine	FX_SummonEntAllies
FX_FueltheFires	FX_TaintSpellFX
FX_GandalfBlast	FX_TheodenGloriousChargeFX
FX_GimliLeapLand	FX_UnSummonElvenAllies
FX_GimliSlayerFX	FX_UnSummonEntAllies
FX_GoldChestPickup	FX_WitchKingPoison

## Sounds

Here are the sounds from the specialpowers.ini file. Refer to soundeffects.ini for others.

AragornAthelesEffect	SpellCloudBreakStereo
ArmyDeadEnterMono	SpellDarkness
EyeOfSauronCreated	SpellDevastation
GenericSpell	SpellEagleAlliesSummon
GondorSoldierCelebratingLarge	SpellElvenSummon
LegolasHawkStrikeArrowShoot	SpellElvenWood
LurtzVoiceAttackCripplingStrike	SpellEntsSummon
NazgulScreech	SpellFuelTheFires
PartTheHeavens	SpellIndustry
RainOfFireStart	SpellPalantirVision
RohirrimSpeechCheer	SpellRohirrimSummon
SarumanFireball	SpellTaint
SarumanWormtongue	SpellWarChant
SpellCallTheHordeStereo	ThunderStrikesStereo

Hopefully, you have a better understanding of how to summon allies, including picking button images, special effects, and sounds. Keep in mind that only existing files have been listed; you can of course add your own.

You may also find the following related tutorials of interest:

- Command Buttons and Command Sets (by "Hostile"): <http://www.the3rdage.net/item-67?addview>
- Summoning Allies the Spellbook (by "Hostile"): <http://www.the3rdage.net/item-55?addview>

## Summoning Aid – Adding Elrond

Now let's give Sam the ability to summon Elven aid. To do this, we need to know where the elves are in the code. Of the elven heroes, only Legolas is complete. Elrond is functional, but has no voice. Arwen, Galadriel, and Haldir are merely outlines (e.g., no unique graphics, commands, or voices). We'll start by adding Elrond.

Elrond's code is located, as you would expect, in the `elrond.ini` file. Go to your `objectcreationlist.ini` file and find Sam's eagle summons. Temporarily replace "`GondorGwaihir`" with "`ElvenElrond`" – this type of approach (substituting another item in the object creation list for a working summons) is an easy way to test the viability of a summoned item without having to create a lot of new code. After saving and starting a new game as Gondor, see what happens when Sam summons the eagle (disregard the eagle radius cursor and sound effect for now). Did you remember to make it such that he can do this as soon as he is created? Don't forget to restore the eagle as your created object when you're done.

As you'll see, Elrond comes in at level 10, but only has the ability to toggle between his bow and sword. He is also mute. Looking in his file as well as the original `gamedata.ini` file, you'll see he has no armor but he does have 150 damage.

If you look in Elrond's mapped images (`data\ini\mappedimages\aptimages\heroui\hselrond.ini`) file, you'll see he has a couple of his own button images that aren't being used. If you look in the `Textures.big` file located in the `C:\Program Files\EA GAMES\The Battle for Middle-earth (tm)` folder, you'll find Elrond's `hselrond_001.dds` file. Refer to the adjacent picture. The top right is his leadership button image; some code already exists for his leadership ability. Of course, we can use other button images as well if we wish. Let's improve on his capabilities:



- Voice additions
- Armor improvements
- Weapon improvements
- Leadership ability

First, though, we need to create the overall structure for Sam to summon Elven aid at level 10.

### **Objective:**

Provide Sam the capability to summon Elven aid at Level 10 every 7 minutes. These summoned allies will automatically fade after their allotted time has expired.

### **data\ini\commandbutton.ini**

```
CommandButton Command_SpawnElvenAid; added by Meneldil
  Command          = SPECIAL_POWER
  SpecialPower     = SuperweaponSpawnElvenAid
  TextLabel        = CONTROLBAR:SummonElvenAid
  ButtonImage      = UPRohan_ElvenWarrior; BCElvenBarracks_ElvenWarriors;
SBGood_ElvenAllies;
  Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND
  RadiusCursorType = ELVEN_ALLIES
  CursorName       = AttackObj
  InvalidCursorName = GenericInvalid
  ButtonBorderType = ACTION
  DescriptLabel    = CONTROLBAR:ToolTipSummonElvenAid
  InPalantir       = Yes
End
```

Note: I added this to the bottom of the file.

### data\ini\commandset.ini

```
CommandSet RohanSamCommandSet
  1 = Command_ToggleHobbitRockThrow
  2 = Command_SpecialAbilityElfCloakSam
  3 = Command_BonkEnemyWithFryingPan; restored by Meneldil
  4 = Command_SpecialAbilitySamLeadership; added by Meneldil
  5 = Command_SpawnWingSupport; added by Meneldil
  6 = Command_SpawnElvenAid; added by Meneldil
 13 = Command_AttackMove
 14 = Command_Stop
 15 = Command_Guard
End
```

### data\ini\experiencelevels.ini

```
ExperienceLevel SamLevel10
  TargetNames = RohanSam
  RequiredExperience = HOBBIT_LVL10_EXP_NEEDED
  ExperienceAward = HOBBIT_LVL10_EXP_AWARD
  LevelUpFx = FX:GandalfLevelUp1FX
  ;LevelUpOCL = OCL_GandalfLevelUp1OCL
  Upgrades = Upgrade_NewAbility4; added by
Meneldil for Elven summons
  Rank = 10
  AttributeModifiers = HobbitLevelUpDamage9
  SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 40
  End
End
```

### data\ini\object\goodfaction\units\rohan\sam.ini

```
;-----Summon Elven Aid-----
; added by Meneldil
  Behavior = UnpauseSpecialPowerUpgrade ModuleTag_ElvenAid
  SpecialPowerTemplate = SuperweaponSpawnElvenAid
  TriggeredBy = Upgrade_NewAbility4
  End

  Behavior = OCLSpecialPower SummonElvenAid; actual name not important but must
be unique
  SpecialPowerTemplate = SuperweaponSpawnElvenAid
  OCL = OCL_SpawnElvenAidEgg
  TriggerFX = FX_ElvenAlliesSummon
  CreateLocation = USE_OWNER_OBJECT
  StartsPaused = Yes
  SetModelCondition = ModelConditionState:LEVELED
  SetModelConditionTime = 8.1
  End
;-----
```

Note: I added this in the “ENGINEERING Parameters” section.

### data\ini\objectcreationlist.ini

```
; -----  
-----  
; Summon elven aid ; added by Meneldil for Sam  
ObjectCreationList OCL_SpawnElvenAidEgg  
  CreateObject  
    ObjectNames = ElvenElrond  
    Count = 1  
    FadeIn = Yes  
    FadeTime = 2000  
    Disposition = LIKE_EXISTING  
  End  
End
```

Note: I added this to the bottom of the file.

### data\ini\specialpower.ini

```
; -----  
SpecialPower SuperweaponSpawnElvenAid; added by Meneldil for Sam  
  Enum = SPECIAL_SPAWN_OATHBREAKERS  
  ReloadTime = 420000; 7 minutes (number in milliseconds)  
  PublicTimer = No  
  InitiateAtLocationSound = GondorSoldierCelebratingLarge; SpellElvenSummon  
  RadiusCursorRadius = 90  
End
```

Note: I added this to the bottom of the file.

### data\ini\upgrade.ini

```
Upgrade Upgrade_NewAbility4; added by Meneldil as generic upgrade tag  
  Type = OBJECT  
End
```

Note: I added this to the bottom of the file.

### data\lotr.str

```
CONTROLBAR:SummonElvenAid  
"El&ven Aid"  
END
```

```
CONTROLBAR:ToolTipSummonElvenAid  
"Required: Rank 10 \n Call on Elven allies to assist you \n Left click to  
activate"  
END
```

At this point, Sam should be able to summon an eagle as well as Elrond. The next step is to give some voices to Elrond as well as some additional capabilities.

### Adding Voices to Elrond

To add voices to a hero, you need to use the following the files:

- The hero's ini file; in this case, data\ini\object\goodfaction\units\elven\elrond.ini
- The data\ini\voice.ini file

If sounds don't exist, add them individually as data\audio\sounds\soundname.wav (they must be .wav format).

In Elrond's case, his hero file references a bunch of voices (look under **AUDIO Parameters**). Go to the voice.ini file and search for Elrond's header. There you will see the actual sound clip names. Unfortunately, if you look in the EnglishAudio.big file, the only voices actually provided for him are 5 death sound clips (guelron\_voidiea, guelron\_voidieb, guelron\_voidiec, guelron\_voidied, and guelron\_voidiee). As a result, the only sound you hear from Elrond is when he dies. So where to get sound files? You can copy them from the movies, download them from the Internet, or copy them from other mods. If you copy from other mods, please respect any wishes from the author or authors regarding copying their files (assuming the original author hasn't abandoned the mod or been absent from modding for a considerable time – use your judgment). At a minimum, give credit where credit is due.

Here are some links I found on the Internet where you can download free sound clips from the movies. There are others and the below links may no longer be around if you look. Therefore, do an online search if you want to go this route.

<http://mevault.ign.com/View.php?view=Other.Detail&id=7>

[http://www.reelwavs.com/movies/lord\\_of\\_the\\_rings/](http://www.reelwavs.com/movies/lord_of_the_rings/)

<http://www.moviesoundscentral.com/lordoftherings.htm>

<http://www.moviesoundscentral.com/lordoftherings2.htm>

<http://www.moviesoundscentral.com/lordoftherings3.htm>

<http://www.jo.spacia.org/elrond/>

<http://elffetish.com/audio.html>

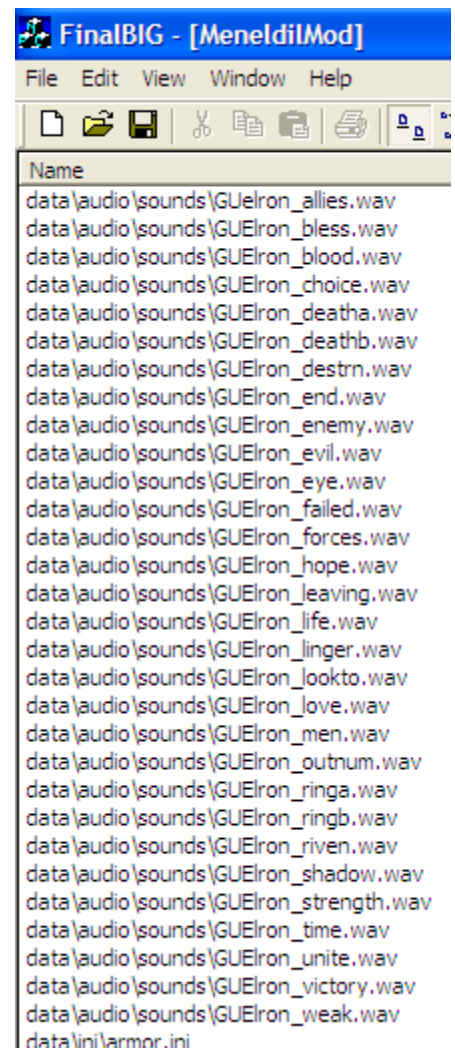
You may also need a sound editor. There are freebies you can find on the Internet or you can buy one. I'll leave that to you. I have used the free software "Audacity" with good results. Learn more at <http://audacity.sourceforge.net/>. I'll assume you've obtained your voice files. Just be sure they are of the .wav format. Also, save them as mono (single track, not stereo). Finally, load them into your INI file. I spent a long time early on wondering why I couldn't get some sounds to play; when I changed them to single track files, they worked.

Also, please note that I did not copy over Elrond's existing death voices. As long as they are in the EnglishAudio.big file, there's no need to copy them over (although it doesn't hurt if you do). Here's an example image to the side that shows Elrond's voice files loaded into my INI file.

I stayed with part of the existing naming convention for Elrond. Since there were already examples beginning with "GUElron" I stayed with that. However, I did not use the referenced names of Elrond's voice files since they are too hard for me to remember what is what. The names I chose at least give me some kind of hint as to what they are. Pick names that have meaning to you.

Hopefully, you now have a better idea how to add voice files to your mod, either as a special effect (like we did for Sam's Pan Bonk) or as a voice file entry (like we did for Elrond).

On the right is an excerpt from my voice.ini file. You may need to experiment around a bit with the sound volumes so that things sound OK to you.





```

;----- Elrond -----
;Meneldil added voice files, including name changes

AudioEvent ElrondVoiceAttackCharge
  Sounds      = GUElron_blood GUElron_deatha GUElron_deathb GUElron_evil
GUElron_failed
  Sounds      = GUElron_linger GUElron_men GUElron_outnum GUElron_shadow
GUElron_strength
  Volume      = 180
  MinVolume   = 120
  Type        = world player voice
  SubmixSlider = voice
End

AudioEvent ElrondVoiceAttack
  Sounds      = GUElron_blood GUElron_deatha GUElron_deathb GUElron_evil
GUElron_failed
  Sounds      = GUElron_linger GUElron_men GUElron_outnum GUElron_shadow
GUElron_strength
  Volume      = 180
  MinVolume   = 120
  Type        = world player voice
  SubmixSlider = voice
End

AudioEvent ElrondVoiceDie
  Sounds      = GUElron_voidiea GUElron_voidieb GUElron_voidiec GUElron_voidied
GUElron_voidiee
  Volume      = UNIT_RESPONSE_VOLUME
  MinRange    = 500
  MaxRange    = 1000
  Type        = world shrouded everyone voice
  SubmixSlider = voice
End

AudioEvent ElrondVoiceDisengage
  Sounds      = GUElron_allies GUElron_blood GUElron_deatha GUElron_failed
GUElron_outnum
  Volume      = 180
  MinVolume   = 120
  Type        = world player voice
  SubmixSlider = voice
End

AudioEvent ElrondVoiceHelpMe
  Sounds      = GUElron_life
  Volume      = 220
  MinVolume   = HELPME_MINVOLUME
  Type        = world player voice
  Priority     = critical
  SubmixSlider = voice
End

```

This is a bit difficult without access to the sound files. I included the above to show you the general structure.

## Modifying Elrond's Armor and Weapons

Now that we have provided voices for Elrond, let's improve his armor and weapon ratings. You'll recall earlier that I said he had no armor. Look in the armor.ini file and search for "hero" to see what all is there. I'm choosing to use the "heroarmor" option; pick what you feel is appropriate for you. Go to Elrond's hero file and search for "NoArmor" – it should be under the Design Parameters section. Put "HeroArmor" in its place.

To improve his bow, look at Legolas' parameters in the weapon.ini file and reapply them to Elrond. You'll note that although Legolas has his own bow warhead, Elrond does not. We could just reference Legolas' warhead in Elrond's "WarheadTemplateName" code, but we'll make our own for Elrond instead. Here then is an example of Elrond's code for his bow in the weapon.ini file. I've highlighted what I've changed from the original code.

```
-----  
Weapon ElrondBow ; BALANCE Elven Archer Weapon  
AttackRange = ELROND_BOW_RANGE; (originally 320) Added by Meneldil  
(see top of file)  
WeaponSpeed = 321 ; dist/sec  
MinWeaponSpeed = 241  
MaxWeaponSpeed = 481 ; dist/sec Upper limit on scaling, when  
attacking past nominal "max" range  
FireFX = FX_RohanArcherBowWeapon  
ScaleWeaponSpeed = Yes ; Used for lob weapons, scales speed  
proportional to range  
HitPercentage = 100 ;When this weapon is used it will hit  
exactly 100% of the time.  
ScatterRadius = ELROND_SCATTERRADIUS; Meneldil changed from original  
16 (Legolas is 5)  
DelayBetweenShots = 0 ; time between shots, msec  
PreAttackDelay = 833; 1467 is the prep time for archer.  
PreAttackRandomAmount = 0 ; amount of additional preattack variance for  
archer type attacks only  
PreAttackType = PER_POSITION ; Do the delay each time we attack a new  
target  
FiringDuration = 0 ; Duration of the archer firing shot is 500ms.  
  
ClipSize = 1  
AutoReloadsClip = Yes  
AutoReloadWhenIdle = 1  
ClipReloadTime = Min:1800 Max:1800  
ContinuousFireOne = 0  
ContinuousFireCoast = 1800  
  
IsAimingWeapon = Yes  
AntiAirborneVehicle = Yes  
AntiAirborneMonster = Yes  
  
ProjectileNugget ; Default arrow  
ProjectileTemplateName = GoodFactionArrow  
WarheadTemplateName = ElrondBowWarhead; Meneldil changed from original  
ElvenArcherBowWarhead  
ForbiddenUpgradeNames = Upgrade_GondorFireArrows; Meneldil changed original  
Upgrade_RohanFireArrows  
End  
  
; Meneldil commented out (heroes don't need fire arrow upgrade)  
; ProjectileNugget ; Fire arrow available through fire upgrade  
; ProjectileTemplateName = GoodFactionFireArrow  
; WarheadTemplateName = GondorArcherBowWarhead  
; RequiredUpgradeNames = Upgrade_GondorFireArrows; Meneldil changed original  
Upgrade_RohanFireArrows  
; End
```

End

```

;-----
Weapon ElrondBowWarhead; Meneldil added (based on Legolas above)
  ProjectileCollidesWith = ENEMIES NEUTRAL STRUCTURES WALLS ALLIES
  RadiusDamageAffects   = ENEMIES NEUTRALS NOT_SIMILAR
  HitStoredTarget       = Yes ; Always hits initial target.
  DamageNugget          ; A basic Nugget that just does damage
  Damage                = ELROND_BOW_DAMAGE; Added by Meneldil (see top of file)
  DamageScalar          = 150% NONE +ORC +URUK +RohanLegolas
  DamageScalar          = 200% NONE +MordorFellBeast +MordorWitchKingOnFellBeast
+GondorGwaihir
  Radius                = 0.0 ; HitStoredTarget means we hurt the person we
launched at. And nobody else. So a miss hurts nobody.
  DelayTime             = 0
  DamageType            = HERO_RANGED
  DamageFXType          = GOOD_ARROW_PIERCE
  DeathType             = NORMAL
End
End

```

Notice that I've added some variable names: **ELROND\_BOW\_RANGE**, **ELROND\_SCATTERRADIUS**, and **ELROND\_RANGED\_DAMAGE**. You may recall earlier in this document that I talked about the challenges associated with changing or adding variable names. I originally put these names in the "mygamedata.ini file." However, the game crashed because it read the weapon.ini file first. When it couldn't find one of these variables, it crashed. I tried creating new files with the data at the root level (data/filename.ini) but it still didn't work. In addition, I tried to change Elrond's health level from the original. Instead of overwriting what was in his hero file, I added **ELROND\_HEALTH** as well. The game crashed because of a duplicate entry error. This is how I concluded that the original gamedata.ini file variables are still read. I therefore changed the defined variable name. Since the weapon.ini file was being read so early, I elected to just put all of Elrond's relevant code at the top of this file, as shown below.

```

;////////////////////////////////////
;FILE: Weapon.ini (SYSTEM) //////////////////////////////////////
;////////////////////////////////////

;-----
;-----
;Variables added by Meneldil

;----- ELROND -----
#define ELROND_HEALTH_NEW          1000; refer to elrond.ini file
#define ELVEN_ELROND_BOUNTY_VALUE_NEW 500 ; refer to elrond.ini file
#define ELROND_BOW_RANGE           400 ; refer to ElrondBow below
#define ELROND_SCATTERRADIUS       10  ; refer to ElrondBow below
#define ELROND_BOW_DAMAGE          150 ; refer to ElrondBowWarhead below
#define ELROND_SWORD_DAMAGE        200 ; refer to ElrondSword below
;-----

```

I appended "\_NEW" to variable names that already exist in the gamedata.ini file.

Here is Elrond's modified sword code. I've highlighted what I changed from the original. Here are the main changes:

- The sword attack range has been decreased (Elrond seems too far away at 30).
- Sword hit frequency is two times faster. The original was slower than I liked. Adjust as you see fit.
- A new sword damage amount has been added.
- The sword damage type has been modified from "SLASH" to "HERO."

```

;-----
Weapon ElrondSword
  LeechRangeWeapon      = Yes
  AttackRange           = 20; Meneldil changed original 30.0
  MeleeWeapon          = Yes
  DelayBetweenShots    = 600; Meneldil changed original ELROND_DELAYBETWEENSHOTS;
time between shots, msec (1200 is original)
  PreAttackDelay       = 300; ELROND_PREATTACKDELAY; sword swing delay time before
contact with target (600 is original)
  PreAttackType        = PER_SHOT; Do the delay each time we attack a new target
  FireFX               = FX_GondorSwordHit
  FiringDuration       = 600; Meneldil changed original ELROND_FIRINGDURATION;
Duration of the sword swing (1200 is original)

  DamageNugget         ; A basic Nugget that just does damage
  Damage               = ELROND_SWORD_DAMAGE; refer to top of file (Meneldil replaced
original ELROND_DAMAGE)
  Radius               = 0.0
  DelayTime            = 0
  DamageType           = HERO; Meneldil replaced original SLASH
  DamageFXType         = SWORD_SLASH
  DeathType            = NORMAL
End
End

```

### Passive Leadership for Elrond

Now let's add some leadership ability to Elrond. Previously, we showed that he has a button image for leadership (`HSElronLeadership`). In addition, if you look in the `attributemodifier.ini` file, you'll see that some code already exists for Elrond leadership (search for `ElrondPassiveLeadership`). Because Elrond is summoned at level 10, there's no point in having any further abilities require any leveling requirements. Here is Elrond's passive leadership code. New code is highlighted yellow.

### data\ini\attributemodifier.ini

```

ModifierList ElrondPassiveLeadership; (affects allies only)
  Category = LEADERSHIP
  Modifier = EXPERIENCE 300%
  Modifier = ARMOR 50% ; Additive. Sum of these are subtracted from
all entries in Armor.ini
  Modifier = DAMAGE_MULT 200% ; Multiplicative. Damage multiplied by this,
will compound in multiple bonuses
  Modifier = RESIST_FEAR 100% ; Additive (added by Meneldil)
  Duration = 2500 ; Matches RefreshRate of giving module
  FX = FX_GenericLeadershipLvl1
  FX2 = FX_GenericLeadershipLvl2
  FX3 = FX_GenericLeadershipLvl3
  MultiLevelFX = Yes
End

```

### data\ini\commandbutton.ini

```

CommandButton Command_SpecialAbilityElrondLeadership; added by Meneldil for Elrond
  Command = SPECIAL_POWER
  SpecialPower = SpecialAbilityFakeLeadership
  Options = NONPRESSABLE
  TextLabel = CONTROLBAR:Leadership
  ButtonImage = HSElronLeadership
  RadiusCursorType = TRAINING
  ButtonBorderStyle = ACTION
  DescriptLabel = CONTROLBAR:ToolTipElrondLeadership
  InPalantir = Yes
End

```

## data\ini\commandset.ini

```
CommandSet ElrondCommandSet
    1 = Command_ToggleElrondWarriorWeapon
    2 = Command_SpecialAbilityElrondLeadership; added by Meneldil
    4 = Command_Guard
    5 = Command_AttackMove
    6 = Command_Stop
End
```

## data\ini\object\goodfaction\units\elven\elrond.ini

Note: I added this under the "ENGINEERING parameters" section.

```
; *** ENGINEERING Parameters ***
RadarPriority = UNIT
KindOf = PRELOAD SELECTABLE CAN_CAST_REFLECTIONS INFANTRY
PATH_THROUGH_EACH_OTHER SCORE ARMY_SUMMARY HERO ATTACK_NEEDS_LINE_OF_SIGHT;
Meneldil added line of sight
PathfindDiameter = 40.0
```

Note: I added this under the "DESIGN parameters" section.

```
ArmorSet
    Conditions = None
    Armor = HeroArmor; Meneldil changed from original NoArmor
    DamageFX = NormalDamageFX
End

DisplayMeleeDamage = ELROND_SWORD_DAMAGE; added by Meneldil
DisplayRangedDamage = ELROND_BOW_DAMAGE ; added by Meneldil

BountyValue = ELVEN_ELROD_BOUNTY_VALUE_NEW; Meneldil appended "NEW" to the
end
```

Note: I added this under the "ENGINEERING Parameters" section.

```
Body = ActiveBody ModuleTag_02
    MaxHealth = ELROND_HEALTH_NEW; Meneldil changed variable name
(refer to weapon.ini file)
    MaxHealthDamaged = ELROND_HEALTH_NEW; Meneldil changed from original 5
    DodgePercent = HERO_DODGE_PERCENT; added by Meneldil
End

Behavior = AIUpdateInterface ModuleTag_03
    AutoAcquireEnemiesWhenIdle = Yes ATTACK_BUILDINGS
    MoodAttackCheckRate = 500
End

Behavior = EmotionTrackerUpdate Module_EmotionTracker
    TauntAndPointDistance = 250 ; max distance to
taunted/pointed objet
    TauntAndPointUpdateDelay = 1000 ; how often scan
(millisecons)

    AddEmotion = Alert_Base
End

Behavior = AttributeModifierAuraUpdate ModuleTag_HeroRadiateFear
    StartsActive = No ;If no, requires upgrade to turn on.
    BonusName = HeroRadiateFear
    TriggeredBy = Upgrade_HeroRadiateFear
```

```

RefreshDelay      = 2000
Range             = 120
TargetEnemy      = Yes
ObjectFilter      = ANY +ORC
End

```

```

;-----Start of Meneldil reapplied self healing code-----
Behavior = AutoHealBehavior ModuleTag_ElronHealing; Meneldil added
StartsActive      = Yes
HealingAmount     = HERO_HEAL_AMOUNT
HealingDelay      = 1000
StartHealingDelay = HERO_HEAL_DELAY
HealOnlyIfNotInCombat = Yes
End
;-----End of Meneldil reapplied self healing code-----

```

```

;----- Elron leadership added by Meneldil -----
Behavior = AttributeModifierAuraUpdate ModuleTag_ElronLeadership
StartsActive      = Yes; If no, requires upgrade to turn on.
BonusName         = ElronPassiveLeadership
RefreshDelay      = 2500
Range             = 200
ObjectFilter      = ANY +INFANTRY +CAVALRY +HERO -MACHINE -STRUCTURE
End
;----- End of Meneldil added leadership code -----

```

```

;----- Elron healing aura added by Meneldil -----
;Reapplied Gondor Healing Well Behavior from goodfactionbuildings.ini
Behavior = PassiveAreaEffectBehavior ModuleTag_SplashOfHealingWater_Ahh
EffectRadius      = 300 ; changed from original 200
PingDelay         = 2000; msec
HealPercentPerSecond = 2%
AllowFilter       = ANY +INFANTRY +CAVALRY +HERO +STRUCTURE
+RohanEntFir +RohanEntBirch +RohanTreeBerd
End
;----- End of Meneldil added healing code -----

```

## data\lotr.str

```

CONTROLBAR:ToolTipElronLeadership
"Nearby allies receive 3x experience, 50% armor, 2x weapon damage, and fear
resistance \n Elron also has a healing aura \n Passive ability"
END

```

## Summary

As you can see, it's relatively simple to add this. Here is a list of the key modifications in the above code.

1. Elron must now be able to see his target before being able to shoot an arrow at it (refer to the line of sight reference in the "**KindOf**" statement). Before this was done, he could shoot through castle walls.
2. I added a "resist fear" attribute modifier like many of the other heroes have. The text description has been updated to show that Elron has this ability.
3. I made it so his leadership capability (in the elron.ini file) affects all allies, including heroes. Machines (such as trebuchets) and buildings are not affected.
4. Elron's armor has been changed from "**NoArmor**" to "**HeroArmor**." Look in the armor.ini file to see the new armor values.
5. Elron's sword and bow damage will be shown when the mouse cursor is on his Palantir image. Note that this shows just the base values and doesn't include any adjustments that would occur from attribute modifiers.
6. A new bounty value and health value have been added. They are defined in the weapon.ini file.
7. Elron now has the ability to automatically heal.
8. Elron also has a passive healing aura. Essentially, adding this code to a hero (or structure) makes it act like a healing well, which is where the code came from. Change the "AllowFilter" to control what can be healed.

## Reapplying Word of Power to Elrond

Next, we'll reapply Gandalf's Word of Power spell in order to provide an example of adding a new hero power. To apply the basic spell, copy the following to Elrond's command set code:

```
CommandSet ElrondCommandSet; Meneldil modified
  1 = Command_ToggleElrondWarriorWeapon
  2 = Command_SpecialAbilityElrondLeadership; added by Meneldil
  3 = Command_SpecialAbilityWordOfPower; added by Meneldil
  4 = Command_Guard
  5 = Command_AttackMove
  6 = Command_Stop
End
```

Also copy the following to Elrond's hero file engineering parameters (e.g., after the above healing aura code):

```
;----- Start of Meneldil reapplied Word of Power code -----
Behavior = SpecialPowerModule ModuleTag_WordStarter
  SpecialPowerTemplate = SpecialAbilityWordOfPower
  UpdateModuleStartsAttack = Yes
  StartsPaused = No; Yes
End
Behavior = WeaponFireSpecialAbilityUpdate ModuleTag_WordWeaponFireUpdate
  SpecialPowerTemplate = SpecialAbilityWordOfPower
  WhichSpecialWeapon = 1
  SkipContinue = Yes
  UnpackTime = 1700
  PackTime = 1
  FreezeAfterTriggerDuration = 2500 ; Hold AI for this long after we
fire.
  AwardXPForTriggering = 0
  StartAbilityRange = 80.0
  SpecialWeapon = GandalfWordOfPower
End
;----- End of Meneldil reapplied Word of Power code -----
```

This is taken from Gandalf's Word of Power code and then modified slightly. Can you see what has changed? Gandalf's WOP code is spread out over way more ini files than this; however, this is all you need to reapply it to another hero. Note that in the code section directly above this, there is no level requirement since Elrond is already at level 10. If you prefer to have Elrond be a buildable character from the citadel, add him like we did Sam and Frodo. You'll need to make adjustments like you did for Sam and Frodo (e.g., so that he has a cost); however, you now know how to do that. We'll discuss how to level him later on.

Now let's further tweak the reapplied Word of Power we gave to Elrond. After all, we don't want it exactly the same as Gandalf's. Before doing this, though, give some thought to what you want Elrond to be able to do. In this example, we'll modify the Word of Power spell such that he knocks enemies back and damages them while a field of Elven grass forms (i.e., an Elven Meadow). Here is the modified code.

## data\ini\commandbutton.ini

```
CommandButton Command_SpecialAbilityElrondMeadow; added by Meneldil for Elrond
  Command = SPECIAL_POWER
  SpecialPower = SpecialAbilityWordOfPower
  TextLabel = CONTROLBAR:ElrondMeadow
  ButtonImage = SBGood_ElvenWood
  ButtonBorderType = ACTION
  DescriptLabel = CONTROLBAR:ToolTipElrondMeadow
  AutoAbility = Yes
  PresetRange = 120
  InPalantir = Yes
End
```

## data\ini\commandset.ini

```
CommandSet ElrondCommandSet; Meneldil modified
  1 = Command_ToggleElrondWarriorWeapon
  2 = Command_SpecialAbilityElrondLeadership; added by Meneldil
  3 = Command_SpecialAbilityElrondMeadow; added by Meneldil
  4 = Command_Guard
  5 = Command_AttackMove
  6 = Command_Stop

End
```

## data\ini\object\goodfaction\units\elven\elrond.ini

```
;----- Start of Meneldil reapplied Word of Power code -----
  Behavior = SpecialPowerModule ModuleTag_WordStarter
    SpecialPowerTemplate      = SpecialAbilityWordOfPower
    UpdateModuleStartsAttack  = Yes
    StartsPaused              = No; Yes

  End

  Behavior = WeaponFireSpecialAbilityUpdate ModuleTag_WordWeaponFireUpdate
    SpecialPowerTemplate      = SpecialAbilityWordOfPower
    WhichSpecialWeapon        = 1
    SkipContinue              = Yes
    UnpackTime                = 1700
    PackTime                  = 1
    FreezeAfterTriggerDuration = 0; 2500 ; Hold AI for this long after we
fire.
    AwardXPForTriggering      = 0
    StartAbilityRange         = 80
    SpecialWeapon              = ElrondMeadow; GandalfWordOfPower

  End

;----- End of Meneldil reapplied Word of Power code -----
```

## data\ini\weapon.ini

```
;-----
Weapon ElrondMeadow ; added by Meneldil (Elrond Word of Power)
  IdleAfterFiringDelay = 0
  AttackRange = GANDALF_WORD_OF_POWER_RANGE
  MinimumAttackRange   = 0.8
  WeaponSpeed           = 401; dist/sec
  MinWeaponSpeed       = 241
  MaxWeaponSpeed       = 601; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
  ScaleWeaponSpeed     = Yes; Used for lob weapons, scales speed
proportional to range
  RadiusDamageAffects  = ENEMIES NOT_SIMILAR
  DelayBetweenShots    = 5000; time between shots, msec
  PreAttackDelay       = 2600
  PreAttackType        = PER_ATTACK ; Do the delay each time we attack a new
target
  PreAttackFX          = FX_Birds; FX_GandalfPreAttackBlast
  FireFX               = FX_ElrondMeadow; FX_GandalfBlast
  FiringDuration       = 1400
  DamageNugget         = ; A basic Nugget that just does damage
    Damage              = 200; GANDALF_WORD_OF_POWER_DAMAGE
    Radius              = 250
    DamageType          = MAGIC
    DamageFXType       = MAGIC
    DeathType          = EXPLODED
    DamageSpeed         = 200; 700; must match the ShockWaveSpeed below
    DamageScalar        = 10000% NONE +STRUCTURE +MACHINE +RohanCastleDoor
+RohanBattleTower +GBMGateDoor +GondorBattleTower
```



```

End
DamageNugget
    Damage           = 100
    Radius           = 200
    DelayTime        = 1000
    DamageType       = FLAME
    DamageFXType     = FLAME
    DeathType        = BURNED
    DamageScalar     = 100% NONE +RohanEntFir +RohanEntBirch +RohanTreeBerd
    DamageScalar     = 500000% NONE +STRUCTURE +MACHINE
End
DamageNugget
    Damage           = 200
    Radius           = 200
    DelayTime        = 2000
    DamageType       = FLAME
    DamageFXType     = FLAME
    DeathType        = BURNED
    DamageScalar     = 100% NONE +RohanEntFir +RohanEntBirch +RohanTreeBerd
    DamageScalar     = 500000% NONE +STRUCTURE +MACHINE
End
DamageNugget
    Damage           = 500
    Radius           = 200
    DelayTime        = 3000
    DamageType       = STRUCTURAL
    DamageFXType     = MAGIC
    DeathType        = EXPLODED
    DamageScalar     = 900000% NONE +STRUCTURE +MACHINE
End
MetaImpactNugget      ; A Nugget that throws things back with force
    HeroResist         = 0.75
    ShockWaveAmount    = 75; 70
    ShockWaveRadius    = 250; 500
    ShockWaveTaperOff  = 1
    ShockWaveZMult     = 1
    ShockWaveSpeed     = 200; 700
End

```

End

### data\lotr.str

```

CONTROLBAR:ElrondMeadow
"Enchante&d Meadow"
END

```

```

CONTROLBAR:ToolTipElrondMeadow
"Required: Rank 8 \n\n Create a meadow that pushes back and severely damages enemy
forces and structures, including
castle gates and battle towers. \n\n Left click to activate"
END

```

Look through the above code. There's a fair amount there. Can you see what's been done? Here's a summary.

- In the Command Button block, a new command name has been provided so that this can be operated somewhat independently from Gandalf's WOP spell. It's not completely independent; you'll see that there is still a reference to the original code. This means, as an example, that the timer will remain the same as Gandalf's WOP.
- New text descriptions have been provided (Command Button and the lotr.str file).
- Note in Elrond's INI file that "StartsPaused" is "No" so that no particular level is required.
- The "FreezeAfterTriggerDuration" was changed to zero.

- Also in the Elrond's INI file, the "SpecialWeapon" reference has been changed in order to allow better control.
- In the Weapon block, the special effects have been changed in order to differentiate it from Gandalf's WOP. In addition, the damage amount, wave speed, and radius have been decreased. Look through the weapon.ini file to see if you find other ideas that you might like to reapply.
- 

### Reapplying Istari Light to Elrond

Let's look at another example. We'll stick with borrowing from Gandalf. This time, we'll reapply the "Istari Light" spell. Again, it's pretty easy to create a duplicate version that doesn't have any level requirement.

To duplicate the Istari Light power, add "Command\_GondorGandalfIstariLight" to Elrond's Command Set and the following to his INI file (note this will work for any hero).

```

;----- Start of Meneldil reapplied Istari Light code -----
  Behavior = SpecialPowerModule ModuleTag_IstariLightPower
    SpecialPowerTemplate      = SpecialAbilityIstariLight
    UpdateModuleStartsAttack  = Yes
    StartsPaused              = No; Yes
  End

  Behavior = WeaponFireSpecialAbilityUpdate ModuleTag_IstariLightUpdate
    SpecialPowerTemplate      = SpecialAbilityIstariLight
    SkipContinue              = Yes
    UnpackTime                = 2000
    PreparationTime           = 1
    PersistentPrepTime        = 2000
    PackTime                  = 500
    AwardXPForTriggering      = 0
    StartAbilityRange         = GANDALF_PHASER_CAST_RANGE ; Note: This has to
be smaller than the weapon range or it'll never succeed
    ApproachRequiresLOS       = Yes
    SpecialWeapon             = GandalfStaffWeapon
    MustFinishAbility         = Yes
    WhichSpecialWeapon        = 3
    BusyForDuration           = 2500
  End
;----- End of Meneldil reapplied Istari Light code -----

```

That's it. The only thing I changed was "StartsPaused" in order to eliminate the leveling requirement. This time, I want to differentiate it completely from Gandalf's original Istari Light spell. Before going further, look up Gandalf's Istari Light code in the FXList and FXParticleSystem files because new versions will be made. Here is an example of what such a modification would look like.

### data\ini\commandbutton.ini

```

CommandButton Command_SpecialAbilityElrondLightBeam; added by Meneldil for Elrond
  Command          = SPECIAL_POWER
  SpecialPower     = SpecialAbilityElrondLightBeam
  Options          = NEED_TARGET_ENEMY_OBJECT
  TextLabel        = CONTROLBAR:ElrondLightBeam
  ButtonImage      = StarBurst; refer to
mappedimages\aptimages\myimages.ini
  CursorName       = Bombard
  InvalidCursorName = GenericInvalid
  ButtonBorderStyle = ACTION
  DescriptLabel    = CONTROLBAR:ToolTipElrondLightBeam
  AutoAbility      = Yes
  InPalantir       = Yes
End

```

### data\ini\commandset.ini

```
CommandSet ElrondCommandSet; Meneldil modified
    1 = Command_ToggleElrondWarriorWeapon
    2 = Command_SpecialAbilityElrondLeadership; added by Meneldil
    3 = Command_SpecialAbilityElrondMeadow; added by Meneldil
    4 = Command_SpecialAbilityElrondLightBeam; added by Meneldil
    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard
End
```

### data\ini\fxlist.ini

```
;-----Elrond Beam Weapon-----
FXList FX_ElrondBeamWeapon; Meneldil reapplied FX_GandalfBeamWeapon
    Sound
        Name = GandalfBeamWeapon
    End
    ParticleSystem
        Name = ElrondLightRays
        Offset = X:0 Y:0 Z:17
        OrientToObject = Yes
        SetTargetMatrix = Yes
    End
    ParticleSystem
        Name = ElrondBeamFlare
    End
End
```

### data\ini\fxparticlesystem.ini

```
FXParticleSystem ElrondLightRays; Meneldil changed original GandalfIstariLightRays
    System
        Priority = ALWAYS_RENDER
        Shader = W3D_EMISSIVE
        Type = DRAWABLE
        ParticleName = EXLightShafts01.W3D
        Lifetime = 120 120; Meneldil changed original 100 100
        SystemLifetime = 7
        SortLevel = 1
        Size = 0.5 1.2
        BurstDelay = 2 2
        BurstCount = 1 1
    End
    Color = DefaultColor
        Color1 = R:0 G:165 B:65 0 ; Meneldil changed original R:235 G:218 B:165 0
        Color2 = R:240 G:230 B:50 30; Meneldil added (starts at frame 30)
        Color3 = R:130 G:30 B:250 60; Meneldil added (starts at frame 60)
        Color4 = R:200 G:0 B:0 90 ; Meneldil added (starts at frame 90)
    End
    Alpha = DefaultAlpha
        Alpha1 = 0.08 0.08 0
        Alpha2 = 0 0 100
    End
    Update = RenderObjectUpdate
        StartSizeX = 0.1 0.1
        StartSizeY = 1 1
        StartSizeZ = 0.1 0.1
        SizeRateX = 0.05 0.05
        SizeRateZ = 0.05 0.05
        SizeDampingX = 0.95 0.95
        SizeDampingY = 1 1
        SizeDampingZ = 0.95 0.95
```

```

    AngleZ = 1.45 1.45
    AngularRateZ = -0.003 0.003
    AngularDamping = 0.99 0.99
    Rotation = ROTATE_Z
End
Physics = DefaultPhysics
    VelocityDamping = 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = PointEmissionVolume
End
Draw = RenderObjectDraw
End
End

FXParticleSystem ElrondBeamFlare; Meneldil changed original GandalfBeamFlare2
System
    Priority = ALWAYS_RENDER
    ParticleName = EXLnzFlar2.tga
    Lifetime = 2 2
    SystemLifetime = 90; 150
    Size = 100 100
    BurstCount = 2 2
    InitialDelay = 0.9999 0.9999
End
Color = DefaultColor
    Color1 = R:150 G:250 B:100 0; Color1 = R:40 G:58 B:79 0
    Color2 = R:0 G:0 B:0 3
End
Update = DefaultUpdate
    AngularDamping = 1 1
End
Physics = DefaultPhysics
End
EmissionVelocity = OutwardEmissionVelocity
End
EmissionVolume = LineEmissionVolume
    IsHollow = Yes
End
Draw = DefaultDraw
End
End

```

### data\ini\mappedimages\aptimages\myimages.ini

```

MappedImage StarBurst
    Texture = exstarbursth.tga
    TextureWidth = 256
    TextureHeight = 256
    Coords = Left:0 Top:0 Right:256 Bottom:256
    Status = NONE
End

```

### data\ini\object\goodfaction\units\elven\elrond.ini

```

;----- Start of Meneldil reapplied Istari Light code -----
    Behavior = SpecialPowerModule ModuleTag_ElrondLightBeamPower
        SpecialPowerTemplate = SpecialAbilityElrondLightBeam
        UpdateModuleStartsAttack = Yes
        StartsPaused = No
End

```

```

Behavior = WeaponFireSpecialAbilityUpdate ModuleTag_ElrondLightBeamUpdate
    SpecialPowerTemplate      = SpecialAbilityElrondLightBeam
    SkipContinue              = Yes
    UnpackTime                = 2000
    PreparationTime           = 1
    PersistentPrepTime        = 2000
    PackTime                  = 500
    AwardXPForTriggering      = 0
    StartAbilityRange         = 190; Note: This has to be smaller than the
weapon range or it'll never succeed (refer to weapon.ini)
    ApproachRequiresLOS       = Yes
    SpecialWeapon             = ElrondLightBeamWeapon
    MustFinishAbility         = Yes
    WhichSpecialWeapon        = 3
    BusyForDuration           = 2500
End
;----- End of Meneldil reapplied Istari Light code -----

```

### data\ini\specialpower.ini

```

;-----
SpecialPower SpecialAbilityElrondLightBeam; added by Meneldil for Elrond
    Enum                = SPECIAL_WOUND_ARROW
    ReloadTime          = 180000 ; in milliseconds
    PublicTimer         = No
End

```

### data\ini\weapon.ini

```

;-----
Weapon ElrondLightBeamWeapon ; added by Meneldil for Elrond
    AttackRange         = 250; must be greater than start ability range (see
elrond.ini)
    LeechRangeWeapon    = Yes
    WeaponSpeed         = 801; dist/sec
    HitPercentage       = 100; When this weapon is used it will hit exactly 100%
of the time.
    DelayBetweenShots   = 4500; time between shots, msec
    FireFX              = FX_ElrondBeamWeapon
    FiringDuration      = 1
    AntiAirborneVehicle = Yes
    AntiAirborneMonster = Yes
    AcceptableAimDelta  = 15
    RadiusDamageAffects = ENEMIES NOT_SIMILAR

    DamageNugget        ; A basic Nugget that just does damage
        Damage         = 800
        DamageScalar   = 800% NONE +Structure
        Radius         = 25; 17.6
        DelayTime      = 200; The target is dying before the laser appears in
the new laser tweak, so try to kill when the laser turns on
        DamageType     = MAGIC
        DamageFXType   = FLAME
        DeathType      = NORMAL
End

    MetaImpactNugget    ; A Nugget that throws things back with force
        HeroResist     = 0.75
        ShockWaveAmount = 50.0
        ShockWaveRadius = 17.6
        ShockWaveTaperOff = 0.5
        DelayTime      = 200; The target is dying before the laser appears
in the new laser tweak, so try to kill when the laser turns on

```

End

ProjectileNugget

ProjectileTemplateName = SarumanFireballProjectile

WarheadTemplateName = SarumanFireballWarhead

End

End

### data\lotr.str

CONTROLBAR:ElrondLightBeam

"Light of the Elda&r"

END

CONTROLBAR:ToolTipElrondLightBeam

"A powerful light beam that damages enemy combatants and structures \n Left click then right click on target"

END

It's a lot, but it's not very complicated. Here's a summary of the key points.

- Gandalf's Istari Light has been renamed to "ElrondLightBeam" in the code and "Light of the Eldar" in the game interface.
- The button image "StarBurst" is taken from the "exstarbursth.dds" file in the Textures.big file and was referenced earlier in this document.
- New text descriptors have been provided.
- In the FX List, note that the sound effect remains the same as for Gandalf but that the reference to the FX Particle System is different than for Gandalf's Istari Light.
- The big changes made to the FX Particle System file was the addition of colors for different frames. Note that there are 30 frames per second. When this is fired, the beam color will change from green to yellow to purple to red.
- The range of the beam was increased by changing the "StartAbilityRange" and the "AttackRange" values.
- The spell will recharge in 3 minutes.
- A damage scalar was added for buildings; they will take significant damage.
- I included Saruman's Fireball for extra damage as well as to show how you can add additional capabilities.
- References to Gandalf's variable names have been replaced with numbers.

I'm not planning to do major special effect modifications in this document. Here are some links related to special effects that you may find of interest:

<http://www.the3rdage.net/item-89?addview>

<http://www.the3rdage.net/item-58?addview>

## Elven Cloak & One Ring Reapplication

As you know, the Elven Cloak ability allows the hero to be invisible so long as he stands still. Frodo's One Ring ability allows him to stay invisible while wearing the ring, even when moving, unless intercepted by the Eye of Sauron or possibly a Fellbeast. We will now essentially give Elrond the ability to be invisible as if he were wearing the ring, but it will look like he's using the cloak (no pesky "Eye of Sauron"). Refer to Frodo's INI file to see how the original code works. Here are the needed code blocks for Elrond.

### data\ini\commandbutton.ini

```
CommandButton Command_InvisibilityCloak; added by Meneldil for Elrond
  Command          = ONE_RING
  TextLabel        = CONTROLBAR:InvisibilityCloak
  DescriptLabel    = CONTROLBAR:ToolTipInvisibilityCloak
  ButtonImage      = HPFrodoElfCloak
  ButtonBorderType = ACTION
  InPalantir       = Yes
End
```

### data\ini\commandset.ini

```
CommandSet ElrondCommandSet; Meneldil modified
  1 = Command_ToggleElrondWarriorWeapon
  2 = Command_SpecialAbilityElrondLeadership; added by Meneldil
  3 = Command_SpecialAbilityElrondMeadow; added by Meneldil
  4 = Command_SpecialAbilityElrondLightBeam; added by Meneldil
  5 = Command_InvisibilityCloak; added by Meneldil
 13 = Command_AttackMove
 14 = Command_Stop
 15 = Command_Guard
End
```

### data\ini\object\goodfaction\units\elven\elrond.ini

```
;----- Start of Meneldil reapplied one ring code -----
  Behavior = StealthUpdate ModuleTag_StealthForCloakAndRing
    StealthDelay          = 0; msec
    FriendlyOpacityMin    = STEALTH_FRIENDLY_OPACITY_MIN
    FriendlyOpacityMax    = STEALTH_FRIENDLY_OPACITY_MAX
    PulseFrequency        = 750; msec
    InnateStealth          = No
    OrderIdleEnemiesToAttackMeUponReveal = Yes
    StealthForbiddenConditions = USING_ABILITY
    DetectedByAnyoneRange = 20
    RevealWeaponSets      = CLOSE_RANGE CONTESTING_BUILDING
    OneRingDelayOn        = 1000
    OneRingDelayOff       = 1000
    RingAnimTimeOn       = 1000
    RingAnimTimeOff      = 1000
    RingDelayAfterRemoving = 3000
    BecomeStealthedOneRingFX = FX_ElvenCloakOn
    ExitStealthOneRingFX  = FX_ElvenCloakOn
  End
;----- End of Meneldil reapplied one ring code -----
```

### data\lotr.str

```
CONTROLBAR:InvisibilityCloak
"&Cloak of Concealment"
END

CONTROLBAR:ToolTipInvisibilityCloak
"Become invisible; enemies will perceive attacks"
END
```

## Summoning Elves

Now let's look at summoning some temporary elven warriors to accompany Elrond when he is summoned by Sam. Looking in the following files yields the following:

### rohanhordes.ini:

- RohanElvenWarriorHorde (5-elf battalion of elven warriors carrying bows)
- RohanElvenWarriorSwordHorde (this is the elven warrior horde using their swords)
- RohanElvenWarriorHorde\_Summoned (this is the the elven warrior horde with a limited lifetime)
- RohanElvenWarriorSwordHorde\_Summoned (this is the elven warrior sword horde with a limited lifetime)
- RohanElvenWarriorDoubleHorde (this is two elven warrior hordes combined; 5 swordsmen in front and 5 bowmen in back)
- LAElvenWarriorHorde (5-elf battalion that can only use their bows; Last Alliance not used in game)
- LAElvenWarriorDoubleHorde (this is two Last Alliance hordes combined; 5 swordsmen in front and 5 bowmen in back)

### elveninfantry.ini:

- RohanElvenWarrior (individual unit used to make up the elven warrior horde; can only use bow)
- RohanElvenWarrior\_Summoned (individual unit used to make up the summoned elven warrior hordes; can only use bow)
- LAElvenWarrior (individual Last Alliance unit used to make up the Last Alliance hordes; can only use bow)

Individual non-hero units are rarely used in the game (e.g., soldiers and archers in Cirth Ungol during the Good Campaign), so summoning units instead of hordes offers some variety.

We'll include some individual elves when Sam summons Elrond. We could use the original "RohanElvenWarrior\_Summoned" in our OCL. However, I want to provide these units with some additional capabilities, such as being able to switch between bow and sword; the original units can't toggle between weapons (can only use bow) because they are intended for use in a horde. Instead of using the existing Rohan version, we'll create a "child object" of the original rohanelvenwarrior unit and give it the desired capabilities.

### data\ini\commandbutton.ini

```
CommandButton Command_ToggleSingleElvenWarriorWeapon; added by Meneldil
  Command          = TOGGLE_WEAPONSET
  Options          = TOGGLE_IMAGE_ON_WEAPONSET OK_FOR_MULTI_SELECT
  TextLabel        = CONTROLBAR:ToggleElvenWarriorWeapons
  ButtonImage      = UCElven_Sword UCElven_Bow
  ButtonBorderStyle = ACTION
  DescriptLabel    = CONTROLBAR:ToolTipToggleElvenWarriorWeapons
  InPalantir       = Yes
  UnitSpecificSound = ElvenWarriorVoiceModeSword ElvenWarriorVoiceModeBow
End
```

### data\ini\commandset.ini

```
CommandSet SingleElvenWarriorCommandSet; added by Meneldil for Elven Warrior Unit
  1 = Command_ToggleSingleElvenWarriorWeapon
  2 = Command_Guard
  3 = Command_AttackMove
  4 = Command_Stop
End
```

### data\ini\object\goodfaction\units\elven\elveninfantry.ini

```
;-----
ChildObject SingleElvenWarrior_Summoned RohanElvenWarrior; added by Meneldil
  IsTrainable = No
  CommandPoints = 0
  CommandSet = SingleElvenWarriorCommandSet
```



```
EquivalentTo = SingleElvenWarrior_Summoned; don't want to auto-select with  
non-summoned elves
```

```
Behavior = GrantUpgradeCreate ModuleTag_FireArrows  
UpgradeToGrant = Upgrade_RohanFireArrows  
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades  
UpgradeToGrant = Upgrade_RohanForgedBlades  
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor  
UpgradeToGrant = Upgrade_RohanHeavyArmor  
End
```

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate  
; This one does the work, but the one in the horde displays the timer  
MinLifetime = 120000; in milliseconds  
MaxLifetime = 150000; in milliseconds  
DeathType = FADED  
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05  
DeathTypes = ALL -FADED  
SinkDelay = 5000  
SinkRate = 0.5 ; in Dist/Sec  
DestructionDelay = 15000  
Sound = INITIAL ElvenWarriorVoiceDie  
DeathFlags = DEATH_1  
End
```

```
Behavior = SlowDeathBehavior ModuleTag_FadeDeath  
DeathTypes = NONE +FADED  
FadeDelay = 0  
FadeTime = 0  
DestructionDelay = 0; changing values to zero allows for instant
```

departure

```
DeathFlags = DEATH_2  
FX = INITIAL FX_UnSummonElvenAllies
```

End

End

## Summary

1. Look at the original “CommandButton Command\_ToggleElvenWarriorWeapon” and “CommandButton Command\_ToggleElrondWarriorWeapon” code blocks. Elrond can successfully swap between his bow and sword and yet he’s an individual unit. Combining aspects from these code blocks allowed me to create the above “CommandButton Command\_ToggleSingleElvenWarriorWeapon” code block.
2. I created a new command set for the new unit.
3. Look at how the child object command works. The first name is for the new unit or horde you wish to create. The second name is the unit or horde that you are referencing (i.e., the parent). Stating “IsTrainable = No” means that the unit or horde cannot gain experience. If you don’t want your new creation to be selected along with the parent, then change or comment out the “EquivalentTo” line. The LifetimeUpdate sets how long the unit or horde lasts. Notice that the minimum and maximum times do not have to match (although they typically do). If you plan to use a horde with a limited lifetime, then both the unit and horde files should have lifetime blocks (more on that later).
4. Notice that you can go straight to upgraded weapons and armor if you wish to do so (more on that below).
5. In the original, summoned elves hang around a bit too long after their timer expires (in my opinion); I altered it so that they disappear instantly. Also, how they die makes a difference (killed versus timer expiration).
6. Notice how names are copied from block to block in order for the overall effect to work.

## Adding Automatic Weapon and Armor Upgrades

If you wish to skip having to purchase weapon and armor upgrades, you can arrange it such that your unit or horde comes with them automatically. Here are the codes you'll need for the different factions.

### **Gondor:**

```
Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_GondorFireArrows
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_GondorForgedBlades
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_GondorHeavyArmor
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_KnightShield
    UpgradeToGrant = Upgrade_GondorKnightShield
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_Firestones; for trebuchet
    UpgradeToGrant = Upgrade_GondorFireStones
End
```

### **Isengard:**

```
Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_IsengardFireArrows
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_IsengardForgedBlades
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_IsengardHeavyArmor
End
```

### **Mordor:**

```
Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_MordorFireArrows
End
```

### **Rohan:**

```
Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_RohanFireArrows
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_RohanForgedBlades
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_RohanHeavyArmor
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HorseShield
    UpgradeToGrant = Upgrade_RohanHorseShield
End
```

### Elves (TEA/TEACE):

```
Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_ElvenFireArrows
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_ElvenForgedBlades
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_ElvenHeavyArmor
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HorseShield
    UpgradeToGrant = Upgrade_ElvenHorseShield
End
```

Note: I included The Elven Alliance because it's a popular mod and one of my favorites.

### Providing Armor and Weapons Upgrades to the Elven Allies Spellbook

Based on what we've done so far, it is a simple matter to add upgrades to the Elven Allies power. If you look in the object creation list, you'll see that "RohanElvenWarriorHorde\_Summoned" is what the spell book uses. Go to the rohanhordes.ini file and add the following to the "ChildObject RohanElvenWarriorHorde\_Summoned RohanElvenWarriorHorde" code block:

```
    ;Enable the following to provide full weapon and armor upgrades (added by
Meneldil)
    Behavior = GrantUpgradeCreate ModuleTag_FireArrows
        UpgradeToGrant = Upgrade_RohanFireArrows
    End

    Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
        UpgradeToGrant = Upgrade_RohanForgedBlades
    End

    Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
        UpgradeToGrant = Upgrade_RohanHeavyArmor
    End
```

### Providing Armor and Weapons Upgrades to the Rohan Allies Spellbook

Similarly, you can go to the rohanhordes.ini file and add the following to the "ChildObject RohanRohirrimHorde\_Summoned" code block:

```
    ;Enable the following to provide full weapon and armor upgrades (added by Meneldil)

    Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
        UpgradeToGrant = Upgrade_RohanForgedBlades
    End

    Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
        UpgradeToGrant = Upgrade_RohanHeavyArmor
    End

    Behavior = GrantUpgradeCreate ModuleTag_HorseShield
        UpgradeToGrant = Upgrade_RohanHorseShield
    End
```

Note: As you make changes, give thought to how the game balance may be affected.

We now have the ability to summon fully upgraded individual Elven Warrior units that can toggle between bow and sword. Since their default is the bow, let's also create battalions (hordes) that have the sword as the default weapon. Why not make a single unit that uses a sword as the default weapon? I've never been able to figure this out except to change all of the animations and that's not worth the effort to me.

Now let's add a temporary Elven Battalion for when Elrond is summoned.

### data\ini\commandset.ini

CommandSet RohanElvenWarriorHordeCommandSet\_Summoned; modified from original by Meneldil

```
1 = Command_ToggleElvenWarriorWeapon
2 = Command_Guard
3 = Command_AttackMove
4 = Command_Stop
```

End

### data\ini\object\goodfaction\hordes\rohan\rohanhordes.ini

```
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
ChildObject ElrondElvenWarriorSwordHorde_Summoned
RohanElvenWarriorSwordHorde_Summoned
; added by Meneldil for Sam
```

```
CommandSet = RohanElvenWarriorHordeCommandSet_Summoned
EquivalentTo = ElrondElvenWarriorSwordHorde_Summoned; makes it easier to
select for weapon toggling
```

```
Behavior = HordeContain ModuleTag_HordeContain
ObjectStatusOfContained =
InitialPayload = RohanElvenWarrior_Summoned 5
Slots = 5
PassengerFilter = NONE +INFANTRY
ShowPips = No
```

```
ThisFormationIsTheMainFormation = No; Used to determine which armorset to
use (and anything else we want!)
AlternateFormation = RohanElvenWarriorHorde_Summoned
```

```
; Positions for 5
RankInfo = RankNumber:1 UnitType:RohanElvenWarrior_Summoned Position:X:13
Y:0 Position:X:0 Y:17 Position:X:0 Y:-17 Position:X:-13 Y:34 Position:X:-13 Y:-34
GrantedWeaponCondition:WEAPONSET_TOGGLE_1
```

```
UpdateWeaponSetFlagsOnHordeToo = Yes ; Only use this flag when there is a
single Granted/Revoked Weaponset flag. This will pass it on to the Horde Brain.
RanksToReleaseWhenAttacking = 1
MeleeAttackLeashDistance = 50; How far the hordes can move from the center
of the horde when melee attacking.
```

End

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
;This one displays the timer, but the one in the unit does the work
MinLifetime = 120000; in milliseconds
MaxLifetime = 150000; in milliseconds
DeathType = FADED
```

End

```
;Provide full weapon and armor upgrades
Behavior = GrantUpgradeCreate ModuleTag_FireArrows
UpgradeToGrant = Upgrade_RohanFireArrows
```

End

```
Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_RohanForgedBlades
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_RohanHeavyArmor
End
```

End

### Summary

1. I didn't need a new command button because I could use what's already there.
2. I didn't allow equivalency to the individually summoned elves because I want to be able to select the battalions together to toggle their weapons. That is, if you select a horde and press the letter "E" twice, only those elven hordes will be selected. The individual elven units will not be included.
3. Do you see how a horde is formed? Notice that the payload is made up of the summoned units we created earlier. The units must be on a timer if you want the horde to also be on a timer.
4. Notice also that this is not the main formation and that the weapon toggle was granted; this allowed the horde to start with swords instead of bows.
5. I also doubled the melee attack leash distance so that horde members can move further apart.
6. Notice there is a duplication of the horde lifetime update. Technically, it is not needed. However, as the comment says, it's the horde that displays the timer (the timer itself applies to the units). Without this code here, there will be no visible timer on the horde, but they'll still disappear when their time runs out.
7. Armor and weapon upgrades have also been provided.
8. Death behaviors were not needed because they are addressed by the individual units.

## Temporary Elven Foundation and Elven Barracks

Now let's provide Elrond with the ability to create a temporary Elven foundation that can be used to build an Elven barracks (as well as other Gondor structures). The Elven Foundation and Elven Barracks do exist (e.g., used in Lothlorien during the Good Campaign), so let's give Elrond the ability to use them. In order to prevent the Good Campaign from using our modifications, we'll create unique versions that will only be used by Elrond.

We'll be referencing two files:

- data\ini\object\civilian\civilianbuildings.ini: **Object ElvenBarracks**
- data\ini\object\goodfaction\goodfactionbuildings.ini: **Object ElvenBuildingFoundation**

Both of these objects are fully functional. In general, I prefer to make foundations temporary. That way, you're not stuck with a permanent foundation if you later change your mind as to where it should go. Therefore, we'll make a child object of the original elven building foundation such that it will disappear within 3 minutes unless it is used (I picked a time less than it takes for Elrond's ability to recharge). As we've previously shown, a child object is a copy of an existing unit, horde, or building that you modify to suit your needs. You use the following structure:

### **ChildObject NewName OriginalName**

Code that is different from the original. Typical variables I may use are:

```
SelectPortrait = x; in case you want to change the picture
IsTrainable = No; Can't gain experience or level up if no (e.g., summoned unit)
CommandPoints = x; number of command points
CommandSet = DesiredCommandSet; in case you want to use a different one
DisplayName = x; what do you want it to be called in the game interface
EquivalentTo = Desired unit or horde; will select with equivalent if you wish
Scale = x; x is the % change from the original size (if desired)
```

```
Body = ActiveBody ModuleTag_Body
    MaxHealth = x; new health points if desired
End
```

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    ...
End
```

```
Behavior = ExperienceLevelCreate ModuleTag_MaxLevel
    LevelToGrant = x; from 1 to 10
    MPOnly = No
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_x; x is desired upgrade
    UpgradeToGrant = x; depends on faction
End
```

```
Behavior = SlowDeathBehavior ModuleTag_xx
    ...
End
```

End

Here are the needed code blocks.

### data\ini\commandbutton.ini

**CommandButton Command\_ConstructElrondElvenBarracks; added by Meneldil for Elrond**

```
Command = FOUNDATION_CONSTRUCT
Object = ElrondElvenBarracks
TextLabel = CONTROLBAR:ConstructElvenBarracks
ButtonImage = BElvenBarracks
```

```

  ButtonBorderStyle = BUILD ; Identifier for the User as to what kind of button this
is
  DescriptLabel    = CONTROLBAR:ToolTipElvenBarracks
  Radial           = Yes
End

```

Note: I added this right after the existing “ConstructElvenBarracks” command.

```

CommandButton Command_CreateElvenFoundation; added by Meneldil for Elrond
  Command          = SPECIAL_POWER
  SpecialPower     = SuperweaponCreateElvenFoundation
  ButtonImage      = ElvenFoundation1
  Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND
  RadiusCursorType = INDUSTRY
  CursorName       = AttackObj
  InvalidCursorName = GenericInvalid
  ButtonBorderStyle = ACTION
  TextLabel        = CONTROLBAR:CreateElvenFoundation
  DescriptLabel    = CONTROLBAR:ToolTipCreateElvenFoundation
  InPalantir       = Yes
End

```

Note: I added this to the bottom of the file.

```

CommandButton Command_ConstructMultiplayerGondorFarm; added by Meneldil for Elrond
  Command          = FOUNDATION_CONSTRUCT
  Object           = GondorFarmMultiplayer; Level 2 Farm (same as economy plot)
  TextLabel        = CONTROLBAR:ConstructGondorFarm
  ButtonImage      = BCFarm
  ButtonBorderStyle = BUILD ; Identifier for the User as to what kind of button this
is
  DescriptLabel    = CONTROLBAR:ToolTipGondorBuildFarm
  Radial           = Yes
End

```

Note: I added this under the “CommandButton Command\_ConstructGondorFarm” code. This allows the existing economy plot level 2 farm to be created instead of a level 1 farm.

### data\ini\commandset.ini

```

CommandSet ElrondCommandSet; Meneldil modified
  1 = Command_ToggleElrondWarriorWeapon
  2 = Command_SpecialAbilityElrondLeadership; added by Meneldil
  3 = Command_SpecialAbilityElrondMeadow; added by Meneldil
  4 = Command_SpecialAbilityElrondLightBeam; added by Meneldil
  5 = Command_InvisibilityCloak; added by Meneldil
  6 = Command_CreateElvenFoundation; added by Meneldil
  13 = Command_AttackMove
  14 = Command_Stop
  15 = Command_Guard
End

```

```

CommandSet ElrondElvenBarracksCommandSet; added by Meneldil for Elrond
  1 = Command_ConstructRohanElvenWarriorHorde
  2 = Command_Sell
End

```

```

CommandSet ElrondFoundationCommandSet; added by Meneldil for Elrond (reference
above ElvenFoundationCommandSet)
  1 = Command_ConstructElrondElvenBarracks; this is a modified version of the
Elven Barracks
; 2 = Command_ConstructElvenFarm; this is a high output Gondor farm

```

```

; 2 = Command_ConstructGondorFarm; added by Meneldil
2 = Command_ConstructMultiplayerGondorFarm; added by Meneldil
3 = Command_ConstructGondorBlackSmith; added by Meneldil
4 = Command_ConstructGondorBarracks; added by Meneldil
5 = Command_ConstructGondorArcherRange; added by Meneldil
6 = Command_ConstructGondorStatue; added by Meneldil
7 = Command_ConstructGondorWell; added by Meneldil
8 = Command_ConstructGondorKeep; added by Meneldil
9 = Command_ConstructGondorStable; added by Meneldil
10 = Command_ConstructGondorWorkshop; added by Meneldil
11 = Command_ConstructGondorMarketPlace; added by Meneldil
End

```

Note: As you can see, I added a number of other Gondor structures to this Elven Foundation.

**data\ini\mappedimages\aptimages\myimages.ini**

```

MappedImage ElvenFoundation1
Texture = ebfoundation.tga
TextureWidth = 256
TextureHeight = 256
Coords = Left:0 Top:0 Right:256 Bottom:256
Status = NONE
End

```

**data\ini\object\goodfaction\units\goodfactionbuildings.ini**

```

;-----
;Temporary Elven Building Foundation added by Meneldil for Elrond
ChildObject ElvenBuildingFoundation_Summoned ElvenBuildingFoundation

CommandSet = ElrondFoundationCommandSet

Behavior = DeletionUpdate ModuleTag_Timer; use this instead of lifetime update
MinLifetime = 180000; 3 minutes to use it or lose it
MaxLifetime = 180000
End
End

```

Note: I added this to the bottom of the file.

**data\ini\object\goodfaction\units\elven\elrond.ini**

```

;-----Start of Meneldil Create Elven Foundation-----
Behavior = OCLSpecialPower CreateElvenFoundation
SpecialPowerTemplate = SuperweaponCreateElvenFoundation
OCL = OCL_CreateElvenFoundationEgg
TriggerFX = FX_DevastationFlare
CreateLocation = USE_OWNER_OBJECT
StartsPaused = No
SetModelCondition = ModelConditionState:LEVELED
SetModelConditionTime = 8.1
End
;-----End of Meneldil Create Elven Foundation-----

```

Note: I added this in the “ENGINEERING Parameters” section.

**data\ini\objectcreationlist.ini**

```

;-----
; Create elven foundation ; added by Meneldil for Elrond
ObjectCreationList OCL_CreateElvenFoundationEgg
CreateObject

```



```

    ObjectNames = ElvenBuildingFoundation_Summoned
    Count = 1
    FadeIn = Yes
    FadeTime = 2000
    Disposition = LIKE_EXISTING
End
End

```

Note: I added this to the bottom of the file.

### data\ini\specialpower.ini

```

; -----
SpecialPower SuperweaponCreateElvenFoundation; added by Meneldil for Elrond
Enum          = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime    = 240000; 4 minutes (number in milliseconds)
PublicTimer   = No
InitiateAtLocationSound = GenericSpell
RadiusCursorRadius = 30
End

```

Note: I added this to the bottom of the file.

### data\lotr.str

```

OBJECT:ElvenBarracks
"Elven Barracks"
END

```

```

CONTROLBAR:ConstructElvenBarracks
"Build &Elven Barracks"
END

```

```

CONTROLBAR:CreateElvenFoundation
"Elven &Foundation"
END

```

```

CONTROLBAR:ToolTipCreateElvenFoundation
"Create a temporary foundation upon which you can build an Elven barracks or
another Gondor structure. \n\n
The foundation will disappear in about 3 minutes if you do not use it. \n\n Left
click to activate."
END

```

Note: The Elven barracks text already existed; I changed “barrack” to “barracks” and added a shortcut for building the barracks. I added the Elven foundation info to the bottom of the string file.

By this point, you should be able to understand this code (at least the important parts) without further explanation.

FYI, if you decide you don’t like the order of the Palantir commands, you can just reorder them, as shown below.

```

CommandSet ElrondCommandSet; Meneldil modified
1 = Command_ToggleElrondWarriorWeapon
2 = Command_InvisibilityCloak          ; added by Meneldil
3 = Command_CreateElvenFoundation     ; added by Meneldil
4 = Command_SpecialAbilityElrondLeadership; added by Meneldil
5 = Command_SpecialAbilityElrondLightBeam ; added by Meneldil
6 = Command_SpecialAbilityElrondMeadow   ; added by Meneldil
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
End

```

You may have noticed a problem with the Elven barracks. You can create Elven Warriors, but they can't be upgraded since their upgrades are provided by Rohan via their barracks and armory, which Gondor doesn't have. There are a number of different ways to handle this. For example, you can change their command set so that they can't receive upgrades, or you can provide them automatic upgrades, or you can add the upgrades for purchase at the barracks. Unfortunately, the upgrades are tied with Rohan, so that complicates things. For this example, we'll make a childobject of the RohanElvenWarriorHorde and call it GondorElvenWarriorHorde. Further, these elves will be created at level 10 with full armor and weapon upgrades (keeps it simple).

First, let's make a new unit to base the new horde on. In the elveninfantry.ini file, add the following to the bottom of the file:

**data\ini\object\goodfaction\units\elven\elveninfantry.ini**

```

;-----
ChildObject GondorElvenWarrior RohanElvenWarrior; added by Meneldil
    CommandSet      = GenericCommandSet
    CommandPoints   = 5
    BuildCost       = 400
    BuildTime       = 20

    Body = ActiveBody ModuleTag_02
        CheerRadius      = EMOTION_CHEER_RADIUS; is 350
        MaxHealth         = 290; ROHAN_ELVENWARRIOR_HEALTH is 160 for level 1
        MaxHealthDamaged = 290; ROHAN_ELVENWARRIOR_HEALTH_DAMAGED is 160 for
level 1
    End

    Behavior = AIUpdateInterface ModuleTag_03
        AutoAcquireEnemiesWhenIdle = Yes ATTACK_BUILDINGS STEALTHED
        MoodAttackCheckRate        = 500
        CanAttackWhileContained     = Yes
        AILuaEventsList             = RohanElvenWarriorFunctions
        AttackPriority               = AttackPriority_Archer; added by
Meneldil
    End

;Provide full weapon and armor upgrades
Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_RohanFireArrows
End

Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_RohanForgedBlades
End

Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_RohanHeavyArmor
End
End

```

**Summary**

- A new unit called GondorElvenWarrior has been created from the original RohanElvenWarrior.
- The existing generic command set has been referenced in order to eliminate the need for upgrades.
- The command points have been increased from 4 to 5, relative to the original RohanElvenWarrior.
- Build cost and build time values have been created in case we want to build single units (e.g., scouts).
- New health levels have been provided.
- Archer attack priority has been added
- Full armor and weapon upgrades have been provided.

Now we'll create the new Gondor Elven Warrior horde.

**data\ini\commandset.ini**

CommandSet ElrondElvenBarracksCommandSet; added by Meneldil for Elrond

- 1 = Command\_ConstructGondorElvenWarriorHorde
- 2 = Command\_Sell

End

CommandSet GondorElvenWarriorHordeCommandSet; added by Meneldil for Elven Warriors built at Elven Barracks created by Elrond

- 1 = Command\_ToggleElvenWarriorWeapon
- 2 = Command\_Guard
- 3 = Command\_AttackMove
- 4 = Command\_Stop

End

**data\ini\experiencelevels.ini**

-----  
;Meneldil added GondorElvenWarrior and GondorElvenWarriorHorde to Good Elite Level 10 Target Names

ExperienceLevel GoodEliteLevel10

TargetNames = GondorTowerShieldGuard  
 GondorTowerShieldGuardHorde GondorTowerShieldGuardHordeWallFormation GondorRanger  
 GondorRangerHorde GondorRangerHordeAmbushFormation RohanElvenWarrior  
 RohanElvenWarriorHorde GondorFighterRangerComboHorde GondorTowerTrebuchetComboHorde  
 GondorTowerArcherComboHorde GondorTowerRangerComboHorde  
 RohanElvenWarriorDoubleHorde **GondorElvenWarrior GondorElvenWarriorHorde**  
 GondorTowerFighterComboHorde

RequiredExperience =  
 EXPERIENCE\_REQUIRED\_GOOD\_ELITE\_10  
 ExperienceAward =  
 EXPERIENCE\_AWARD\_GOOD\_ELITE\_10  
 AttributeModifiers = GoodEliteBonusRank10  
 InformUpdateModule = Yes  
 Rank = 10  
 LevelUpFx = FX:GenericLevelUp4FX  
 LevelUpTintColor = R:255 G:255 B:255  
 LevelUpTintPreColorTime = 500  
 LevelUpTintPostColorTime = 3000  
 LevelUpTintSustainColorTime = 500

SelectionDecal

Texture = decal\_G\_level4  
 Texture2 = decal\_good\_CO  
 Style = SHADOW\_MERGE\_DECAL  
 OpacityMin = 80%  
 OpacityMax = 100%  
 MinRadius = HORDE\_DECAL\_MIN\_RADIUS  
 MaxRadius = 200  
 MaxSelectedUnits = 40

End

END

**data\ini\object\goodfaction\hordes\rohan\roanhordes.ini**

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;  
ChildObject GondorElvenWarriorHorde RohanElvenWarriorHorde; added by Meneldil for Elrond summoned barracks

;Note: GondorElvenWarrior & GondorElvenWarriorHorde added to Good Elite Level 10 in the experience.ini file

```

CommandSet = GondorElvenWarriorHordeCommandSet
CommandPoints = 25; originally 20
BuildCost = 2000; these come with full armor, weapon, and level upgrades
VisionRange = 420; ROHAN_ELVENWARRIOR_HORDE_VISION_RANGE is 270

Behavior = HordeContain ModuleTag_HordeContain
    ObjectStatusOfContained =
    InitialPayload = GondorElvenWarrior 5
    Slots = 5
    PassengerFilter = NONE +INFANTRY
    ShowPips = No
    ThisFormationIsTheMainFormation = Yes; Used to determine which armorset
to use (and anything else we want!)
    AlternateFormation = GondorElvenWarriorSwordHorde

    ; Banner Carrier info
    BannerCarriersAllowed = ElvenGondorBanner; refer to gondorinfantry.ini
file
    BannerCarrierPosition = UnitType:GondorElvenWarrior Pos:X:35 Y:0

    ; Positions for 5
    RankInfo = RankNumber:1 UnitType:GondorElvenWarrior Position:X:13 Y:0
Position:X:13 Y:25 Position:X:13 Y:-25 Position:X:13 Y:50 Position:X:13 Y:-50
RevokedWeaponCondition:WEAPONSET_TOGGLE_1
    UpdateWeaponSetFlagsOnHordeToo = Yes ; Only use this flag when there is
a single Granted/Revoked Weaponset flag. This will pass it on to the Horde Brain.
    RanksToReleaseWhenAttacking = 1
    MeleeAttackLeashDistance = 50; How far the hordes can move from the
center of the horde when melee attacking.
End

Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_RohanFireArrows
End

Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_RohanForgedBlades
End

Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_RohanHeavyArmor
End

Behavior = ExperienceLevelCreate ModuleTag_LevelUp
    LevelToGrant = 10; if number is decreased from 10, experience.ini file
needs to be adjusted
    MPOnly = No
End

End

;////////////////////////////////////
ChildObject GondorElvenWarriorSwordHorde GondorElvenWarriorHorde; added by Meneldil
for Elrond summoned barracks
; Horde configuration not changed from GondorElvenWarriorHorde

Behavior = HordeContain ModuleTag_HordeContain
    ObjectStatusOfContained =
    InitialPayload = GondorElvenWarrior 5
    Slots = 5
    PassengerFilter = NONE +INFANTRY

```

```

    ShowPips = No

    ThisFormationIsTheMainFormation = No; Used to determine which armorset
to use (and anything else we want!)
    AlternateFormation = GondorElvenWarriorHorde

    ; Banner Carrier info
    BannerCarriersAllowed = ElvenGondorBanner; refer to gondorinfantry.ini
file
    BannerCarrierPosition = UnitType:GondorElvenWarrior Pos:X:35 Y:0

    ; Positions for 5
    RankInfo = RankNumber:1 UnitType:GondorElvenWarrior Position:X:13 Y:0
Position:X:13 Y:25 Position:X:13 Y:-25 Position:X:13 Y:50 Position:X:13 Y:-50
GrantedWeaponCondition:WEAPONSET_TOGGLE_1
    UpdateWeaponSetFlagsOnHordeToo = Yes ; Only use this flag when there is
a single Granted/Revoked Weaponset flag. This will pass it on to the Horde Brain.
    RanksToReleaseWhenAttacking = 1
    MeleeAttackLeashDistance = 50; How far the hordes can move from the
center of the horde when melee attacking.
    End
End

```

**data\ini\object\goodfaction\units\gondor\gondorinfantry.ini**

```

;-----
ChildObject ElvenGondorBanner GondorBanner; added by Meneldil to allow for Gondor
Elven Warrior Level 10 Horde
    LocomotorSet
        Locomotor      = NormalMeleeHordeLocomotor
        Condition      = SET_NORMAL
        Speed          = NORMAL_GOOD_FAST_HORDE_SPEED
    End
End

```

Note: This was added to the bottom of the gondorinfantry.ini file.

Summary

1. The command set was created to reflect the lack of weapon, armor, and level upgrade options.
2. The Gondor Elven Warriors will be created at level 10. If you wish them to start at level 1 and work their way up normally, then add “GondorElvenWarrior” & “GondorElvenWarriorHorde” to to all of the TargetNames for GoodEliteLevel1 through GoodEliteLevel10. In addition, “LevelToGrant” will need to be changed to 1. Experience gains will also have to be added.
3. The build cost was increased to allow for the fact that this horde will be fully leveled and upgraded.
4. The command points and vision values were also increased from the base Rohan Elven Warriors.
5. The line formation doesn’t change when weapons are toggled, but that ability could be added if desired.
6. An additional child object was created to allow for weapon toggling.
7. The child objects can’t create a double horde like their parents can (because I chose not to – feel free to do it for yourself). However, I eliminated the porcupine formation speed loss when a battalion uses its swords.
8. Since these elves are fighting for Gondor, I wanted to use a Gondor banner carrier. Unfortunately, it was too slow to keep up with the elves and was always trailing behind. Therefore, I created a childobject of the Gondor banner carrier with the only difference being he can match the speed of the elves.
9. I increased the melee attack distance from 25 to 50.
10. This Elven battalion is only created at the Elven Barracks created by Elrond (unless summoned separately by the game AI when playing against Gondor – more on that later).

In order to build these units at Elrond’s Elven Barracks, add the following code.

### data\ini\commandbutton.ini

CommandButton Command\_ConstructGondorElvenWarriorHorde; added by Meneldil for Elven Barracks created by Elrond

```
Command          = UNIT_BUILD
Object           = GondorElvenWarriorHorde; Meneldil changed original
RohanElvenWarriorHorde
Options          = CANCELABLE
TextLabel        = CONTROLBAR:ConstructElvenWarriorHorde
ButtonImage      = UPRohan_ElvenWarrior; Meneldil changed original
BCElvenBarracks_ElvenWarriors
ButtonBorderStyle = BUILD ; Identifier for the User as to what kind of
button this is
DescriptLabel    =
CONTROLBAR:ToolTipBuildElvenWarriorHordeWithNoPrerequisites
Radial           = Yes
InPalantir       = Yes
ShowProductionCount = Yes
End
```

### data\lotr.str

```
CONTROLBAR:ToolTipBuildElvenWarriorHordeWithNoPrerequisites
"Recruit Elven allies to aid in the fight against the forces of evil"
END
```

Note: The tool tip already exists; I just changed the text.

What if you want to add something else to the barracks? We'll use the previously created single Gondor Elven Warrior unit and refer to it as a Rivendell Scout. It will have self-healing and cloaking capability.

### data\ini\commandbutton.ini

CommandButton Command\_ConstructElvenScout; added by Meneldil for Elrond

```
Command          = UNIT_BUILD
Object           = ElvenScout; GondorElvenWarrior
Options          = CANCELABLE
TextLabel        = CONTROLBAR:ConstructElvenScout
ButtonImage      = BCElvenBarracks_ElvenWarriors
ButtonBorderStyle = BUILD
DescriptLabel    = CONTROLBAR:ToolTipBuildElvenScout
Radial           = Yes
InPalantir       = Yes
ShowProductionCount = Yes
End
```

CommandButton Command\_SpecialAbilityElfCloak

```
Command          = SPECIAL_POWER
SpecialPower      = SpecialAbilityElfCloak
Options          = OK_FOR_MULTI_SELECT; this line added by Meneldil
TextLabel        = CONTROLBAR:ElvenCloak
ButtonImage      = HPFrodoElfCloak
ButtonBorderStyle = ACTION
DescriptLabel    = CONTROLBAR:ToolTipElvenCloak
; UnitSpecificSound =
InPalantir       = Yes
End
```

Note: "OK\_FOR\_MULTI\_SELECT" means the command works when multiple units are selected.

CommandButton Command\_ToggleSingleElvenWarriorWeapon; added by Meneldil for Rivendell Scouts

```
Command          = TOGGLE_WEAPONSET
```

```

Options          = OK_FOR_MULTI_SELECT
TextLabel        = CONTROLBAR:ToggleElvenWarriorWeapons
ButtonImage      = HSFaramirKnightRanger
ButtonBorderStyle = ACTION
DescriptorLabel  = CONTROLBAR:ToolTipToggleElvenWarriorWeapons
InPalantir       = Yes
UnitSpecificSound = ElvenWarriorVoiceSelectBattle
End

```

### data\ini\commandset.ini

```

CommandSet ElrondElvenBarracksCommandSet; added by Meneldil for Elrond
  1 = Command_ConstructGondorElvenWarriorHorde
  2 = Command_ConstructElvenScout
  3 = Command_Sell
End

```

```

CommandSet ElvenScoutCommandSet; added by Meneldil for Elven Scout built at Elven
Barracks
  1 = Command_ToggleSingleElvenWarriorWeapon
  2 = Command_SpecialAbilityElfCloak
  3 = Command_Guard
  4 = Command_AttackMove
  5 = Command_Stop
End

```

### data\ini\object\goodfaction\units\elven\elveninfantry.ini

```

;-----
ChildObject GondorElvenWarrior RohanElvenWarrior; added by Meneldil
  CommandSet      = ElvenScoutCommandSet
  CommandPoints   = 5
  BuildCost       = 400
  BuildTime       = 20

  Body = ActiveBody ModuleTag_02
    CheerRadius      = EMOTION_CHEER_RADIUS; is 350
    MaxHealth        = 290; ROHAN_ELVENWARRIOR_HEALTH is 160 for level 1
    MaxHealthDamaged = 290; ROHAN_ELVENWARRIOR_HEALTH_DAMAGED is 160 for
level 1
  End

  Behavior = AIUpdateInterface ModuleTag_03
    AutoAcquireEnemiesWhenIdle = Yes ATTACK_BUILDINGS STEALTHED
    MoodAttackCheckRate        = 500
    CanAttackWhileContained     = Yes
    AILuaEventsList            = RohanElvenWarriorFunctions
    AttackPriority               = AttackPriority_Archer; added by
Meneldil
  End

  WeaponSet
    Conditions = None
    Weapon = PRIMARY GondorElvenBow
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
  End

  WeaponSet
    Conditions = WEAPONSET_TOGGLE_1
    Weapon = PRIMARY ElvenWarriorSword
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
  End

```

```

;Provide full weapon and armor upgrades
Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_RohanFireArrows
End

Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_RohanForgedBlades
End

Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_RohanHeavyArmor
End

Behavior = AutoHealBehavior ModuleTag_Healing
    StartsActive          = Yes
    HealingAmount        = 2
    HealingDelay         = 1000
    StartHealingDelay    = 20000
    HealOnlyIfNotInCombat = Yes
End

Behavior = StealthUpdate StealthUpdateModuleTag
    StealthDelay          = 0
    FriendlyOpacityMin    = 10%
    FriendlyOpacityMax    = 30%
    PulseFrequency        = 750
    InnateStealth         = No
    OrderIdleEnemiesToAttackMeUponReveal = Yes
    DetectedByAnyoneRange = 20
    RevealWeaponSets      = CLOSE_RANGE CONTESTING_BUILDING
    BecomeStealthedFX     = FX_ElvenCloakOn
    ExitStealthFX         = FX_ElvenCloakOn
End

Behavior = SpecialPowerModule ModuleTag_ElfCloakStarter
    SpecialPowerTemplate = SpecialAbilityElfCloak
    UpdateModuleStartsAttack = Yes
End

Behavior = ToggleHiddenSpecialAbilityUpdate ModuleTag_ElfCloakUpdate
    SpecialPowerTemplate = SpecialAbilityElfCloak
    AwardXPForTriggering = 0
End

```

End

-----

```

ChildObject ElvenScout GondorElvenWarrior; added by Meneldil
    ButtonImage = BCElvenBarracks_ElvenWarriors; UPRohan_ElvenWarrior
    DisplayName = OBJECT:ElvenScout
    EquivalentTo = ElvenScout
    VisionRange = 500

```

End

### data\lotr.str

```

CONTROLBAR:ConstructElvenScout
"Rivendell &Scout"
END

```

```

CONTROLBAR:ToolTipBuildElvenScout
"Recruit an armed scout"
END

```



```
OBJECT:ElvenScout
"Rivendell Scout"
END
```

### Summary

1. I added the ability to create a scout at the Elven barracks.
2. The Elven Scout child object was created in order to prevent single units from being selected with the Elven Warrior Horde.
3. I replaced the generic command set with a new command set that allows use of the cloak.
4. The scout will heal on its own (which now means the horde will, too). This ability was added to the “**GondorElvenWarrior**” unit.
5. The scout has cloaking capability when standing still. This ability was added to the “**GondorElvenWarrior**” unit.
6. I adjusted the barrack button images to differentiate between the warrior horde and a single scout.
7. I modified the “**ToggleSingleElvenWarriorWeapon**” command we created earlier. Note that even though the units can switch weapons, there is only a single button image for the weapon change and that the typical bow/sword voice sets have been eliminated. I did this because the button image & voices didn’t always sync properly when the weapons were switched.

Now we’ll make a child object of Elrond such that he has a specified lifetime range. This could have been done earlier but I held off because I didn’t want him disappearing while I was testing new abilities. Add the following to the bottom of his INI file:

```
ChildObject Elrond_Summoned ElvenElrond
  IsTrainable = No
  CommandPoints = 0
  Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    MinLifetime      = 120000
    MaxLifetime      = 150000
    DeathType        = FADED
  End
  Behavior = SlowDeathBehavior ModuleTag_05
    DeathTypes = ALL -FADED
    SinkDelay = 4000
    SinkRate = 0.40
    DestructionDelay = 12000
    Sound = INITIAL ElrondVoiceDie
  End
  Behavior = SlowDeathBehavior ModuleTag_FadeDeath
    DeathTypes = NONE +FADED
    FadeDelay = 0
    FadeTime = 0
    DestructionDelay = 0
    Sound = INITIAL ElrondVoiceFarewell
    FX = INITIAL FX_UnSummonElvenAllies
  End
End
```

### Summary

1. Elrond cannot level (even if he weren’t already at 10). If the “**IsTrainable**” line is set to “No” he can’t level.
2. He has no command points. This is true of the original, so I really didn’t have to include this.
3. He lasts between 2 and 2.5 minutes.
4. If he is killed before his timer expires, you’ll hear a death cry. He’ll crumple to the ground and eventually sink from view.
5. If his timer expires before he is killed, he’ll vanish into the mist and you’ll hear a parting farewell. Note that you’ll have to create or add your own voice file.

In order to show him at level 10, modify his experience code block as follows:

```
ExperienceLevel ElrondLevel1
    TargetNames = ElvenElrond Elrond_Summoned; summoned
version added by Meneldil
    RequiredExperience = 1
    ExperienceAward = 0
    Rank = 10
    AttributeModifiers = ElrondResistKnockback
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
End
```

Here is what the code would look like to make Elrond a buildable hero from a Gondor citadel. If you do this, be sure to remove the summoned version of Elrond from Sam's OCL code.

### **Making Elrond a Buildable Unit from a Gondor Citadel**

#### **data\ini\commandset.ini**

```
CommandSet GondorCastleBaseKeepCommandSet
    1 = Command_GenericReviveSlot1
    2 = Command_GenericReviveSlot2
    3 = Command_GenericReviveSlot3
    4 = Command_GenericReviveSlot4
    5 = Command_GenericReviveSlot5
    6 = Command_GenericReviveSlot6
    7 = Command_GenericReviveSlot7; added by Meneldil
    8 = Command_GenericReviveSlot8; added by Meneldil
;    7 = Command_EvacuateGarrison
;    8 = Command_ExitGarrison
    9 = Command_StartCitadelSelfRepair
End
```

#### **data\ini\fxlist.ini**

```
; -----
FXList FX_ElrondDieToRespawn; added by Meneldil
    ParticleSystem
        Name = GandalfSwordHitSpark
        Offset = X:12.0 Y:0.0 Z:8.0
        OrientToObject = Yes
    End
    ParticleSystem
        Name = GandalfSwordHitFlash
        Offset = X:12.0 Y:0.0 Z:8.0
        OrientToObject = Yes
    End
    EvaEvent
        EvaEventOwner = ElrondDie; already exists in eva.ini
        EvaEventAlly = None
    End
End
```

;-----

```
FXList FX_ElrondInitialSpawn; added by Meneldil
  Sound
    Name = GenericRespawn1
  End
  Sound
    Name = ElrondVoiceSalute; refer to voice.ini file
  End
  ParticleSystem
    Name = ResurrectionCenter
    Offset = X:0.0 Y:0.0 Z:5.0
    OrientToObject = Yes
  End
  ParticleSystem
    Name = ResurrectionLightShaft
    Offset = X:0.0 Y:0.0 Z:0.0
    OrientToObject = Yes
  End
  ParticleSystem
    Name = ResurrectionVortex
    Offset = X:0.0 Y:0.0 Z:5.0
    OrientToObject = Yes
  End
  ParticleSystem
    Name = ResurrectionWave
    Offset = X:0.0 Y:0.0 Z:5.0
    OrientToObject = Yes
  End
End
```

;-----

```
FXList FX_ElrondRespawn; added by Meneldil
  Sound
    Name = GenericRespawn1
  End
  Sound
    Name = ElrondVoiceSalute; refer to voice.ini file
  End
  ParticleSystem
    Name = ResurrectionCenter
    Offset = X:0.0 Y:0.0 Z:5.0
    OrientToObject = Yes
  End
  ParticleSystem
    Name = ResurrectionLightShaft
    Offset = X:0.0 Y:0.0 Z:0.0
    OrientToObject = Yes
  End
  ParticleSystem
    Name = ResurrectionVortex
    Offset = X:0.0 Y:0.0 Z:5.0
    OrientToObject = Yes
  End
  ParticleSystem
    Name = ResurrectionWave
    Offset = X:0.0 Y:0.0 Z:5.0
    OrientToObject = Yes
  End
End
```

## data\ini\object\goodfaction\units\elven\elrond.ini

```
; ***DESIGN parameters ***
Side = Gondor
EditorSorting = UNIT
ThreatLevel = 8; Meneldil changed from 4.0
ThingClass = CHARACTER_UNIT
TransportSlotCount = 1
HeroSortOrder = 15; added by Meneldil
DisplayMeleeDamage = ELROND_SWORD_DAMAGE; added by Meneldil
DisplayRangedDamage = ELROND_BOW_DAMAGE ; added by Meneldil
BountyValue = ELVEN_ELROND_BOUNTY_VALUE_NEW; Meneldil appended "NEW"
to the end
VisionRange = VISION_HERO_RANGED
DisplayName = OBJECT:ElvenElrond
CrushableLevel = 2 ;What am I?: 0 = for infantry, 1 = for trees, 2 =
general vehicles
CommandSet = ElrondCommandSet
IsTrainable = No; added by Meneldil
RecruitText = CONTROLBAR:ElvenElrondRecruit; added by Meneldil for
skirmish
ReviveText = CONTROLBAR:ElvenElrondRevive; added by Meneldil for
skirmish
Hotkey = CONTROLBAR:ElvenElrondHotkey; added by Meneldil for
skirmish
BuildCost = ELROND_BUILD_COST; Meneldil added (refer to weapon.ini
file)
BuildTime = GANDALF_THE_WHITE_BUILDTIME; Meneldil added

; *** ENGINEERING Parameters ***
Behavior = ExperienceLevelCreate ModuleTag_MPLevelBonus; added by Meneldil
LevelToGrant = 10; (level 1 to 10)
MPOnly = Yes
End

Body = ActiveBody ModuleTag_02
MaxHealth = ELROND_HEALTH_NEW; Meneldil changed variable name
(refer to weapon.ini file)
MaxHealthDamaged = ELROND_HEALTH_NEW; Meneldil changed from original 5
DodgePercent = HERO_DODGE_PERCENT; added by Meneldil
End

; Meneldil added respawn code (reapplied from Gandalf)
Body = RespawnBody ModuleTag_RespawnBody
CheerRadius = EMOTION_CHEER_RADIUS
MaxHealth = GANDALF_THE_WHITE_HEALTH ;BALANCE
Eomer Health
PermanentlyKilledByFilter = NONE ;Who kills me
permanently?
DodgePercent = HERO_DODGE_PERCENT
End
Behavior = RespawnUpdate ModuleTag_RespawnUpdate
DeathAnim = DYING ;STUNNED ;Model condition
to play when killed-to-respawn
DeathFX = FX_ElrondDieToRespawn ;FXList to play
when killed-to-respawn
DeathAnimationTime = 5367 ;1133 ;How long
DeathAnim will take.
InitialSpawnFX = FX_ElrondInitialSpawn
```

```

        RespawnAnim                = LEVELED                ;Animation to
play when respawning.
        RespawnFX                  = FX_ElrondRespawn       ;FXList to play
when respawning.
        RespawnAnimationTime       = 2000                  ;Time it takes
for respawn to play.
        AutoRespawnAtObjectFilter   = NONE +CASTLE_KEEP     ;Respawn at this
location -- and at it's exit production point if possible.

```

;RespawnEntries determine the ruleset for how a character can be revived. Some units may automatically respawn, others may require a specific revive action performed on him. You can specify different values for each level... or use Level:Any

```

        RespawnRules =      AutoSpawn:No      Cost:1200      Time:100000
Health:100% ;DEFAULT VALUES
        RespawnEntry =      Level:2          Cost:1400      Time:120000
;For other levels, only override what is different.
        RespawnEntry =      Level:3          Cost:1600      Time:140000
        RespawnEntry =      Level:4          Cost:1800      Time:160000
        RespawnEntry =      Level:5          Cost:2000      Time:180000
        RespawnEntry =      Level:6          Cost:2200      Time:180000
        RespawnEntry =      Level:7          Cost:2400      Time:210000
        RespawnEntry =      Level:8          Cost:2600      Time:210000
        RespawnEntry =      Level:9          Cost:2800      Time:240000
        RespawnEntry =      Level:10         Cost:3000      Time:240000

```

End

-----Start of Meneldil reapplied self healing code-----

```

        Behavior = AutoHealBehavior ModuleTag_ElrondHealing; Meneldil added
        StartsActive          = Yes
        HealingAmount          = 20; HERO_HEAL_AMOUNT; original is 10
        HealingDelay           = 1000
        StartHealingDelay      = 15000; HERO_HEAL_DELAY; original is 30000
        HealOnlyIfNotInCombat = Yes

```

End

-----End of Meneldil reapplied self healing code-----

```

        Behavior = SlowDeathBehavior ModuleTag_05
        DeathTypes = ALL
        SinkDelay = 5000; Meneldil changed original 3000
        SinkRate = 0.40 ; in Dist/Sec
        DestructionDelay = 15000; Meneldil changed original 4000
        Sound = INITIAL ElrondVoiceDie
        FX = FINAL FX_UnSummonElvenAllies

```

End

Note: Don't just copy and paste the above code blocks without thinking. Be sure they go in the right locations.

### data\ini\playertemplate.ini

PlayerTemplate FactionGondor

---existing code---

```

BuildableHeroesMP = GondorGandalf ElvenElrond GondorBoromir GondorFaramir
RohanFrodo RohanSam RohanPippin; Meneldil added Sam, Frodo, and Elrond

```

## data\ini\weapon.ini

```
----- ELROND -----  
;-----  
#define ELROND_HEALTH_NEW 1000; refer to elrond.ini file  
#define ELVEN_ELROND_BOUNTY_VALUE_NEW 500 ; refer to elrond.ini file  
#define ELROND_BOW_RANGE 400 ; refer to ElrondBow below  
#define ELROND_SCATTERRADIUS 10 ; refer to ElrondBow below  
#define ELROND_BOW_DAMAGE 150 ; refer to ElrondBowWarhead below  
#define ELROND_SWORD_DAMAGE 200 ; refer to ElrondSword below  
#define ELROND_BUILD_COST 5000; refer to elrond.ini file  
;-----
```

## data\lotr.str

```
CONTROLBAR:ElvenElrondRecruit  
"Hero Unit. Recruit the Lord of Imladris. \n  
Elrond starts with the ability to heal \n nearby allies and repair structures."  
END
```

```
CONTROLBAR:ElvenElrondRevive  
"Revive the fallen Hero, Elrond"  
END
```

```
CONTROLBAR:ElvenElrondHotkey  
"&Elrond"  
END
```

## Summary

1. The Gondor citadel initially only has 6 slots for heroes. I added two more.
2. The special effects were easily copied from existing hero respawn codes.
3. We created voice files earlier, so those are referenced.
4. I reapplied Gandalf's respawn code, adjusting it for Elrond. I left the other levels in place to allow for leveling Elrond if desired.
5. A build cost was added.
6. Don't forget to removed summoned Elrond from Sam's object creation code list.

If you want Elrond to start at level 1 and have him work his way up to level 10, then you would need to include the following.

## data\ini\experiencelevels.ini

```
----- ELROND -----  
;-----  
ExperienceLevel ElrondLevel1  
    TargetNames = ElvenElrond  
    RequiredExperience = 1  
    ExperienceAward = ELROND_LVL1_EXP_AWARD  
    Rank = 1  
    AttributeModifiers = ElrondResistKnockback  
    SelectionDecal  
        Texture = decal_hero_good  
        Style = SHADOW_ALPHA_DECAL  
        OpacityMin = 50%  
        OpacityMax = 100%  
        MinRadius = 40  
        MaxRadius = 200  
        MaxSelectedUnits = 40  
    End  
End  
  
ExperienceLevel ElrondLevel2  
    TargetNames = ElvenElrond  
    RequiredExperience = ELROND_LVL2_EXP_NEEDED
```

```

ExperienceAward = ELROND_LVL2_EXP_AWARD
AttributeModifiers = HeroLevelUpDamage1
Rank = 2
LevelUpFx = FX:GandalfLevelUp1FX
;LevelUpOCL = OCL_GandalfLevelUp1OCL
SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 40

```

End

END

ExperienceLevel ElrondLevel3

```

TargetNames = ElvenElrond
RequiredExperience = ELROND_LVL3_EXP_NEEDED
ExperienceAward = ELROND_LVL3_EXP_AWARD
AttributeModifiers = HeroLevelUpDamage2
Rank = 3
LevelUpFx = FX:GandalfLevelUp1FX
;LevelUpOCL = OCL_GandalfLevelUp1OCL
SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 40

```

End

END

ExperienceLevel ElrondLevel4

```

TargetNames = ElvenElrond
RequiredExperience = ELROND_LVL4_EXP_NEEDED
ExperienceAward = ELROND_LVL4_EXP_AWARD
AttributeModifiers = HeroLevelUpDamage3
Rank = 4
LevelUpFx = FX:GandalfLevelUp1FX
;LevelUpOCL = OCL_GandalfLevelUp1OCL
SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 40

```

End

END

ExperienceLevel ElrondLevel5

```

TargetNames = ElvenElrond
RequiredExperience = ELROND_LVL5_EXP_NEEDED
ExperienceAward = ELROND_LVL5_EXP_AWARD
AttributeModifiers = HeroLevelUpDamage4
Rank = 5
LevelUpFx = FX:GandalfLevelUp1FX

```

```

;LevelUpOCL = OCL_GandalfLevelUp1OCL
SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 40
End
END

ExperienceLevel ElrondLevel6
    TargetNames = ElvenElrond
    RequiredExperience = ELROND_LVL6_EXP_NEEDED
    ExperienceAward = ELROND_LVL6_EXP_AWARD
    AttributeModifiers = HeroLevelUpDamage5
    Rank = 6
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
END

ExperienceLevel ElrondLevel7
    TargetNames = ElvenElrond
    RequiredExperience = ELROND_LVL7_EXP_NEEDED
    ExperienceAward = ELROND_LVL7_EXP_AWARD
    AttributeModifiers = HeroLevelUpDamage6
    Rank = 7
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
END

ExperienceLevel ElrondLevel8
    TargetNames = ElvenElrond
    RequiredExperience = ELROND_LVL8_EXP_NEEDED
    ExperienceAward = ELROND_LVL8_EXP_AWARD
    AttributeModifiers = HeroLevelUpDamage7
    Rank = 8
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL

```



```

        OpacityMin           = 50%
        OpacityMax           = 100%
        MinRadius            = 40
        MaxRadius            = 200
        MaxSelectedUnits     = 40
    End
END

```

```

ExperienceLevel  ElrondLevel9
    TargetNames           = ElvenElrond
    RequiredExperience     = ELROND_LVL9_EXP_NEEDED
    ExperienceAward        = ELROND_LVL9_EXP_AWARD
    AttributeModifiers     = HeroLevelUpDamage8
    Rank                  = 9
    LevelUpFx             = FX:GandalfLevelUp1FX
    ;LevelUpOCL           = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture           = decal_hero_good
        Style             = SHADOW_ALPHA_DECAL
        OpacityMin        = 50%
        OpacityMax        = 100%
        MinRadius         = 40
        MaxRadius         = 200
        MaxSelectedUnits  = 40
    End
END

```

```

ExperienceLevel  ElrondLevel10
    TargetNames           = ElvenElrond Elrond_Summoned
    RequiredExperience     = ELROND_LVL10_EXP_NEEDED
    ExperienceAward        = ELROND_LVL10_EXP_AWARD
    AttributeModifiers     = HeroLevelUpDamage9
    Rank                  = 10
    LevelUpFx             = FX:GandalfLevelUp1FX
    ;LevelUpOCL           = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture           = decal_hero_good
        Style             = SHADOW_ALPHA_DECAL
        OpacityMin        = 50%
        OpacityMax        = 100%
        MinRadius         = 40
        MaxRadius         = 200
        MaxSelectedUnits  = 40
    End
END

```

### data\ini\object\goodfaction\units\elven\elrond.ini

```

CommandSet           = ElrondCommandSet
CommandPoints        = 10; added by Meneldil
IsTrainable          = Yes; added by Meneldil

```

### data\ini\object\weapon.ini

```

;----- ELROND -----
#define ELROND_HEALTH_NEW 1000 ; refer to elrond.ini file
#define ELVEN_ELROND_BOUNTY_VALUE_NEW 500 ; refer to elrond.ini file
#define ELROND_BOW_RANGE 400 ; refer to ElrondBow below
#define ELROND_SCATTERRADIUS 10 ; refer to ElrondBow below
#define ELROND_BOW_DAMAGE 100 ; refer to ElrondBowWarhead below
#define ELROND_SWORD_DAMAGE 100 ; refer to ElrondSword below
#define ELROND_BUILD_COST 7000 ; refer to elrond.ini file
#define ELVEN_BARRACKS_BUILD_COST 900 ; refer to civilianbuildings.ini file

```

```

#define ELVEN_BARRACKS_BUILD_TIME          60 ; refer to civilianbuildings.ini file

#define ELROND_LVL2_EXP_NEEDED            100 ; refer to experience.ini file
#define ELROND_LVL3_EXP_NEEDED            200 ; refer to experience.ini file
#define ELROND_LVL4_EXP_NEEDED            400 ; refer to experience.ini file
#define ELROND_LVL5_EXP_NEEDED            600 ; refer to experience.ini file
#define ELROND_LVL6_EXP_NEEDED            800 ; refer to experience.ini file
#define ELROND_LVL7_EXP_NEEDED           1000 ; refer to experience.ini file
#define ELROND_LVL8_EXP_NEEDED           1200 ; refer to experience.ini file
#define ELROND_LVL9_EXP_NEEDED           1400 ; refer to experience.ini file
#define ELROND_LVL10_EXP_NEEDED           1600 ; refer to experience.ini file

#define ELROND_LVL1_EXP_AWARD              70 ; refer to experience.ini file
#define ELROND_LVL2_EXP_AWARD              80 ; refer to experience.ini file
#define ELROND_LVL3_EXP_AWARD              90 ; refer to experience.ini file
#define ELROND_LVL4_EXP_AWARD             100 ; refer to experience.ini file
#define ELROND_LVL5_EXP_AWARD             120 ; refer to experience.ini file
#define ELROND_LVL6_EXP_AWARD             150 ; refer to experience.ini file
#define ELROND_LVL7_EXP_AWARD             180 ; refer to experience.ini file
#define ELROND_LVL8_EXP_AWARD             210 ; refer to experience.ini file
#define ELROND_LVL9_EXP_AWARD             250 ; refer to experience.ini file
#define ELROND_LVL10_EXP_AWARD            300 ; refer to experience.ini file
;-----

```

### data\lotr.str

```

CONTROLBAR:ElvenElrondRecruit
"Hero Unit. Recruit the Lord of Imladris. \n
Elrond starts with the ability to heal \n nearby allies and repair structures. \n\n
Command Points: 10"
END

```

### Summary

1. I simply copied Gandalf's experience code and adjusted it for Elrond.
2. I assigned 10 command points to Elrond (I included the command set above to show where it goes). I also increased his build cost to 7000 (he's going to be very strong by the time we're done with him). I also placed Elrond before Gandalf in the "BuildableHeroesMP" line in the playertemplate.ini file.
3. Be sure you make Elrond trainable.
4. I reduced the initial bow and sword damage values since they will increase by 100 from level 1 to level 10.
5. Adjust Elrond's needed experience levels as you see fit. I simply copied Gandalf's experience award amounts.

Note that all of his abilities will still be present at level 1 unless you change them. You've already added the appropriate code to the upgrade.ini file. Decide which levels you want which ability to become active and then add those upgrades to the experience.ini file. That leaves adding the upgrade code to Elrond's INI file. Here is the code I used.

```

;-----Start of Meneldil Create Elven Foundation-----
Behavior = UnpauseSpecialPowerUpgrade ModuleTag_ElvenFoundation
SpecialPowerTemplate = SuperweaponCreateElvenFoundation
TriggeredBy = Upgrade_NewAbility1
End

Behavior = OCLSpecialPower ModuleTag_CreateElvenFoundation
SpecialPowerTemplate = SuperweaponCreateElvenFoundation
OCL = OCL_CreateElvenFoundationEgg
TriggerFX = FX_DevastationFlare
CreateLocation = USE_OWNER_OBJECT
StartsPaused = Yes
End
;-----End of Meneldil Create Elven Foundation-----

```

```

;-----Start of Meneldil Elrond leadership code-----
Behavior = AttributeModifierAuraUpdate ModuleTag_ElrondLeadership
  StartsActive      = No; If no, requires upgrade to turn on.
  BonusName        = ElrondPassiveLeadership
  TriggeredBy      = Upgrade_NewAbility2
  RefreshDelay     = 2500
  Range            = 200
  ObjectFilter     = ANY +INFANTRY +CAVALRY +HERO -MACHINE -STRUCTURE
End

Behavior = UnpauseSpecialPowerUpgrade ModuleTag_UnpauseLeadership
  SpecialPowerTemplate = SpecialAbilityFakeLeadership
  TriggeredBy = Upgrade_NewAbility2
End

Behavior = SpecialPowerModule ModuleTag_ElrondLeadershipUpdate
  SpecialPowerTemplate      = SpecialAbilityFakeLeadership
  UpdateModuleStartsAttack = No
  StartsPaused = Yes
End
;-----End of Meneldil Elrond leadership code-----

;----- Start of Meneldil reapplied Istari Light code -----
Behavior = UnpauseSpecialPowerUpgrade ModuleTag_LightBeamEnabler
  SpecialPowerTemplate = SpecialAbilityElrondLightBeam
  TriggeredBy = Upgrade_NewAbility3
End

Behavior = SpecialPowerModule ModuleTag_LightBeamPower
  SpecialPowerTemplate      = SpecialAbilityElrondLightBeam
  UpdateModuleStartsAttack = Yes
  StartsPaused              = Yes
  InitiateSound             = ElrondVoiceAttack
End

Behavior = WeaponFireSpecialAbilityUpdate ModuleTag_ElrondLightBeamUpdate
  SpecialPowerTemplate      = SpecialAbilityElrondLightBeam
  SkipContinue              = Yes
  UnpackTime                = 2000
  PreparationTime           = 1
  PersistentPrepTime        = 2000
  PackTime                  = 500
  AwardXPForTriggering      = 0
  StartAbilityRange         = 190; Note: This has to be smaller than the
weapon range or it'll never succeed (refer to weapon.ini)
  ApproachRequiresLOS       = Yes
  SpecialWeapon              = ElrondLightBeamWeapon
  MustFinishAbility         = Yes
  WhichSpecialWeapon         = 3
  BusyForDuration           = 2500
End
;----- End of Meneldil reapplied Istari Light code -----

;----- Start of Meneldil reapplied Word of Power code-----
Behavior = UnpauseSpecialPowerUpgrade ModuleTag_WordEnabler
  SpecialPowerTemplate = SpecialAbilityWordOfPower
  TriggeredBy = Upgrade_NewAbility4
End

Behavior = SpecialPowerModule ModuleTag_WordStarter
  SpecialPowerTemplate      = SpecialAbilityWordOfPower

```

```

        UpdateModuleStartsAttack = Yes
        StartsPaused             = Yes
    End

    Behavior = WeaponFireSpecialAbilityUpdate ModuleTag_WordWeaponFireUpdate
        SpecialPowerTemplate     = SpecialAbilityWordOfPower
        WhichSpecialWeapon       = 1
        SkipContinue              = Yes
        UnpackTime               = 1700
        PackTime                 = 1
        FreezeAfterTriggerDuration = 2500 ; Hold AI for this long after we
fire.
        AwardXPForTriggering     = 0
        StartAbilityRange        = 80
        SpecialWeapon             = ElrondMeadow; GandalfWordOfPower
    End
;----- End of Meneldil reapplied Word of Power code-----

```

### Adding Armor Sets to Elrond

Objective: Provide armor upgrades to Elrond as he levels up.

As discussed previously, Elrond originally did not have armor, so we added “**HeroArmor**” as his default armor. We can adjust this such that he still starts with no armor (makes the invisibility cloak and use of bow more important), upgrades to hero armor when he reaches a certain level, and then upgrades to tough hero armor when he reaches another level. Here is what this would look like in his file.

#### data\ini\object\goodfaction\units\elven\elrond.ini

```

    ArmorSet
        Conditions = None
        Armor      = NoArmor
        DamageFX   = NormalDamageFX
    End

    ArmorSet; added by Meneldil for Elrond Armor Upgrade
        Conditions = PLAYER_UPGRADE
        Armor      = HeroArmor; can use InvulnerableArmor to verify this
works
        DamageFX   = NormalDamageFX
    End

    ArmorSet; added by Meneldil for Elrond Armor Upgrade
        Conditions = PLAYER_UPGRADE_2
        Armor      = ToughHeroArmor; can use InvulnerableArmor to verify
this works
        DamageFX   = NormalDamageFX
    End

```

In this example, Elrond will receive hero armor when he reaches level 4 and tough hero armor when he reaches level 6. Go to Elrond’s engineering paramaters and add the following code. I included the “**LevelToGrant**” code as a reference to show where I added the armor upgrade codes.

```

    Behavior = ExperienceLevelCreate ModuleTag_MPLevelBonus; added by Meneldil
        LevelToGrant = 1; (level 1 to 10)
        MPOnly = Yes
    End

```

Behavior = ArmorUpgrade ModuleTag\_UpgradeArmor; Meneldil changed from NoArmor to HeroArmor

```
    TriggeredBy = Upgrade_NewAbility2
    ArmorSetFlag = PLAYER_UPGRADE
End
```

Behavior = ArmorUpgrade ModuleTag\_UpgradeArmor2; Meneldil changed from HeroArmor to ToughHeroArmor

```
    TriggeredBy = Upgrade_NewAbility3
    ArmorSetFlag = PLAYER_UPGRADE_2
End
```

Naturally, you'll need to add the appropriate experience level upgrades, as shown below.

ExperienceLevel ElrondLevel2

```
    TargetNames = ElvenElrond
    RequiredExperience = ELROND_LVL2_EXP_NEEDED
    ExperienceAward = ELROND_LVL2_EXP_AWARD
    AttributeModifiers = HeroLevelUpDamage1
    Rank = 2
    Upgrades = Upgrade_NewAbility1; Added by
```

Meneldil for foundation upgrade

```
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
```

End

END

ExperienceLevel ElrondLevel4

```
    TargetNames = ElvenElrond
    RequiredExperience = ELROND_LVL4_EXP_NEEDED
    ExperienceAward = ELROND_LVL4_EXP_AWARD
    AttributeModifiers = HeroLevelUpDamage3
    Rank = 4
    Upgrades = Upgrade_NewAbility2; Added by
```

Meneldil for leadership & hero armor upgrades

```
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
```

End

END

ExperienceLevel ElrondLevel6

```
    TargetNames = ElvenElrond
    RequiredExperience = ELROND_LVL6_EXP_NEEDED
    ExperienceAward = ELROND_LVL6_EXP_AWARD
    AttributeModifiers = HeroLevelUpDamage5
    Rank = 6
```

```

    Upgrades = Upgrade_NewAbility3; Added by
Meneldil for light beam & tough hero armor upgrades
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
END

```

You'll also need to update the text descriptions to reflect the required ranks, as indicated below.

### data\lotr.str

```

CONTROLBAR:ToolTipCreateElvenFoundation
"Required: Rank 2 \n\n Create a temporary foundation upon which you can build an
Elven barracks or another Gondor structure. \n
The foundation will disappear in about 3 minutes if you do not use it. \n\n Elrond
also receives an armor upgrade. \n\n Left click to activate."
END

```

```

CONTROLBAR:ToolTipElrondLeadership
"Required: Rank 4 \n\n Nearby allies receive 3x experience, 50% armor, 2x weapon
damage, and fear invulnerability.
\n\n Elrond receives an armor upgrade. \n\n Passive ability"
END

```

```

CONTROLBAR:ToolTipElrondLightBeam
"Required: Rank 6 \n\n A powerful light beam that damages enemy combatants and
structures. \n\n Left click then right click on target.
\n\n Elrond also receives a final armor upgrade."
END

```

```

CONTROLBAR:ToolTipElrondMeadow
"Required: Rank 8 \n\n Create a meadow that pushes back and severely damages enemy
forces and structures, including
castle gates and battle towers. \n\n Left click to activate"
END

```

## Modifying an Existing Structure: Gondor Keep Part 1

Objective: Replace the standard Gondor Keep in Elrond's Elven Foundation Command Set with a modified keep that appears nowhere else and has its own projectile special effects. Further, if it is destroyed, a small army of the dead will be generated.

Previously, we added a number of standard Gondor Structures to the Elven Foundation, one of which was the Gondor Keep. This is a standalone defensive tower. Let's modify it so that it has some unique abilities. We'll use the "child object" command to create a new version of the keep.

### data\ini\commandbutton.ini

CommandButton Command\_ConstructGondorDeathTower; added by Meneldil for Elrond's Elven Foundation

```
Command          = FOUNDATION_CONSTRUCT
Object           = DeathTower
ButtonBorderStyle = BUILD
ButtonImage      = BGBattleTower
TextLabel        = CONTROLBAR:ConstructGondorDeathTower
DescriptLabel    = CONTROLBAR:ToolTipConstructGondorDeathTower
Radial           = Yes
End
```

### data\ini\commandset.ini

CommandSet ElrondFoundationCommandSet; added by Meneldil for Elrond (reference above ElvenFoundationCommandSet)

```
1 = Command_ConstructElrondElvenBarracks; this is a modified version of the
Elven Barracks
; 2 = Command_ConstructElvenFarm; this is a high output Gondor farm
; 2 = Command_ConstructGondorFarm; added by Meneldil
2 = Command_ConstructMultiplayerGondorFarm; added by Meneldil
3 = Command_ConstructGondorBlackSmith; added by Meneldil
4 = Command_ConstructGondorBarracks; added by Meneldil
5 = Command_ConstructGondorArcherRange; added by Meneldil
6 = Command_ConstructGondorStatue; added by Meneldil
7 = Command_ConstructGondorWell; added by Meneldil
; 8 = Command_ConstructGondorKeep; added by Meneldil
8 = Command_ConstructGondorDeathTower; added by Meneldil
9 = Command_ConstructGondorStable; added by Meneldil
10 = Command_ConstructGondorWorkshop; added by Meneldil
11 = Command_ConstructGondorMarketPlace; added by Meneldil
End
```

### data\ini\object\goodfaction\goodfactionbuildings.ini

-----  
-----

ChildObject DeathTower GondorKeep; added by Meneldil for Elrond's Elven Foundation

```
SelectPortrait      = BPGBattleTower
ButtonImage         = BGKeep
DisplayName          = OBJECT:GondorDeathTower
CommandSet          = EmptyCommandSet
ThreatLevel         = 3
BuildCost           = 1200; GONDOR_KEEP_BUILDCCOST; (800)
BuildTime           = 15; GONDOR_KEEP_BUILDTIME; (30)
BountyValue         = 1000; GONDOR_KEEP_BOUNTY_VALUE; (50)
```

WeaponSet

```
Weapon              = PRIMARY DeathTowerBow
Conditions           = None
AutoChooseSources   = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
```

End

```
Behavior = CreateObjectDie ModuleTag_BuildingDestroyed
CreationList = SUPERWEAPON_SpawnOathbreakers
End
```

End

### data\ini\weapon.ini

```
;-----
;This weapon is for the "Death Tower" available from Elrond's Elven Foundation
Weapon DeathTowerBow; added by Meneldil
AttackRange = 400; KEEP_ARCHER_RANGE
WeaponSpeed = 321 ; dist/sec
MinWeaponSpeed = 241
MaxWeaponSpeed = 481 ; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
FireFX = FX_RohanArcherBowWeapon
ScaleWeaponSpeed = Yes ; Used for lob weapons, scales speed
proportional to range
HitPercentage = 100 ;When this weapon is used it will hit
exactly 50% of the time.
ScatterRadius = 16.0 ;When this weapon misses it can randomly
miss by as much as this distance.
DelayBetweenShots = Min:KEEP_BOW_DELAYBETWEENSHOTS_MIN
Max:KEEP_BOW_DELAYBETWEENSHOTS_MAX
PreAttackDelay = KEEP_BOW_PREATTACKDELAY ; 1467 is the prep time for
archer.
PreAttackType = PER_SHOT ; Do the delay each time we attack a new
target
FiringDuration = KEEP_BOW_DELAYBETWEENSHOTS_MAX ; Duration of the
archer firing shot is 500ms.
IsAimingWeapon = Yes
AntiAirborneVehicle = Yes
AntiAirborneMonster = Yes
HitPassengerPercentage = 20%
AcceptableAimDelta = 360.0; We want to be able to shoot all round, as we
can't move.
```

```
CanBeDodged = Yes ; Will check for a DodgePercent on the target to have a second
chance at failing HitPercent
```

```
ProjectileNugget ; Default arrow
ProjectileTemplateName = FaramirSpecialArrow; GoodFactionArrow
WarheadTemplateName = BattleTowerBowUpgradedWarhead; KeepBowWarhead
ForbiddenUpgradeNames = Upgrade_BattleTowersToUseFireArrows
End
```

```
ProjectileNugget ; Upgraded arrow
ProjectileTemplateName = LegolasSpecialArrow; UpgradedGoodFactionArrow
WarheadTemplateName = LegolasHawkStrikeWarhead; KeepBowUpgradedWarhead
RequiredUpgradeNames = Upgrade_BattleTowersToUseFireArrows
End
```

End



## data\lotr.str

OBJECT:GondorDeathTower

"Tower of the Dead"

END

CONTROLBAR:ConstructGondorDeathTower

"Build Tower of the &Dead"

END

CONTROLBAR:ToolTipConstructGondorDeathTower

"Defensive tower guarded by the dead"

END

## Summary

1. A new command button was created, along with text descriptions.
2. In Elrond's Elven Foundation command set, the original Gondor Keep was replaced with the new Gondor Death Tower.
3. A child object was made of the Gondor Keep. Notice how some of the parameters have changed. For example, the build cost is 50% more than the original. Also, notice a new weapon set has been created (DeathTowerBow). Finally, notice that if the building is destroyed, an AOD horde will be created. The command set was changed from "BattleTowerCommandSet" to "EmptyCommandSet" to prevent demolishing the tower over and over just to release AOD hordes.
4. A new weapon called "DeathTowerBow" was created. It is a modification of the "BattleTowerBow" weapon. The attack range has been increased from 380 to 400. The non-upgraded tower uses Faramir's special arrow while the upgraded tower uses Legolas' special arrow. The damage generated by the non-upgraded tower is the normal keep damage. However, the upgraded tower uses Legolas' Hawk Strike, which is a very powerful weapon. There is a more detailed discussion about changing projectiles later on in this document; refer to "Modifying an Existing Structure: Gondor Keep Part 2" for further information.

Tip: Did you know you can direct what you want a tower to shoot at? Left-click on the tower and then right-click on the enemy target like you would normally do with a unit or horde.

## Adding Sword Glow and Blade Master Effect to Elrond

Objective: Give a visual indication when enemies are near, as well as provide a special effect when Elrond is using his sword. Since these are just visual effects, there are no level requirements.

Basically, we'll reapply some code from Aragorn's Blade Master spell as well as from when Frodo's sword Sting is near orcs.

### data\ini\commandbutton.ini

```
CommandButton Command_ToggleElrondWarriorWeapon
  Command          = TOGGLE_WEAPONSET
  Options          = TOGGLE_IMAGE_ON_WEAPONSET
  FlagsUsedForToggle = WEAPONSET_TOGGLE_1
  TextLabel       = CONTROLBAR:ToggleElvenWarriorWeapons
  ButtonImage     = HSElrondeElvenSword UCelven_Bow; Meneldil changed
original UCelven_Sword UCelven_Bow
  ButtonBorderStyle = ACTION
  DescriptLabel     = CONTROLBAR:ToolTipToggleElvenWarriorWeapons
  InPalantir       = Yes
  UnitSpecificSound = ElrondVoiceModeSword ElrondVoiceModeBow
End
```

Note: The above is optional. I changed Elrond's Palantir button image for his sword because I liked it better.

### data\ini\object\goodfaction\units\elven\elrond.ini

There are 3 locations for code in the elrond.ini file. The first block goes right before the animation section.

```
;----- Start of Meneldil Blade Master Effects -----
----
;This activates when Elrond is using his sword and enemies are nearby
  ModelConditionState = SPECIAL_ENEMY_NEAR WEAPONSET_TOGGLE_1
    ParticleSysBone = BAT_HEAD AragornElendill FollowBone:Yes
    ParticleSysBone = BAT_HEAD ElrondAttackAura FollowBone:Yes
;    ParticleSysBone = BAT_FEET WitchKingCursed FollowBone:Yes
;    ParticleSysBone = BAT_HEAD LightningCharge FollowBone:Yes
;    ParticleSysBone = BAT_HEAD PhialofGaladriel FollowBone:Yes
  End

  AnimationState = FIRING_OR_PREATTACK_A
WEAPONSET_TOGGLE_1
  StateName = Ready_Sword
  Animation = AttackWithSwordA
    AnimationName = RUElfWar_SKL.RUElfWar_ATKSV2
    AnimationMode = ONCE
    UseWeaponTiming = Yes
  End
  Animation = AttackWithSwordB
    AnimationName = RUElfWar_SKL.RUElfWar_ATKS
    AnimationMode = ONCE
    UseWeaponTiming = Yes
  End
  Animation = AttackWithSwordD
    AnimationName = RUElfWar_SKL.RUElfWar_ATKSV4
    AnimationMode = ONCE
    UseWeaponTiming = Yes
  End
  Flags = RESTART_ANIM_WHEN_COMPLETE
  FXEvent = Frame:25 Name:
FX_BladeMasterHitOrient
  FXEvent = Frame:45 Name:
FX_BladeMasterHitOrient
```

```

                EnteringStateFX                = FX_ElrondSword; FX_Anduril
            End
;----- End of Meneldil Blade Master Effects -----
----
                ; ===== ;
                ; ===== ANIMATIONS ===== ;
                ; ===== ;

```

This code block does the following:

1. If an orc or uruk is nearby (based on the third code block below) and Elrond is using his sword (“SPECIAL\_ENEMY\_NEAR” and “WEAPONSET\_TOGGLE\_1” respectively), then whichever “ParticleSysBone” options you have selected above will be used. I have provided 5 choices above to give you an idea as to what you can do, including a variation on Aragorn’s Elendil effect. You can use whatever combination you like or use your own. Alternatively, you can choose to use no effect in this part of the code.
2. When Elrond is using his sword to attack anything, the blade master effects will be used. I also created a new effect for his sword based on Aragorn’s Anduril effect. If you feel this overwhelms the sword image, disable or remove this second section of the above code block.

Just before the Design Parameters section, I added this code block:

```

;-----
----
;Meneldil reapplied from Frodo's INI file (illuminates Elrond when near enemies)

    Draw = W3DLightDraw ModuleTag_DrawLight
        Ambient      = R:150 G:150 B:150
        Diffuse      = R:128 G:128 B:255
        Radius       = 25
        Intensity    = 50
    End

    Draw = W3DScriptedModelDraw ModuleTag_LightController
        DefaultModelState
            Model = None
        End

        IdleAnimationState
            BeginScript
                CurDrawableHideModule("ModuleTag_DrawLight")
            EndScript
        End

        AnimationState = SPECIAL_ENEMY_NEAR
            BeginScript
                CurDrawableShowModule("ModuleTag_DrawLight")
            EndScript
        End

    End

;-----
----

; ***DESIGN parameters ***

```

When Elrond is near orcs or uruks (as defined in the third code block below), he will be illuminated. This is also an optional effect.

Finally, the following code block is placed in the Design Parameter section with the other new behaviors we added.

```

;-----Start of Meneldil reapplied enemy sensing FX-----
;Reapplied Frodo's Sting Glow from frodo.ini
    Behavior = SpecialEnemySenseUpdate ModuleTag_StingSeesOrcs
        SpecialEnemyFilter = ANY +ORC +URUK
        ScanRange          = 200
        ScanInterval       = 500
    End
;-----End of Meneldil reapplied enemy sensing FX-----

```

This defines which types of enemies that Elrond will be affected by, as well as how close he has to be and the frequency that the game will check his proximity to enemies.

The following are the new special effects. They are simple alterations of existing ones just to provide a little variety.

### data\ini\fxlist.ini

```

; -----
FXList FX_ElrondSword; Meneldil reaplication of FX_Anduril
    Sound
        Name = LurtzCrippleEffect
    End
    ParticleSystem
        Name = balrogPixelDisplEfx
        AttachToObject = Yes
    End
    ParticleSystem
        Name = ElrondSword; Anduril
        AttachToObject = Yes
        AttachToBone   = B_SWORDBONE
    End
End

```

Note: Use “AttachToObject” if you want the FX to stay with the object versus remaining where it was originally created.

### data\ini\fxparticlesystem.ini

```

FXParticleSystem ElrondAttackAura; Meneldil reapplied AragornElendill
    System
        Priority = ALWAYS_RENDER
        ParticleName = EXBarbStreaks.tga
        Lifetime = 10 10
        SortLevel = 1
        Size = 30 40; 50 50
        BurstCount = 1 1
        IsGroundAligned = Yes
    End
    Color = DefaultColor
        Color2 = R:225 G:225 B:225 5; R:65 G:100 B:222 5
        Color3 = R:0 G:0 B:0 10
    End
    Alpha = DefaultAlpha
    End
    Update = DefaultUpdate
        SizeRate = 5 5
        SizeRateDamping = 1 1
        AngleZ = -6 6
        AngularDamping = 1 1
    End
End

```

```

Physics = DefaultPhysics
  VelocityDamping = 0 8.07921e+33
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = PointEmissionVolume
End
Draw = DefaultDraw
End
End

FXParticleSystem ElrondSword; Meneldil reapplied Anduril
System
  Priority = AREA_EFFECT
  ParticleName = EXSplatHaze.tga
  Lifetime = 20 20
  SystemLifetime = 150; effect ends 5 seconds after no longer called for
  SortLevel = 1
  Size = 1 6; 0 15
  BurstCount = 1 2; 2 3
  InitialDelay = 0 10; 15 15
  IsParticleUpTowardsEmitter = Yes
End
Color = DefaultColor
  Color2 = R:225 G:225 B:225 5; Color2 = R:0 G:106 B:185 5
  Color3 = R:0 G:0 B:0 20
End
Update = DefaultUpdate
  SizeRate = -0.25 -0.25
  SizeRateDamping = 1 1
  AngleZ = -7 7
  AngularDamping = 1 1
End
Physics = DefaultPhysics
  VelocityDamping = 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = LineEmissionVolume
  EndPoint = X:0 Y:0 Z:15
End
Draw = DefaultDraw
End
End

```

## Adding Anti-Leadership and Self-Modifications to Elrond

We have seen that a hero unit can provide attribute modifiers (leadership) to nearby allies. How about adding a negative leadership to enemies as well as providing himself with his own attribute modifiers? In this section, we'll add "ElrondWrath" to affect nearby enemies and "ElfLord" to affect only Elrond. They will activate at levels 6 and 8, respectively.

What's interesting here is that we're going to do this without specific command buttons. That is, it will happen transparently in the background. This simplifies the code a lot. Text descriptions will be updated so that the changes will be known to the user.

### data\ini\attributemodifier.ini

ModifierList ElrondWrath ; added by Meneldil for Elrond (affects enemies only)

```
Category      = LEADERSHIP
Modifier      = SPEED 50%           ; 50% speed reduction
Modifier      = DAMAGE_MULT 50%    ; 50% damage reduction
Modifier      = ARMOR -50%         ; 50% armor reduction
ModelCondition = EMOTION_AFRAND    ; Like Cloud Break and Eye of Sauron
Duration      = 2000               ; matches refresh delay in the elrond.ini
```

file  
End

ModifierList ElfLord; added by Meneldil for Elrond (affects Elrond only)

```
Category      = SPELL
Modifier      = RECHARGE_TIME 50%; Spell recharge time halved (twice as quick
to recharge)
Modifier      = HEALTH 500         ; add 500 more health
Duration      = 0; Duration is forever when set to 0
```

End

Note: If you wish for a visual feedback, add a "FX" line in the above code blocks. Be aware though that too many special effects in one area can be distracting or bog down your CPU.

### data\ini\object\goodfaction\units\elven\elrond.ini

```
-----Start of Meneldil applied Elrond Wrath-----
Behavior = AttributeModifierAuraUpdate ModuleTag_Wrath
StartsActive      = No
BonusName         = ElrondWrath
TriggeredBy      = Upgrade_NewAbility3
RefreshDelay      = 2000
Range            = 200
TargetEnemy       = Yes
ObjectFilter      = ANY +MONSTER +INFANTRY +CAVALRY
End

-----End of Meneldil applied Elrond Wrath-----

-----Start of Meneldil applied Elf Lord code-----
Behavior = AttributeModifierUpgrade ModuleTag_ElfLord
TriggeredBy      = Upgrade_NewAbility4
AttributeModifier = ElfLord
End

-----End of Meneldil applied Elf Lord code-----
```

Note: I made use of previously created upgrades. You can add new ones at different levels if desired.

### data\lotr.str

```
CONTROLBAR:ToolTipElrondLightBeam
"Required: Rank 6 \n\n A powerful light beam that damages enemy combatants and
structures. \n\n Left click then right click on target.
```

\n\n Elrond also receives a final armor upgrade. \n\n Enemy speed, armor, and damage are decreased 50%."

END

CONTROLBAR:ToolTipElrondMeadow

"Required: Rank 8 \n\n Create a meadow that pushes back and severely damages enemy forces and structures, including castle gates and battle towers. \n Left click to activate. \n\n Elrond gains 500 health points and a 50% faster spell recharge rate."

END

Now that we've made all these changes to Elrond, we need to update Sam's object creation list. Here's an example of what that would look like.

```
; -----  
-----  
; Summon elven aid ; added by Meneldil for Sam  
ObjectCreationList OCL_SpawnElvenAidEgg  
  CreateObject  
    ObjectNames = Elrond_Summoned  
    Count = 0  
    FadeIn = Yes  
    FadeTime = 2000  
    Disposition = LIKE_EXISTING  
End  
CreateObject  
  ObjectNames = SingleElvenWarrior_Summoned  
  Count = 5  
  FadeIn = Yes  
  FadeTime = 5000  
  IgnoreCommandPointLimit = Yes  
  Disposition = SPAWN_AROUND  
  DispositionAngle = 360; SpawnAround uses this as the arc between guys  
  DispositionIntensity = 25; and this for distance from center  
End  
CreateObject  
  ObjectNames = RohanElvenWarriorHorde_Summoned  
  Count = 1  
  FadeIn = Yes  
  FadeTime = 3000  
  IgnoreCommandPointLimit = Yes  
  Disposition = SPAWN_AROUND  
  DispositionAngle = 120 ;SpawnAround uses this as the arc between guys  
  DispositionIntensity = 75 ; and this for distance from center  
End  
CreateObject  
  ObjectNames = ElrondElvenWarriorSwordHorde_Summoned  
  Count = 2  
  FadeIn = Yes  
  FadeTime = 5000  
  IgnoreCommandPointLimit = Yes  
  Disposition = SPAWN_AROUND  
  DispositionAngle = 180; SpawnAround uses this as the arc between guys  
  DispositionIntensity = 120; and this for distance from center  
End  
End
```

The above code should be pretty self-explanatory. Adjust as you see fit. Now that we've upgraded Sam so much, let's finalize his code. The following is in Sam's INI file.

```

DisplayName = OBJECT:RohanSam
BountyValue = ROHAN_SAM_BOUNTY_VALUE_NEW; Meneldil appended "NEW" to the end
RecruitText = CONTROLBAR:RohanSamRecruit; added by Meneldil for skirmish
ReviveText  = CONTROLBAR:RohanSamRevive; added by Meneldil for skirmish
Hotkey      = CONTROLBAR:RohanSamHotkey; added by Meneldil for skirmish

BuildCost = SAM_BUILD_COST; HOBBIT_BUILD_COST; added by Meneldil for skirmish
BuildTime = HOBBIT_BUILD_TIME; added by Meneldil for skirmish

Behavior = ExperienceLevelCreate ModuleTag_MPLevelBonus; added by Meneldil
          LevelToGrant = 1; (level 1 to 10)
          MPOnly = Yes
End

```

;RespawnEntries determine the ruleset for how a character can be revived. Some units may automatically respawn, others may require a specific revive action performed on him. You can specify different values for each level... or use Level:Any

```

RespawnRules = AutoSpawn:No      Cost:300      Time:10000  Health:100%
; Meneldil changed original respawn cost (100)
RespawnEntry = Level:2           Cost:400      Time:20000; Meneldil
changed original cost (150)
RespawnEntry = Level:3           Cost:500      Time:30000; Meneldil
changed original cost (200)
RespawnEntry = Level:4           Cost:600      Time:40000; Meneldil
changed original cost (250) and time (30000)
RespawnEntry = Level:5           Cost:700      Time:50000; Meneldil
changed original cost (300) and time (30000)
RespawnEntry = Level:6           Cost:800      Time:60000; Meneldil
changed original cost (350) and time (30000)
RespawnEntry = Level:7           Cost:900      Time:70000; Meneldil
changed original cost (400) and time (30000)
RespawnEntry = Level:8           Cost:1000     Time:80000; Meneldil
changed original cost (450) and time (30000)
RespawnEntry = Level:9           Cost:1100     Time:90000; Meneldil
changed original cost (500) and time (30000)
RespawnEntry = Level:10          Cost:1200     Time:100000; Meneldil
changed original cost (550) and time (30000)

```

```

BecomeStealthedFX      = FX_ElvenCloakOn
ExitStealthFX          = FX_ElvenCloakOn; Meneldil changed original
FX_ElvenCloakOff

```

## Summary

1. I added a new bounty value for Sam (along with the other game heroes) in the weapon.ini file. Alternatively, you can just enter a new numerical value directly if you like. Note that you can't use the original variable name because you will get a duplication error that will crash the game (the original is still read in the gamedata.ini file).
2. Sam's build cost has a new variable name that's been added to the weapon.ini file.
3. You can change the level that Sam starts at. When I complete a skirmish mod, I usually start all heroes at level 1.
4. Sam's respawn costs and times have been increased.

With this, we've completed our modifications to Sam. We've gone from not having him at all in the game to having a strong hero with lots of capabilities. We've also added Elrond to the game, providing him with a number of capabilities. It took a while to get here; hopefully, you've learned something you didn't already know that you can reapply to your own mod.



## Adding Elrond to the Good Campaign

It's possible to add Elrond to the Good Campaign. Ideally, you would use WorldBuilder to modify the map to include Elrond (or any other hero) in a specific location. Since we're not modifying maps in this guide (plus, I haven't tried doing that yet), we'll have to look for ready entry points within the existing gondorcampaign.ini file. This means looking for places where an "ArmyEntry" code line already exists. The first place you could add Elrond is at the beginning of the campaign. Here is the code section for the Fellowship Army (near the bottom of the file):

```
LivingWorldPlayerArmy
  Name = FellowshipPlayerArmy
  DisplayNameTag = LWA:Fellowship
  Color = R:255 G:0 B:0
  NightColor = R:0 G:255 B:0
  ArmyEntry
    ThingTemplate = GondorAragorn
    Quantity = 1
  End
  ArmyEntry
    ThingTemplate = GondorBoromir
    Quantity = 1
  End
  ArmyEntry
    ThingTemplate = GondorGandalfGrey
    Quantity = 1
  End
  ArmyEntry
    ThingTemplate = RohanGimli
    Quantity = 1
  End
  ArmyEntry
    ThingTemplate = RohanLegolas
    Quantity = 1
  End
  ArmyEntry
    ThingTemplate = RohanFrodo
    Quantity = 1
  End
  ArmyEntry
    ThingTemplate = RohanPippin
    Quantity = 1
  End
  ArmyEntry
    ThingTemplate = RohanMerry
    Quantity = 1
  End
  ArmyEntry
    ThingTemplate = RohanSam
    Quantity = 1
  End
  ArmyEntry; added by Meneldil
    ThingTemplate = ElvenElrond
    Quantity = 1
  End
End
```

I added Elrond as shown above. However, if you run the game like this, he'll appear just outside the gate of Moria and won't be able to join the Fellowship within Moria, which isn't much fun. However, if you're willing to put up with that, he'll appear again in Lothlorien in the far northeast where you can use him to take out the lumber mills there.

If this doesn't suit you, the next readily available place to add Elrond is with Eomer at the beginning of Act 2.

```
LivingWorldPlayerArmy
  Name = EomerPlayerArmy
  DisplayNameTag = LWA:Rohan
  Color = R:255 G:0 B:0
  NightColor = R:0 G:255 B:0
  MinCommandPoints = 40
  ReplenishArmyName = RohanReplenish
  ArmyEntry
    ThingTemplate = RohanEomerCavalry
    Quantity = 1
  End
  ArmyEntry
    ThingTemplate = RohanRohirrimHorde
    Quantity = 2
  End
  ArmyEntry; Meneldil added
    ThingTemplate = RohanArcherHorde
    Quantity = 1
  End
  ArmyEntry; Meneldil added
    ThingTemplate = ElvenElrond
    Quantity = 1
  End
End
```

This code will place Elrond on the map with Eomer and his Rohirrim (plus an archer battalion I threw in order to meet one of the bonus criteria). In order for Elrond to continue on in the game, it's important that "ARMY\_SUMMARY" appears in the "KindOf" statement in the elrond.ini file (it is already there). This is something I read in the forums. It could be helpful if you add your own hero.

What if you don't want Elrond to join the game at this point? After all, his Elven foundation creates Gondor structures instead of Rohan structures. You could create a child object of Elrond (e.g., RohanElrond) and customize him for playing more for Rohan if you like.

There is not an entry point for Lothlorien unless you edit the map or add him to Moria as indicated above. If there is a way to add Elrond to Lothlorien without modifying the map, I don't know what it is. Another potentially logical place for Elrond to join the game is at Helm's Deep. Again, you would need to modify that map to include him.

If you prefer to have Elrond join the game with Gondor, then you can have him appear with Faramir, as shown below.

```
LivingWorldPlayerArmy
  Name = FaramirPlayerArmy; Northern Ithilien
  DisplayNameTag = LWA:Gondor
  Color = R:255 G:0 B:0
  NightColor = R:0 G:255 B:0
  ArmyEntry
    ThingTemplate = GondorFaramir
    Quantity = 1
  End
  ArmyEntry; Meneldil added
    ThingTemplate = ElvenElrond
    Quantity = 1
  End
End
```

Elrond will appear elsewhere on the map (southwest relative to Frodo, Sam, and Faramir) and will come under attack. However, he should be OK until he joins the others, particularly if he uses his cloaking ability. Since we're on the subject of modifying the good campaign, recall that we previously increased our maximum command points to 400. However, the original game will not provide that number to you when playing in campaign mode. To fix this, all you have to do is modify one or more of the region bonuses so that you can get more command points.

The key command is "**ArmyBonus = x**" where "x" is the number of command points you wish to provide. For example, I added 30 command points as follows:

```

;////////////////////////////////////
;// Anorien (16)
;////////////////////////////////////

*** Existing Code ***

ResourceBonus                = 20
ArmyBonus                     = 10; added by Meneldil

;////////////////////////////////////
;// Southern Ithilien (24)
;////////////////////////////////////

*** Existing Code ***

ResourceBonus                = 20
ArmyBonus                     = 10; added by Meneldil

;////////////////////////////////////
;// Central Ithilien (29)
;////////////////////////////////////

*** Existing Code ***

ResourceBonus                = 10
LegendaryBonus                = 2
ArmyBonus                     = 10; Restored by Meneldil

```

Note that "**ResourceBonus**" is the resource multiplier and "**LegendaryBonus**" is the number of power points in case you wish to modify those values.

Also, if you don't like a particular mission's bonus objective(s), then you can comment out the "**BonusMissionObjectiveTag**" entries.



```

Behavior = SpecialPowerModule ModuleTag_PhialStarter
    SpecialPowerTemplate = SpecialAbilityPhialOfGaladriel
    UpdateModuleStartsAttack = Yes
    StartsPaused = Yes; added by Meneldil
    TriggerFX = FX_PhialOfGaladriel
End

```

### data\ini\voice.ini

```

AudioEvent FrodoVoiceUsePhial
    Sounds = GUFrodo_voiphic; Meneldil commented out the Galadriel reference voices
    GUFrodo_voiphia GUFrodo_voiphib
    Volume = UNIT_RESPONSE_VOLUME
    MinVolume = UNIT_RESPONSE_MINVOLUME
    Type = world shrouded everyone voice; Meneldil changed original world
player voice
    SubmixSlider = voice
End

```

### data\lotr.str

```

CONTROLBAR:PhialofGaladriel
"Phial of Gala&driel"
END

```

```

CONTROLBAR:ToolTipPhialofGaladriel
"Required: Rank 2 \n Causes enemy units to flee \n Right click to auto-activate \n
Left click to manually activate"
END

```

Note: The control bar tool tip already exists; I just modified the text. Also, the voice file change is optional. It was included to show you that it could be done.

## Frodo Mithril Coat (Reapplication of Eowyn Shield Maiden Spell)

This code will provide Frodo with a 30 second armor boost once he reaches level 4. To the right is Frodo's hsfrodo\_001.dds file. As you can see, there's an image that can only have been intended for his Mithril coat.

### data\ini\attributemodifier.ini

```

ModifierList FrodoMithrilCoat; added by Meneldil for Frodo
    Category = SPELL
    Modifier = ARMOR 200%
    Modifier = RESIST_KNOCKBACK 100%
    Duration = 30000
    FX = FX_MithrilAura
End

```



### data\ini\commandbutton.ini

```

CommandButton Command_FrodoMithrilCoat; added by Meneldil for Frodo
    Command = SPECIAL_POWER
    SpecialPower = SpecialAbilityFrodoMithrilCoat
    TextLabel = CONTROLBAR:MithrilCoat
    ButtonImage = HSFrodoMithrilCoat
    RadiusCursorType = TRAINING
    ButtonBorderType = ACTION
    DescriptLabel = CONTROLBAR:ToolTipMithrilCoat
    InPalantir = Yes

```

```

AutoAbility          = Yes
PresetRange          = 50.0
UnitSpecificSound    = GenericSpell
End

```

### data\ini\commandset.ini

```

CommandSet RohanFrodoCommandSet
  1 = Command_ToggleFrodoWeapon
  2 = Command_SpecialAbilityElfCloak
  3 = Command_SpecialAbilityPhialOfGaladriel
  4 = Command_FrodoMithrilCoat; added by Meneldil
;5 = still to come...
  6 = Command_OneRing
 13 = Command_AttackMove
 14 = Command_Stop
 15 = Command_Guard
End

```

### data\ini\experiencelevels.ini

```

ExperienceLevel FrodoLevel4
  TargetNames = RohanFrodo
RohanSamWithFrodoPowers
  RequiredExperience = HOBBIT_LVL4_EXP_NEEDED
  ExperienceAward = HOBBIT_LVL4_EXP_AWARD
  LevelUpFx = FX:GandalfLevelUp1FX
;LevelUpOCL = OCL_GandalfLevelUp1OCL
  Rank = 4
  Upgrades = Upgrade_NewAbility2; added by
Meneldil for Mithril Coat
  AttributeModifiers = HobbitLevelUpDamage3
;Upgrades = Upgrade_HeroRadiateFear
  SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40 ;16
    MaxRadius = 200 ;16
    MaxSelectedUnits = 40 ;1
  End
End

```

### data\ini\fxlist.ini

```

; -----
FXList FX_MithrilAura; Meneldil added for 30 second visual feedback
  ParticleSystem
    Name = FrodoMithrilCoat; already existing
    AttachToObject = Yes
  End
  ParticleSystem
    Name = FrodoMithrilAura; modified glowWhite
    AttachToObject = Yes
  End
End

```

### data\ini\fxparticlesystem.ini

```

FXParticleSystem FrodoMithrilCoat
  System
    Priority = AREA_EFFECT
    ParticleName = EXSparkle.tga

```

```

    Lifetime = 20 20
    SystemLifetime = 900; lasts 30 seconds (this line added by Meneldil)
    SortLevel = 1
    Size = 5 5
    BurstCount = 2 2
End
Color = DefaultColor
    Color2 = R:51 G:51 B:51 3
    Color3 = R:0 G:0 B:0 20
End
Update = DefaultUpdate
    SizeRate = 2 2
    SizeRateDamping = 1 1
    AngleZ = -7 7
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = BoxEmissionVolume
    HalfSize = X:3 Y:3 Z:3
End
Draw = DefaultDraw
End
End

FXParticleSystem FrodoMithrilAura; Meneldil modified original glowWhite
System
    Priority = ALWAYS_RENDER
    ParticleName = EXglow.tga
    Lifetime = 20 20
    SystemLifetime = 900; Meneldil changed original 1050
    Size = 50 50
    BurstDelay = 6 6
    BurstCount = 1 1
End
Color = DefaultColor
    Color2 = R:220 G:220 B:225 5; Meneldil changed original R:84 G:66 B:10 5
    Color3 = R:0 G:0 B:0 20
End
Update = DefaultUpdate
    SizeRateDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0.8 0.85
End
EmissionVelocity = OutwardEmissionVelocity
End
EmissionVolume = PointEmissionVolume
End
Draw = DefaultDraw
End
End

```

Note: These effects were added so that there would be a visual reminder that the spell is working. If you change the spell duration in the attributemodifier.ini file, change the system lifetime to match. In addition, I made use of existing FX particle systems. I made slight changes so that the effects would last for 30 seconds as well as to adjust color (refer to comments in the code).

### data\ini\object\goodfaction\units\rohan\frodo.ini

```
-----Start Meneldil Mithril Coat-----
Behavior = UnpauseSpecialPowerUpgrade ModuleTag_MithrilCoat
SpecialPowerTemplate = SpecialAbilityFrodoMithrilCoat
TriggeredBy = Upgrade_NewAbility2
End
Behavior = SpecialPowerModule ModuleTag_MithrilCoatUpdate
SpecialPowerTemplate = SpecialAbilityFrodoMithrilCoat
UpdateModuleStartsAttack = No
StartsPaused = Yes
AttributeModifier = FrodoMithrilCoat
AttributeModifierRange = 1
AttributeModifierAffectsSelf = Yes
AttributeModifierAffects = ANY -CAVALRY -INFANTRY -HERO
AttributeModifierFX = FX_EowynShieldMaiden
End
-----End Meneldil Mithril Coat-----
```

(this is placed in the Engineering parameters)

### data\ini\specialpower.ini

```
-----
SpecialPower SpecialAbilityFrodoMithrilCoat; added by Meneldil for Frodo
Enum = SPECIAL_ATTRIBUTEMOD_CANCELDISGUISE
ReloadTime = 60000
PublicTimer = No
End
```

### data\lotr.str

```
CONTROLBAR:MithrilCoat
"&Mithril Coat"
END
```

```
CONTROLBAR:ToolTipMithrilCoat
"Required: Rank 4 \n Frodo temporarily gains a 100% armor and 100% knockback
resistance increase \n Right click to auto-activate or \n Left click to manually
activate"
END
```

Now give Frodo a leadership ability that complements the one given to Sam.

### Frodo Passive Leadership (20% Armor Boost to Hobbit Allies)

#### data\ini\attributemodifier.ini

```
ModifierList FrodoPassiveLeadership; added by Meneldil for Frodo
Category = LEADERSHIP
Modifier = ARMOR 20%; Additive
Duration = 3000; needs to match refresh delay value in frodo.ini file
FX = FX_GenericLeadershipLvl1
FX2 = FX_GenericLeadershipLvl2
FX3 = FX_GenericLeadershipLvl3
MultiLevelFX = Yes
End
```

#### data\ini\commandbutton.ini

```
CommandButton Command_SpecialAbilityFrodoLeadership; added by Meneldil for Frodo
Command = SPECIAL_POWER
SpecialPower = SpecialAbilityFakeLeadership
```



```
Options = NONPRESSABLE
TextLabel = CONTROLBAR:Leadership
ButtonImage = HSFaramirLeadership
RadiusCursorType = TRAINING
ButtonBorderStyle = ACTION
DescriptLabel = CONTROLBAR:ToolTipFrodoLeadership
InPalantir = Yes
```

End

### data\ini\commandset.ini

```
CommandSet RohanFrodoCommandSet
1 = Command_ToggleFrodoWeapon
2 = Command_SpecialAbilityElfCloak
3 = Command_SpecialAbilityPhialOfGaladriel
4 = Command_FrodoMithrilCoat; added by Meneldil
5 = Command_SpecialAbilityFrodoLeadership; added by Meneldil
6 = Command_OneRing
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
```

End

### data\ini\experiencelevels.ini

```
ExperienceLevel FrodoLevel6
    TargetNames = RohanFrodo
RohanSamWithFrodoPowers
    RequiredExperience = HOBBIT_LVL6_EXP_NEEDED
    ExperienceAward = HOBBIT_LVL6_EXP_AWARD
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    Rank = 6
    Upgrades = Upgrade_NewAbility3; added by
Meneldil for Leadership
    AttributeModifiers = HobbitLevelUpDamage5
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40 ;16
        MaxRadius = 200 ;16
        MaxSelectedUnits = 40 ;1
```

End

End

### data\ini\object\goodfaction\units\rohan\frodo.ini

Under "ENGINEERING Parameters" add/modify the following:

```
;-----Start Meneldil Frodo Leadership-----
    Behavior = AttributeModifierAuraUpdate ModuleTag_FrodoLeadership
        StartsActive = No; If no, requires upgrade to turn on.
        BonusName = FrodoPassiveLeadership
        TriggeredBy = Upgrade_NewAbility3
        RefreshDelay = 3000; needs to match value in attributemodifier.ini
        Range = 200
        ObjectFilter = ANY -INFANTRY -CAVALRY -STRUCTURE -HERO +RohanSam
+RohanPippin +RohanMerry; +HOBBIT doesn't work
    End

    Behavior = UnpauseSpecialPowerUpgrade ModuleTag_UnpauseLeadership
        SpecialPowerTemplate = SpecialAbilityFakeLeadership
```

```
        TriggeredBy = Upgrade_NewAbility3
    End
```

```
    Behavior = SpecialPowerModule ModuleTag_FrodoLeadershipUpdate
        SpecialPowerTemplate      = SpecialAbilityFakeLeadership
        UpdateModuleStartsAttack  = No
        StartsPaused = Yes
```

```
End
```

```
;-----End Meneldil Frodo Leadership-----
```

### data\lotr.str

```
CONTROLBAR:ToolTipFrodoLeadership
```

```
"Required: Rank 6 \n Nearby hobbit allies receive 20% increased armor \n Passive ability"
```

```
END
```

Tip: When you are adding a new ability like this, temporarily add a high speed increase or special effect in the attributemodifier.ini file in order to get a visual signal that the code is working.

Tip: If you saved Sam's leadership ability code as a Word file (or something equivalent), it's easy to create the above version for Frodo using search and replace commands.

If you like, you can modify Sting such that it gives more damage against orcs and uruks. Note the changes in the following code from the weapon.ini file.

```
;-----
Weapon Sting
    LeechRangeWeapon      = Yes
    AttackRange           = 20.0
    MeleeWeapon           = Yes
    DelayBetweenShots     = FRODO_DELAYBETWEENSHOTS          ; time between shots,
msec
    PreAttackDelay        = FRODO_PREATTACKDELAY              ; 433 is natural time
of the stabbing animation.
    PreAttackType         = PER_SHOT ; Do the delay each time we attack a new target
    FiringDuration        = FRODO_FIRINGDURATION              ; min 600 for anim
    FireFX                = FX_GondorSwordHit
    DamageNugget          =                                ; A basic Nugget that just does damage
    Damage                = FRODO_DAMAGE
    DamageScalar          = 150% NONE +ORC +URUK +MordorShelob; added by Meneldil
    Radius                = 0
    DelayTime             = 0
    DamageType            = HERO
    DamageFXType         = SWORD_SLASH
    DeathType            = NORMAL
End
End
```

The above codes for Frodo should be pretty self-explanatory. Adjust as you see fit. Now let's finalize his code. The following is in Frodo's INI file. Use the search command to find where it is at (I've included unmodified code to make it easier to find).

```
    DisplayName = OBJECT:RohanFrodo
    BountyValue = ROHAN_FRODO_BOUNTY_VALUE_NEW; Meneldil appended "_NEW"
    RecruitText = CONTROLBAR:RohanFrodoRecruit; added by Meneldil for skirmish
    ReviveText  = CONTROLBAR:RohanFrodoRevive; added by Meneldil for skirmish
    Hotkey      = CONTROLBAR:RohanFrodoHotkey; added by Meneldil for skirmish

    BuildCost = FRODO_BUILD_COST; added by Meneldil for skirmish
```

```
BuildTime = HOBBIT_BUILD_TIME; added by Meneldil for skirmish
```

```
Behavior = ExperienceLevelCreate ModuleTag_MPLevelBonus; added by Meneldil  
LevelToGrant = 1; (level 1 to 10)  
MPOnly = Yes  
End
```

;RespawnEntries determine the ruleset for how a character can be revived. Some units may automatically respawn, others  
;may require a specific revive action performed on him. You can specify different values for each level... or use Level:Any

```
RespawnRules = AutoSpawn:No Cost:300 Time:10000  
Health:100%; Meneldil changed original respawn cost of 100  
RespawnEntry = Level:2 Cost:400 Time:20000;  
Meneldil changed original respawn cost of 150  
RespawnEntry = Level:3 Cost:500 Time:30000;  
Meneldil changed original respawn cost of 200  
RespawnEntry = Level:4 Cost:600 Time:40000;  
Meneldil changed original respawn cost of 250  
RespawnEntry = Level:5 Cost:700 Time:50000;  
Meneldil changed original respawn cost of 300  
RespawnEntry = Level:6 Cost:800 Time:60000;  
Meneldil changed original respawn cost of 350  
RespawnEntry = Level:7 Cost:900 Time:70000;  
Meneldil changed original respawn cost of 400  
RespawnEntry = Level:8 Cost:1000 Time:80000;  
Meneldil changed original respawn cost of 450  
RespawnEntry = Level:9 Cost:1100 Time:90000;  
Meneldil changed original respawn cost of 500  
RespawnEntry = Level:10 Cost:1200 Time:100000;  
Meneldil changed original respawn cost of 550
```

```
BecomeStealthedFX = FX_ElvenCloakOn  
ExitStealthFX = FX_ElvenCloakOn; Meneldil changed original  
FX_ElvenCloakOff
```

In case you're interested, here's what's at the top of the weapon.ini file at this point.

```
;Variables added by Meneldil
```

```
;----- ELROND -----  
#define ELROND_HEALTH_NEW 1000 ; refer to elrond.ini file  
#define ELVEN_ELROND_BOUNTY_VALUE_NEW 500 ; refer to elrond.ini file  
#define ELROND_BOW_RANGE 400 ; refer to ElrondBow below  
#define ELROND_SCATTERRADIUS 10 ; refer to ElrondBow below  
#define ELROND_BOW_DAMAGE 100 ; refer to ElrondBowWarhead below  
#define ELROND_SWORD_DAMAGE 100 ; refer to ElrondSword below  
#define ELROND_BUILD_COST 7000 ; refer to elrond.ini file  
#define ELVEN_BARRACKS_BUILD_COST 900 ; refer to civilianbuildings.ini file  
#define ELVEN_BARRACKS_BUILD_TIME 60 ; refer to civilianbuildings.ini file  
  
#define ELROND_LVL2_EXP_NEEDED 100 ; refer to experience.ini file  
#define ELROND_LVL3_EXP_NEEDED 200 ; refer to experience.ini file  
#define ELROND_LVL4_EXP_NEEDED 400 ; refer to experience.ini file  
#define ELROND_LVL5_EXP_NEEDED 600 ; refer to experience.ini file  
#define ELROND_LVL6_EXP_NEEDED 800 ; refer to experience.ini file  
#define ELROND_LVL7_EXP_NEEDED 1000 ; refer to experience.ini file  
#define ELROND_LVL8_EXP_NEEDED 1200 ; refer to experience.ini file  
#define ELROND_LVL9_EXP_NEEDED 1400 ; refer to experience.ini file
```

```

#define ELROND_LVL10_EXP_NEEDED          1600 ; refer to experience.ini file

#define ELROND_LVL1_EXP_AWARD            70 ; refer to experience.ini file
#define ELROND_LVL2_EXP_AWARD            80 ; refer to experience.ini file
#define ELROND_LVL3_EXP_AWARD            90 ; refer to experience.ini file
#define ELROND_LVL4_EXP_AWARD           100 ; refer to experience.ini file
#define ELROND_LVL5_EXP_AWARD           120 ; refer to experience.ini file
#define ELROND_LVL6_EXP_AWARD           150 ; refer to experience.ini file
#define ELROND_LVL7_EXP_AWARD           180 ; refer to experience.ini file
#define ELROND_LVL8_EXP_AWARD           210 ; refer to experience.ini file
#define ELROND_LVL9_EXP_AWARD           250 ; refer to experience.ini file
#define ELROND_LVL10_EXP_AWARD          300 ; refer to experience.ini file
;-----
;----- HOBBIT BUILD COSTS -----
#define FRODO_BUILD_COST                 400 ; refer to frodo.ini file
#define SAM_BUILD_COST                   600 ; refer to sam.ini file
#define MERRY_BUILD_COST                 500 ; refer to merry.ini file
#define PIPPIN_BUILD_COST                500 ; refer to pippin.ini file
;-----
;-----HERO BOUNTY VALUES -----
#define ISENGARD_SARUMAN_BOUNTY_VALUE_NEW 1000 ; refer to evilfactionunits.ini
file
#define ISENGARD_LURTZ_BOUNTY_VALUE_NEW   600 ; refer to evilfactionunits.ini
file
#define MORDOR_NAZGUL_BOUNTY_VALUE_NEW   800 ; refer to evilfactionunits.ini
file
#define MORDOR_WITCHKING_BOUNTY_VALUE_NEW 1000 ; refer to evilfactionunits.ini
file
#define MORDOR_SAUROON_BOUNTY_VALUE_NEW  2000 ; refer to evilfactionunits.ini
file
#define ELVEN_ISILDUR_BOUNTY_VALUE_NEW   500 ; refer to isildur.ini file
#define GONDOR_ARAGORN_BOUNTY_VALUE_NEW  900 ; refer to aragorn.ini file
#define GONDOR_BOROMIR_BOUNTY_VALUE_NEW  700 ; refer to boromir.ini file
#define GONDOR_FARAMIR_BOUNTY_VALUE_NEW  700 ; refer to faramir.ini file
#define GONDOR_GANDALF_BOUNTY_VALUE_NEW  1000 ; refer to gandalf.ini file
#define GONDOR_GWAIHIR_BOUNTY_VALUE_NEW  500 ; refer to gwaihir.ini file
#define ROHAN_EOMER_BOUNTY_VALUE_NEW     700 ; refer to eomer.ini file
#define ROHAN_EOWYN_BOUNTY_VALUE_NEW     500 ; refer to eowyn.ini file
#define ROHAN_FRODO_BOUNTY_VALUE_NEW     500 ; refer to frodo.ini file
#define ROHAN_GIMLI_BOUNTY_VALUE_NEW     800 ; refer to gimli.ini file
#define ROHAN_LEGOLAS_BOUNTY_VALUE_NEW   800 ; refer to legolas.ini file
#define ROHAN_MERRY_BOUNTY_VALUE_NEW     300 ; refer to merry.ini file
#define ROHAN_PIPPIN_BOUNTY_VALUE_NEW    300 ; refer to pippin.ini file
#define ROHAN_SAM_BOUNTY_VALUE_NEW       500 ; refer to sam.ini file
#define ROHAN_THEODEN_BOUNTY_VALUE_NEW   700 ; refer to theoden.ini file
#define MORDOR_GOLLUM_BOUNTY_VALUE_NEW   300 ; refer to neutralunits.ini file
#define MORDOR_SHELOB_BOUNTY_VALUE_NEW   600 ; refer to neutralunits.ini file
;-----

```

## Altering What Happens if Frodo is Caught by Sauron Wearing the One Ring

In the original game, if the Eye of Sauron catches Frodo wearing the One Ring, he simply becomes visible again. There are no other consequences. What if you would like to make it more interesting by having Frodo take damage if he is caught wearing the ring? Or to be even more punishing, what would it take for both “good” factions to receive significant damage?

Objective: If Frodo is caught wearing the One Ring, then Sauron will appear very briefly and Frodo will take significant damage. At lower levels, it will kill him. Further, certain key Gondor and Rohan structures will take significant damage or be destroyed.

Open the evilfactionunits.ini file (located in data\ini\object\evilfaction\evilfactionunits.ini) and search for “Object EyeOfSauronFromRing.” You’ll see that this is a special version of the Eye of Sauron. It is only invoked if Frodo wears the Ring. Mordor doesn’t even have to be playing for this to happen.

### data\ini\fxlist.ini

```
; -----  
; added by Meneldil for SauronShortTimer  
FXList FX_ISeeYou  
    Sound  
        Name = EyeOfSauronCreated  
    End  
End  
  
; -----  
; added by Meneldil for Sauron Death Blast  
FXList FX_SauronStrikesBack  
    ParticleSystem  
        Name = SauronShockwave  
    End  
    ParticleSystem  
        Name = ElvenAlliesUnsummonFog  
    End  
    CameraShakerVolume  
        Radius = 600  
        Duration_Seconds = 4  
        Amplitude_Degrees = .5  
    End  
    Sound  
        Name = EarthRumbleStereo  
    End  
End
```

### data\ini\fxparticlesystem.ini

```
FXParticleSystem SauronShockwave; Meneldil reapplication of ExplosiveMineShockwave  
System  
    Priority = ALWAYS_RENDER  
    ParticleName = EXShockWav.tga  
    Lifetime = 90 90; 15 15  
    SystemLifetime = 30; 3  
    SortLevel = 1  
    StartSizeRate = 1 4  
    BurstCount = 5 5  
    IsGroundAligned = Yes  
End  
Color = DefaultColor  
    Color1 = R:55 G:70 B:40 0; R:238 G:98 B:38 0  
    Color2 = R:0 G:0 B:0 90; R:0 G:0 B:0 15  
End  
Update = DefaultUpdate
```

```

    SizeRate = 60 60; 20 20
    SizeRateDamping = 1 1
    AngleZ = -1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0 8.07921e+33
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = PointEmissionVolume
End
Draw = DefaultDraw
End
End

```

Note: Also change SystemLifetimes for “LeafPileFire” and “LeafPileSmoke” from 900 to 120 and 240, respectively. The original effects take too long to end.

### data\ini\object\evilfaction\evilfactionunits.ini

```

;Modified by Meneldil - Frodo pays a price for getting caught with the ring
Behavior = SlowDeathBehavior ModuleTag_05
    DeathTypes = ALL
    DestructionDelay = 0; Meneldil changed original 3000
    ShadowWhenDead = Yes
    Weapon = INITIAL EyeCatchesFrodo; added by Meneldil
    FX = INITIAL FX_CatapultFlamingProjectileExplosion; added by Meneldil
    OCL = INITIAL OCL_SpawnSauronShortTimer
End

```

At the bottom of the file, add the following:

```

;-----
ChildObject SauronShortTimer MordorSauron; appears if Eye of Sauron catches Frodo
with Ring
;Meneldil added for when Frodo wears Ring for too long

    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime = 2000
        MaxLifetime = 2000
    End

    Behavior = SlowDeathBehavior ModuleTag_06
        DeathTypes = ALL
        FX = INITIAL FX_ISeeYou
        FX = FINAL FX_SauronStrikesBack
    End
End

```

### data\ini\object\goodfaction\units\rohan\frodo.ini

```

Behavior = StealthUpdate ModuleTag_StealthForCloakAndRing
    StealthDelay = 0 ; msec
    FriendlyOpacityMin = 10%; Meneldil changed original
STEALTH_FRIENDLY_OPACITY_MIN
    FriendlyOpacityMax = 11%; Meneldil changed original
STEALTH_FRIENDLY_OPACITY_MAX

```

This is optional, but I changed the opacity values for when Frodo is wearing the ring or is cloaked. Just the beginning part of the code is shown above. I did this because there was too much of a range plus I didn’t care for the pulsing effect. Be sure the min/max numbers are not the same. You may also want to do this for Pippin, Merry, and Sam (for when they are using their cloaks).

At the end of the “ChildObject RohanSamWithFrodoPowers RohanFrodo” code (very bottom of the file), disable the discovered sound because it is now included when Sauron appears. Note this is only an issue if Sam is wearing the ring.

```

CommandSet = RohanSamWithFrodoPowersCommandSet

Behavior = OneRingPenaltyUpdate ModuleTag_SinglePlayerEyeSummoning
    SpecialObjectName = EyeOfSauronFromRing ;Different from the Spell
driven Stealth Detector, this is just for looks

    RingTimeBeforeSpawning = 30000 ; Time ring is active before
Eye spawns
    TimeSpentRoamingAround = 15000 ; Time of roaming before Eye
snaps to us
    TimeRingPowerSuppressed = 30000 ; How long we can't use the
ring for after being found
    StartingDistanceFromMe = 300 ; How far the Eye is created to
start wandering
    TimeFrozenFromPenalty = 5000 ; How long we are paralyzed the
moment we are discovered, separate from the time our stealth is supressed
    ;DiscoveredSound = EyeOfSauronCreated ; Sound to play when found out
    ;Meneldil disabled "DiscoveredSound" because it is now included when
Sauron appears (SauronShortTimer)
End

```

### data\ini\objectcreationlist.ini

```

; -----
; -----
; Briefly summon Sauron in the event the Eye sees Frodo wearing the Ring (Meneldil
added)
ObjectCreationList OCL_SpawnSauronShortTimer
    CreateObject
        ObjectNames = SauronShortTimer
        Count = 1
        FadeIn = No
        Offset = X:20 Y:0 Z:0
    End
End

```

### data\ini\weapon.ini

```

; -----
Weapon EyeCatchesFrodo; added by Meneldil for when Eye of Sauron catches Frodo
wearing the One Ring
    RadiusDamageAffects = ENEMIES NEUTRALS ALLIES
    FireFX = FX_LeafPileFire
    DamageNugget
        Damage = 1500
        Radius = 30
        DamageType = FLAME
        DamageFXType = FLAME
        DeathType = BURNED
    End

    DamageNugget
        Damage = 10; change this to 20 and even the citadels will be
destroyed
        Radius = 10000
        DamageType = MAGIC
        DamageFXType = MAGIC

```

```

    DeathType          = EXPLODED
    DelayTime          = 2000
    DamageSpeed        = 1800; needs to visually match SauronShockwave (refer to
fxlist.ini)
    DamageScalar       = 50000% NONE +RohanCastleDoor +RohanBattleTower
+RohanCastleUpgrade +RohanSentryTower +RohanCampKeep +RohanCastleBaseKeep
+RohanFarm +RohanFarmMultiplayer
    DamageScalar       = 50000% NONE +GBMGateDoor +GondorOutpost +GondorCampKeep
+GondorCastleBaseKeep +GondorSentryTower +GondorCastleUpgrade +GondorKeep
+GondorBattleTower +GondorFarm +GondorFarmMultiplayer
    End
End

```

The first section in the weapon.ini file targets Frodo while the second section targets structures. As you can see, major human structures will be destroyed or severely damaged. Mordor and Isengard will receive negligible damage. I typically don't have Frodo wear the One Ring, so I really did this just for fun and to illustrate what can be done. Feel free to further adjust it if you wish. Also note that Sam will have this same functionality if he has the ring (Sam now gets the Ring when he is in Cirith Ungol), although there's not much point to it.

Finally, please note that if the ring is removed before the Eye shows up, there is no harm done. The default setting is 30 seconds (refer to the frodo.ini file "**GivingRingPenalty**" module tag). However, once the Eye is present, removing the ring (even if the Eye hasn't caught Frodo) will cause the structural damage to occur. For that reason, you may not want to enable the second section in the above weapon.ini file because it really will cause a lot of structural damage.





```

;      RespawnEntry =      Level:6           Cost:300      Time:30000
;      RespawnEntry =      Level:7           Cost:350      Time:30000
;      RespawnEntry =      Level:8           Cost:400      Time:30000
;      RespawnEntry =      Level:9           Cost:450      Time:30000
;      RespawnEntry =      Level:10          Cost:500      Time:30000

```

;Meneldil commented out the above original respawn code and replaced it with the following:

```

      RespawnRules =      AutoSpawn:No       Cost:300      Time:10000   Health:100%
      RespawnEntry =      Level:2           Cost:400      Time:20000
      RespawnEntry =      Level:3           Cost:500      Time:30000
      RespawnEntry =      Level:4           Cost:600      Time:40000
      RespawnEntry =      Level:5           Cost:700      Time:50000
      RespawnEntry =      Level:6           Cost:800      Time:60000
      RespawnEntry =      Level:7           Cost:900      Time:70000
      RespawnEntry =      Level:8           Cost:1000     Time:80000
      RespawnEntry =      Level:9           Cost:1100     Time:90000
      RespawnEntry =      Level:10          Cost:1200     Time:100000
End

```

```

=====
      BecomeStealthedFX      = FX_ElvenCloakOn
      ExitStealthFX          = FX_ElvenCloakOn; Meneldil changed original
FX_ElvenCloakOff

```

### Providing a Palantir Ability to Pippin

The objective is to provide Pippin the capability to view the entire map for 40 seconds at level 4 every 4 minutes. In addition, there is a 10% speed and 25% vision/range bonus that also lasts for 40 seconds.

#### data\ini\attributemodifier.ini

ModifierList PalantirPower; added by Meneldil for Pippin & Aragorn

```

      Category = LEADERSHIP
      Modifier = SPEED 110%; Multiplicative
      Modifier = VISION 25%; Additive
      Modifier = RANGE 25% ; Additive
      Duration = 40000 ; Should match values in system.ini
      FX = FX_GenericLeadershipLvl1; FX_EowynShieldMaiden; disable this if it
bogs down the CPU
      ModelCondition = EMOTION_CELEBRATING
End

```

Note: I placed this at the end of the file. Also, the generic leadership FX didn't affect my CPU like the shield maiden FX did.

#### data\ini\commandbutton.ini

CommandButton Command\_SpecialAbilitySeeingStone; added by Meneldil for Pippin & Aragorn

```

      Command = SPECIAL_POWER
      SpecialPower = SpecialAbilitySeeingStone
      ButtonImage = SBEvil_PalantirVision
      ButtonBorderStyle = ACTION
      TextLabel = CONTROLBAR:SeeingStone
      DescriptLabel = CONTROLBAR:TooltipSeeingStone
      InPalantir = Yes
      AutoAbility = No
End

```

Note: I placed this at the end of the file.

### data\ini\commandset.ini

```
CommandSet RohanPippinCommandSet
  1 = Command_ToggleHobbitRockThrow
  2 = Command_SpecialAbilityElfCloak
  3 = Command_SpecialAbilitySeeingStone; added by Meneldil
 13 = Command_AttackMove
 14 = Command_Stop
 15 = Command_Guard
End
```

### data\ini\experiencelevels.ini

```
ExperienceLevel PippinLevel4
  TargetNames = RohanPippin
  RequiredExperience = HOBBIT_LVL4_EXP_NEEDED
  ExperienceAward = HOBBIT_LVL4_EXP_AWARD
  LevelUpFx = FX:GandalfLevelUp1FX
  ;LevelUpOCL = OCL_GandalfLevelUp1OCL
  Rank = 4
  AttributeModifiers = HobbitLevelUpDamage3
  Upgrades = Upgrade_NewAbility1; Added by
Meneldil for Palantir
  ;Upgrades = Upgrade_HeroRadiateFear
  SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 40
  End
End
```

### data\ini\object\goodfaction\units\rohan\pippin.ini

```
;-----Start Seeing Stone Vision-----
---
; Palantir Map View added by Meneldil
Behavior = UnpauseSpecialPowerUpgrade ModuleTag_SeeingStone
  SpecialPowerTemplate = SpecialAbilitySeeingStone
  TriggeredBy = Upgrade_NewAbility1
End

Behavior = OCLSpecialPower SeeingStone; the actual name used
here is not important but it must be unique
  SpecialPowerTemplate = SpecialAbilitySeeingStone
  AttributeModifier = PalantirPower
  AttributeModifierRange = 9999; should match value in system.ini
  AttributeModifierAffects = ANY +INFANTRY +CAVALRY +MACHINE +HERO; should
match values in system.ini
  AttributeModifierAffectsSelf = Yes
  OCL = OCL_SpawnSeeingStonePing
  CreateLocation = CREATE_AT_LOCATION
  StartsPaused = Yes; if no, timer will begin at level 1
  AvailableAtStart = No; If no, have to wait on upgrade; otherwise, it
will work at level 1
End
;-----End Seeing Stone Vision-----
---
```

Note: I placed this in the Engineering Parameters just before the Auto Heal Behavior

## data\ini\object\system\system.ini

```
----- Palantir Seeing Stone Vision Ping -----
Object SeeingStonePing; Palantir Map View added by Meneldil

    Draw = W3DScriptedModelDraw ModuleTag_Draw
        DefaultModelConditionState
            Model = None
        End
    End

EvaEnemyUnitSightedEvent = None ; Not a real unit

; ***DESIGN parameters ***
VisionRange = 9999999
EditorSorting = SYSTEM
KindOf = NO_COLLIDE IMMOBILE UNATTACKABLE IGNORE_FOR_VICTORY
IGNORE_FOR_EVA_SPEECH_POSITION MOVE_ONLY
ThreatLevel = 0

; *** ENGINEERING Parameters ***
Body = ActiveBody ModuleTag_01
    MaxHealth = 999999
    InitialHealth = 999999
End

Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    MinLifetime = 40000; 40 second duration
    MaxLifetime = 40000; should match below refresh delay as well as
attribute modifier duration
End

; Give bonus to ally troops
Behavior = AttributeModifierAuraUpdate ModuleTag_TroopBonus
    StartsActive = Yes ;If no, requires upgrade to turn on.
    BonusName = PalantirPower
    RefreshDelay = 40000; should match above lifetime as well as
attribute modifier duration
    Range = 9999; should match value in hero's ini file (e.g.,
Pippin and Aragorn)
    ObjectFilter = ANY +INFANTRY +CAVALRY +MACHINE +HERO; should match
values in hero's ini file (e.g., Pippin and Aragorn)
End

; Detects other stealth units
Behavior = StealthDetectorUpdate StealthDetectorUpdateModuleTag
    DetectionRate = 500; how often to rescan for stealthed things in my
sight (msec)
End
End
```

Note: I placed this at the end of the file.

## data\ini\objectcreationlist.ini

```
-----
; Palantir Map View added by Meneldil for Pippin and Aragorn
ObjectCreationList OCL_SpawnSeeingStonePing
    CreateObject
        ObjectNames = SeeingStonePing
        Count = 1
```

End  
End

Note: I placed this at the end of the file.

### data\ini\specialpower.ini

```
-----  
; Palantir Map View added by Meneldil for Pippin and Aragorn  
SpecialPower SpecialAbilitySeeingStone  
    Enum                = SPECIAL_SPELL_BOOK_PALANTIR_VISION  
    ReloadTime          = 240000; 4 minutes (number in milliseconds)  
    PublicTimer         = Yes  
    InitiateAtLocationSound = SpellPalantirVision  
End
```

Note: I placed this at the end of the file.

### data\ini\upgrade.ini

```
Upgrade Upgrade_NewAbility1; added by Meneldil as generic upgrade tag  
    Type    = OBJECT  
End
```

Note: I placed this at the end of the file.

### data\lotr.str

```
CONTROLBAR:SeeingStone  
"Palan&tir Seeing Stone"  
END
```

```
CONTROLBAR:ToolTipSeeingStone  
"Required: Rank 4 \n Temporarily view the entire countryside by gazing into the  
Palantir that Pippin recovered from the traitor Saruman. \n  
During this time, ally troops receive a 10% speed and 25% vision & range bonus \n  
Left click to activate."  
END
```

Note: I placed this at the end of the file.

We'll now give Pippin a number of permanent upgrades at level 8 to signify that he is now in the service of the Steward of Gondor. Here are the upgrades he'll be receiving.

- Upgrade to Moria Hobbit Armor (versus standard Hero Armor)
- 25% More Damage
- 200 Point Health Increase
- Trolls Lose 60% Defense and Speed

Earlier, you saw a reapplication of Eowyn's Shield Maiden Spell for Frod's Mithril Coat as well as the "Fake Leadership" method for his passive leadership. In this example, we'll reapply the Gandalf the White Spell as well as the Fake Leadership method.

## Provide Pippin an Armor Upgrade at Level 8

### data\ini\experiencelevels.ini

```
ExperienceLevel PippinLevel8
    TargetNames = RohanPippin
    RequiredExperience = HOBBIT_LVL8_EXP_NEEDED
    ExperienceAward = HOBBIT_LVL8_EXP_AWARD
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    Rank = 8
    AttributeModifiers = HobbitLevelUpDamage7
    Upgrades = Upgrade_NewAbility2; Added by
Meneldil for "Pippin for Gondor"
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
End
```

### data\ini\object\goodfaction\units\rohan\pippin.ini

```
ArmorSet
    Conditions = None
    Armor = HeroArmor
    DamageFX = NormalDamageFX
End

ArmorSet; added by Meneldil for Pippin Armor Upgrade
    Conditions = PLAYER_UPGRADE
    Armor = MoriaHobbitArmor; use InvulnerableArmor to verify
this works
    DamageFX = NormalDamageFX
End
```

(this is placed in the Design parameters after the existing armor set code, shown above for reference)

Behavior = ArmorUpgrade ModuleTag\_UpgradeArmor; Meneldil changed from HeroArmor to MoriaHobbitArmor

```
    TriggeredBy = Upgrade_NewAbility2
    ArmorSetFlag = PLAYER_UPGRADE
```

End

(this is placed in the Engineering parameters)

### Summary

1. Moria Hobbit Armor is an existing armor that can be found in the armor.ini file. In the original game, it's only used while in Moria (refer to the Moria map ini file). You can create your own if you wish. Ideally, a new skin would be made to visually show the improved armor on Pippin.
2. Provide what the upgrade will be in the design parameters section.
3. Provide the upgrade requirement in the engineering parameters section.
4. Note that no command button is required for this.

## Provide Pippin an Attribute Modifier Upgrades at Level 8

If you look at how Gandalf's "White" upgrade occurs at level 5, you can readily reapply that to Pippin.

### data\ini\attributemodifier.ini

```
ModifierList PippinForGondor; added by Meneldil for Pippin
    Category      = SPELL
    Modifier      = DAMAGE_MULT 125%; Multiplicative
    Modifier      = HEALTH 200; Additive
    Duration      = 0; Duration is forever when set to 0
    FX            = FX_PippinForGondor
End
```

### data\ini\fxlist.ini

```
;-----
FXList FX_PippinForGondor; Meneldil added for Pippin
    ParticleSystem
        Name = PippinUpgradeAura
        AttachToObject = Yes
    End
End
```

### data\ini\fxparticlesystem.ini

```
FXParticleSystem PippinUpgradeAura; Meneldil modified original GoldChestAura
System
    Priority = CONSTANT
    ParticleName = EXLnzFlar1.tga
    Lifetime = 80 80
    SortLevel = 1
    Size = 25 25; Meneldil changed original 75 75
    BurstDelay = 40 40; Meneldil changed original 40 40
    BurstCount = 1 1
    IsGroundAligned = Yes
    IsEmitAboveGroundOnly = Yes
End
Color = DefaultColor
    Color2 = R:205 G:205 B:255 40; Meneldil changed original R:236 G:199 B:136 40
    Color3 = R:0 G:0 B:0 80
End
Alpha = DefaultAlpha
    Alpha1 = 1 1 0
End
Update = DefaultUpdate
    SizeRateDamping = 1 1
    AngleZ = -5 5
    AngularRateZ = -0.03 0.03
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = LineEmissionVolume
    StartPoint = X:0 Y:0 Z:0; Meneldil changed original X:0 Y:0 Z:18
    EndPoint = X:0 Y:0 Z:2; Meneldil changed original X:0 Y:0 Z:20
End
Draw = DefaultDraw
End
End
```

### data\ini\object\goodfaction\units\rohan\pippin.ini

```
;added by Meneldil
  Behavior = AttributeModifierUpgrade ModuleTag_PippinForGondor; activates the
attribute modifiers
  TriggeredBy = Upgrade_NewAbility2
  AttributeModifier = PippinForGondor
End
```

(this is placed in the Engineering parameters)

### data\ini\specialpower.ini

```
;-----
SpecialPower SpecialAbilityPippinForGondor; added by Meneldil for Pippin
  Enum          = SPECIAL_GLORIOUS_CHARGE
  ReloadTime    = 0
  PublicTimer   = No
End
```

### Summary

1. The new attributes are shown in the attribute modifier code.
2. A special effect has been included to visually indicate that the upgrade is working. Disable it if it becomes distracting.
3. A different Enum has been used in the special power code. Enums can be touchy (read the programmer comments at the top of the specialpower.ini file). In general, it's best not to repeat them within your faction. It's also a good idea to use ones from another faction to avoid any conflicts. If your code doesn't work, this is a good place to look for the cause.
4. No command button is required.

### Provide a Dummy Command Button to Indicate Status, Plus Troll Negative Leadership

The following code is used to create a command button with text description so that the user knows that upgrades have occurred and what they are. You can choose not to include any modifiers if you wish. For this situation, I'll include the ability to reduce troll speed & armor by 60%. This is an example of negative leadership. Instead of granting a bonus to nearby allies, nearby enemies will suffer a decrease in one or more abilities.

### data\ini\attributemodifier.ini

```
ModifierList PippinPassiveLeadership; added by Meneldil to allow Pippin to better
take on trolls
  Category      = LEADERSHIP
  Modifier      = SPEED 40% ; Multiplicative
  Modifier      = ARMOR -60% ; Additive (60% armor reduction)
  Duration      = 3000 ; needs to match value in pippin.ini file
  FX            = FX_PippinLeadership; Affected units are indicated
End
```

### data\ini\commandbutton.ini

```
CommandButton Command_SpecialAbilityPippinForGondor; added by Meneldil for Pippin
  Command       = SPECIAL_POWER
  SpecialPower  = SpecialAbilityFakeLeadership
  Options       = NONPRESSABLE
  ButtonImage   = HSBorimirForGondor
  RadiusCursorType = TRAINING
  ButtonBorderType = ACTION
  InPalantir    = Yes
  TextLabel     = CONTROLBAR:PippinForGondor
  DescriptLabel = CONTROLBAR:ToolTipPippinForGondor
End
```



### data\ini\commandset.ini

```
CommandSet RohanPippinCommandSet
  1 = Command_ToggleHobbitRockThrow
  2 = Command_SpecialAbilityElfCloak
  3 = Command_SpecialAbilitySeeingStone; added by Meneldil
  4 = Command_SpecialAbilityPippinForGondor; added by Meneldil
  13 = Command_AttackMove
  14 = Command_Stop
  15 = Command_Guard
End
```

### data\ini\fxlist.ini

```
;-----
FXList FX_PippinLeadership; Meneldil added
  ParticleSystem
    Name = GreenAura
    AttachToObject = Yes
  End
End
```

### data\ini\fxparticlesystem.ini

```
FXParticleSystem GreenAura; Meneldil reapplied FueltheFiresEmbers
System
  Priority = ALWAYS_RENDER
  ParticleName = EXGimliAxeSpecial.tga
  Lifetime = 30 30
  SortLevel = 1
  Size = 10 15
  BurstCount = 2 2
  IsGroundAligned = Yes
  IsParticleUpTowardsEmitter = Yes
  SystemLifetime = 120
End
Color = DefaultColor
  Color2 = R:50 G:150 B:100 10; Meneldil changed original R:45 G:24 B:6 10
  Color3 = R:0 G:0 B:0 20
End
Update = DefaultUpdate
  SizeRate = 15 15
  SizeRateDamping = 0.8 0.5
  AngleZ = 0 7
  AngularRateZ = -0.4 0.4
  AngularDamping = 0.9 0.95
End
Physics = DefaultPhysics
  VelocityDamping = 0.8 0.9
End
EmissionVelocity = CylindricalEmissionVelocity
  Radial = 0 5
End
EmissionVolume = CylinderEmissionVolume
  IsHollow = Yes
  Radius = 65; Meneldil changed original 75
  Offset = X:0 Y:0 Z:5
End
Draw = DefaultDraw
End
End
```

### data\ini\object\goodfaction\units\rohan\pippin.ini

```
Behavior = AttributeModifierAuraUpdate ModuleTag_PippinLeadership
  StartsActive      = No; If no, requires upgrade to turn on.
  BonusName        = PippinPassiveLeadership
  TriggeredBy      = Upgrade_NewAbility2
  RefreshDelay     = 3000; needs to match value in attributemodifier.ini file
  TargetEnemy      = Yes
  Range            = 200
  ObjectFilter     = NONE +TROLL; Intended to allow Pippin to do greater
damage to trolls
  End

Behavior = UnpauseSpecialPowerUpgrade ModuleTag_UnpauseLeadership; only used to
update the button status
  SpecialPowerTemplate = SpecialAbilityFakeLeadership
  TriggeredBy = Upgrade_NewAbility2
  End

Behavior = SpecialPowerModule ModuleTag_PippinLeadershipUpdate; only used to
update the button status
  SpecialPowerTemplate      = SpecialAbilityFakeLeadership
  UpdateModuleStartsAttack = No
  StartsPaused = Yes
  End

(this is placed in the Engineering parameters)
```

### data\lotr.str

```
CONTROLBAR:PippinForGondor
"Defender of the White Tree"
End
```

```
CONTROLBAR:ToolTipPippinForGondor
"Required: Rank 8 \n As a soldier of Gondor, Pippin delivers 25% more damage, gains
200 health points, and receives an armor upgrade. \n
Trolls suffer a 60% speed & armor reduction. \n Passive ability"
End
```

### Summary

1. The Fake Leadership method has been used to create a dummy command button in Pippin's Palantir.
2. If desired, modifiers could be added so that Pippin provides benefits to nearby troops or hurt nearby enemies. Notice the use of "**TargetEnemy**" above. In this case, trolls lose 60% speed and armor. In addition, a visual indicator FX (GreenAura) is provided to show that the troll is being affected.
3. The upgrades were provided invisibly. The command button provides a visual status indicator.
4. The White Tree command button is taken from Boromir's DDS file.
5. The lotr.str text shows all of the provided upgrade descriptions.
6. I'll leave it to you to combine and adjust the above code blocks into a single template that best meets your needs.

Do you see how easy it is to add an upgrade without the need of any visual feedback? For example, let's say we want to give Sam a permanent health bonus at the same time he gets his leadership upgrade at level 6. Do you know what to do?

## Adding a Permanent Increase in Health

### data\ini\attributemodifier.ini

```
ModifierList HealthBoost; added by Meneldil for Sam
    Category      = SPELL
    Modifier      = HEALTH 200 ; Additive
    Duration      = 0; Duration is forever when set to 0
End
```

### data\ini\object\goodfaction\units\rohan\sam.ini

```
Behavior = AttributeModifierUpgrade ModuleTag_HealthBoost
    TriggeredBy = Upgrade_NewAbility2
    AttributeModifier = HealthBoost
End
```

(add this to his the leadership code created previously)

### data\lotr.str

```
CONTROLBAR:ToolTipSamLeadership
"Required: Rank 6 \n Nearby hobbit allies deliver 20% more damage. Sam also gains
200 health points. \n Passive ability"
END
```

(I simply modified the tool tip we created previously)

Since Pippin is now a soldier of Gondor, we'll include the ability to summon some temporary soldiers to aid him. This is a reapplication of what's already been covered.

I prefer to have summoned troops disappear into some kind of special effect when their timer expires, assuming they aren't killed in battle. You've seen this with the summoned elves; however, the same effect gets boring after a while. Before continuing, I'm going to create some new effects based on the "FireFieldSmall" object in the system.ini file. I chose this because it covers an individual unit nicely and as an added bonus, provides a small amount of fire damage when it is executed (although that can be a problem if the unit departs while next to a building plot you've just started to build on). If desired, you can go to the weapon.ini file and adjust as you see fit (e.g., change **SmallFireFieldWeapon** damage value to zero). The original color is orange. All I did was make some new versions with different colors in order to have some variety. Here is a summary of the new effects.

- FireBlue (blue theme)
- FireGreen (green theme)
- FireRed (red theme)
- FireDark (gray/red theme)
- FireBold (gold/green/purple theme)
- FireGold (yellow theme)
- FirePatriot (red, white, and blue theme)
- FireOrange (burnt orange theme)
- FireFieldSmall (original flame colors)

### data\ini\system.ini

```
-----
ChildObject FireBlue FireFieldSmall; added by Meneldil

; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_01
    DefaultModelState
    Model = NONE
    ParticleSysBone = None FireBlueFire
    ParticleSysBone = None FireBlueEmbers
End
End
End
```

```

;-----
ChildObject FireGreen FireFieldSmall; added by Meneldil

; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_01
  DefaultModelState
    Model = NONE
    ParticleSysBone = None FireGreenFire
    ParticleSysBone = None FireGreenEmbers
  End
End
End

;-----
ChildObject FireRed FireFieldSmall; added by Meneldil

; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_01
  DefaultModelState
    Model = NONE
    ParticleSysBone = None FireRedFire
    ParticleSysBone = None FireRedEmbers
  End
End
End

;-----
ChildObject FireDark FireFieldSmall; added by Meneldil

; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_01
  DefaultModelState
    Model = NONE
    ParticleSysBone = None FireDarkFire
    ParticleSysBone = None FireDarkEmbers
  End
End
End

;-----
ChildObject FireBold FireFieldSmall; added by Meneldil

; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_01
  DefaultModelState
    Model = NONE
    ParticleSysBone = None FireBoldFire
    ParticleSysBone = None FireBoldEmbers
  End
End
End

;-----
ChildObject FireGold FireFieldSmall; added by Meneldil

; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_01
  DefaultModelState
    Model = NONE
    ParticleSysBone = None FireGoldFire

```

```

    ParticleSysBone = None FireGoldEmbers
End
End
End

```

```

;-----
ChildObject FirePatriot FireFieldSmall; added by Meneldil

```

```

; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_01
    DefaultModelConditionState
        Model = NONE
        ParticleSysBone = None FirePatriotFire
        ParticleSysBone = None FirePatriotEmbers
    End
End
End

```

```

;-----
ChildObject FireOrange FireFieldSmall; added by Meneldil

```

```

; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_01
    DefaultModelConditionState
        Model = NONE
        ParticleSysBone = None FireOrangeFire
        ParticleSysBone = None FireOrangeEmbers
    End
End
End

```

### data\ini\fxparticlesystem.ini

In the following code blocks, I've shown just the color changes and not the complete code. If you want to add this for yourself, you will need to completely duplicate the original FireFieldSmallFire and FireFieldSmallEmbers codes and make the following color changes.

```

;-----
-----

```

```

; Meneldil changed colors of FireFieldSmallFire and FireFieldSmallEmbers)
;

```

```

FXParticleSystem FireBlueEmbers; added by Meneldil
Color = DefaultColor
    Color1 = R:0 G:140 B:240 0; changed original R:255 G:185 B:79 0
    Color2 = R:0 G:255 B:255 15; changed original R:0 G:0 B:0 20
    ColorScale = -5 0
End

```

```

FXParticleSystem FireBlueFire; added by Meneldil
Color = DefaultColor
    Color2 = R:160 G:200 B:250 10; changed original R:255 G:128 B:64 10
    Color3 = R:0 G:0 B:0 40
End

```

```

;-----
-----

```

```

FXParticleSystem FireGreenEmbers; added by Meneldil
Color = DefaultColor
    Color1 = R:0 G:150 B:0 0; changed original R:255 G:185 B:79 0
    Color2 = R:0 G:255 B:0 15; changed original R:0 G:0 B:0 20
    ColorScale = -5 0
End

```

```
FXParticleSystem FireGreenFire; added by Meneldil
  Color = DefaultColor
    Color2 = R:100 G:255 B:100 10; changed original R:255 G:128 B:64 10
    Color3 = R:0 G:0 B:0 40
  End
```

```
;-----
-----
```

```
FXParticleSystem FireRedEmbers; added by Meneldil
  Color = DefaultColor
    Color1 = R:75 G:0 B:0 0; changed original R:255 G:185 B:79 0
    Color2 = R:255 G:0 B:0 15; changed original R:0 G:0 B:0 20
    ColorScale = -5 0
  End
```

```
FXParticleSystem FireRedFire; added by Meneldil
  Color = DefaultColor
    Color2 = R:180 G:140 B:140 10; changed original R:255 G:128 B:64 10
    Color3 = R:0 G:0 B:0 40
  End
```

```
;-----
-----
```

```
FXParticleSystem FireDarkEmbers; added by Meneldil
  Color = DefaultColor
    Color1 = R:75 G:0 B:0 0; changed original R:255 G:185 B:79 0
    Color2 = R:0 G:50 B:0 15; changed original R:0 G:0 B:0 20
    ColorScale = -5 0
  End
```

```
FXParticleSystem FireDarkFire; added by Meneldil
  Color = DefaultColor
    Color2 = R:50 G:50 B:50 10; changed original R:255 G:128 B:64 10
    Color3 = R:0 G:0 B:0 40
  End
```

```
;-----
-----
```

```
FXParticleSystem FireBoldEmbers; added by Meneldil
  Color = DefaultColor
    Color1 = R:150 G:0 B:200 0; changed original R:255 G:185 B:79 0
    Color2 = R:255 G:255 B:0 15; changed original R:0 G:0 B:0 20
    ColorScale = -5 0
  End
```

```
FXParticleSystem FireBoldFire; added by Meneldil
  Color = DefaultColor
    Color2 = R:140 G:200 B:80 10; changed original R:255 G:128 B:64 10
    Color3 = R:0 G:0 B:0 40
  End
```

```
;-----
-----
```

```
FXParticleSystem FireGoldEmbers; added by Meneldil
  Color = DefaultColor
    Color1 = R:205 G:205 B:0 0; changed original R:255 G:185 B:79 0
    Color2 = R:100 G:255 B:100 15; changed original R:0 G:0 B:0 20
    ColorScale = -5 0
  End
```

```
FXParticleSystem FireGoldFire; added by Meneldil
  Color = DefaultColor
    Color2 = R:255 G:255 B:150 10; changed original R:255 G:128 B:64 10
    Color3 = R:0 G:0 B:0 40
  End
```

```
;-----
-----
```

```
FXParticleSystem FirePatriotEmbers; added by Meneldil
  Color = DefaultColor
    Color1 = R:200 G:0 B:0 0; changed original R:255 G:185 B:79 0
    Color2 = R:0 G:0 B:200 15; changed original R:0 G:0 B:0 20
    ColorScale = -5 0
  End
```

```
FXParticleSystem FirePatriotFire; added by Meneldil
  Color = DefaultColor
    Color2 = R:255 G:255 B:255 10; changed original R:255 G:128 B:64 10
    Color3 = R:0 G:0 B:0 40
  End
End
```

```
;-----
-----
```

```
FXParticleSystem FireOrangeEmbers; added by Meneldil
  Color = DefaultColor
    Color1 = R:200 G:150 B:0 0; changed original R:255 G:185 B:79 0
    Color2 = R:255 G:50 B:0 15; changed original R:0 G:0 B:0 20
    ColorScale = -5 0
  End
```

```
FXParticleSystem FireOrangeFire; added by Meneldil
  Color = DefaultColor
    Color2 = R:150 G:50 B:0 10; changed original R:255 G:128 B:64 10
    Color3 = R:0 G:0 B:0 40
  End
```

**data\ini\objectcreationlist.ini**

Note: The OCL\_FireFieldSmall line already exists and is included for reference

```
;-----
```

```
ObjectCreationList OCL_FireFieldSmall
  CreateObject
    ObjectNames = FireFieldSmall
;   Offset = X:0 Y:0 Z:0
    Disposition = ON_GROUND_ALIGNED
  End
End
```

```
;-----
```

```
ObjectCreationList OCL_FireBlue; added by Meneldil
  CreateObject
    ObjectNames = FireBlue
    Disposition = ON_GROUND_ALIGNED
  End
End
```

```
;-----
```

```
ObjectCreationList OCL_FireGreen; added by Meneldil
  CreateObject
    ObjectNames = FireGreen
```

```

Disposition = ON_GROUND_ALIGNED
End
End

; -----
ObjectCreationList OCL_FireRed; added by Meneldil
CreateObject
ObjectNames = FireRed
Disposition = ON_GROUND_ALIGNED
End
End

; -----
ObjectCreationList OCL_FireDark; added by Meneldil
CreateObject
ObjectNames = FireDark
Disposition = ON_GROUND_ALIGNED
End
End

; -----
ObjectCreationList OCL_FireBold; added by Meneldil
CreateObject
ObjectNames = FireBold
Disposition = ON_GROUND_ALIGNED
End
End

; -----
ObjectCreationList OCL_FireGold; added by Meneldil
CreateObject
ObjectNames = FireGold
Disposition = ON_GROUND_ALIGNED
End
End

; -----
ObjectCreationList OCL_FirePatriot; added by Meneldil
CreateObject
ObjectNames = FirePatriot
Disposition = ON_GROUND_ALIGNED
End
End

; -----
ObjectCreationList OCL_FireOrange; added by Meneldil
CreateObject
ObjectNames = FireOrange
Disposition = ON_GROUND_ALIGNED
End
End

```

These new effects will be referenced from here on without further comment.



## Provide Pippin the Ability to Summon Aid: Gondor Soldiers

Objective: Summon temporary Gondor Soldiers at Level 9 every 4 minutes.

Tip: Do a search and replace on Sam's Eagle or Elven Summons in order to make faster work of this.

### data\ini\commandbutton.ini

CommandButton Command\_SpawnGondorSoldiers; added by Meneldil for Pippin

```
Command           = SPECIAL_POWER
SpecialPower      = SuperweaponGondorSoldiers
ButtonImage       = BGBarracks_Soldiers
Options           = NEED_TARGET_POS CONTEXTMODE_COMMAND
RadiusCursorType  = LIGHTNING_SWORD
CursorName        = AttackObj
InvalidCursorName = GenericInvalid
ButtonBorderType  = ACTION
InPalantir        = Yes
TextLabel         = CONTROLBAR:SummonGondorSoldiers
DescriptorLabel   = CONTROLBAR:ToolTipSummonGondorSoldiers
```

End

### data\ini\commandset.ini

CommandSet RohanPippinCommandSet

```
1 = Command_ToggleHobbitRockThrow
2 = Command_SpecialAbilityElfCloak
3 = Command_SpecialAbilitySeeingStone; added by Meneldil
4 = Command_SpecialAbilityPippinForGondor; added by Meneldil
5 = Command_SpawnGondorSoldiers; added by Meneldil
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
```

End

### data\ini\experiencelevels.ini

ExperienceLevel PippinLevel9

```
TargetNames           = RohanPippin
RequiredExperience     = HOBBIT_LVL9_EXP_NEEDED
ExperienceAward        = HOBBIT_LVL9_EXP_AWARD
LevelUpFx              = FX:GandalfLevelUp1FX
;LevelUpOCL            = OCL_GandalfLevelUp1OCL
Rank                   = 9
AttributeModifiers     = HobbitLevelUpDamage8
Upgrades               = Upgrade_NewAbility3; Added by
```

Meneldil for Soldier summons

```
SelectionDecal
Texture               = decal_hero_good
Style                 = SHADOW_ALPHA_DECAL
OpacityMin            = 50%
OpacityMax            = 100%
MinRadius             = 40
MaxRadius             = 200
MaxSelectedUnits     = 40
```

End

End

### data\ini\fxlist.ini

; -----

FXList FX\_GondorSummon1 ; Meneldil reapplication of FX\_BoromirHorn & FX\_Devastation

```
ParticleSystem
Name = BlueRipple; BoromirHorn
Offset = X:0.0 Y:0.0 Z:10.0
```

End

```

ParticleSystem
  Name = DevastationLightBlue; DevastationLight
  Offset = X:0.0 Y:0.0 Z:1.0
End
ParticleSystem
  Name = DevastationRingBlue; DevastationRing
  Offset = X:0.0 Y:0.0 Z:3.0
End
End

```

### data\ini\fxparticlesystem.ini

FXParticleSystem BlueRipple; Meneldil altered original BoromirHorn System

```

System
  Priority = ALWAYS_RENDER
  ParticleName = EXLightAura01.tga
  Lifetime = 50 50
  SystemLifetime = 50; 6
  SortLevel = 1
  Size = 1 1
  StartSizeRate = 1 4
  BurstDelay = 0 3
  BurstCount = 1 1
  IsGroundAligned = Yes
End
Color = DefaultColor
  Color1 = R:0 G:140 B:240 0; Color1 = R:225 G:185 B:100 0
  Color2 = R:0 G:0 B:0 50
End
Alpha = DefaultAlpha
End
Update = DefaultUpdate
  SizeRate = 2 8
  SizeRateDamping = 1 1
  AngleZ = -6 6
  AngularRateZ = -0.05 0.05
  AngularDamping = 1 1
End
Physics = DefaultPhysics
  VelocityDamping = 0 8.07921e+33
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = PointEmissionVolume
End
Draw = DefaultDraw
End
End

```

FXParticleSystem DevastationLightBlue; Meneldil altered DevastationLight System

```

Priority = ALWAYS_RENDER
Shader = W3D_EMISSIVE
Type = DRAWABLE
ParticleName = exlight01.w3d
Lifetime = 15 15
SystemLifetime = 5; 1
SortLevel = 1
Size = 0.1 0.1
BurstCount = 2 2
End
Color = DefaultColor

```

```

    Color1 = R:0 G:50 B:150 0; Color1 = R:179 G:255 B:179 0
    Color2 = R:0 G:0 B:0 15
End
Alpha = DefaultAlpha
    Alpha1 = 0.25 0.25 0
    Alpha2 = 0 0 10
End
Update = RenderObjectUpdate
    StartSizeX = 0.05 0.05
    StartSizeY = 0.05 0.05
    StartSizeZ = 0.05 0.05
    SizeRateX = 0.15 0.15
    SizeRateY = 0.15 0.15
    SizeRateZ = 0.2 0.2
    SizeDampingX = 0.9 0.9
    SizeDampingY = 0.9 0.9
    SizeDampingZ = 0.98 0.98
    AngleZ = -5 5
    Rotation = ROTATE_Z
End
Physics = DefaultPhysics
    VelocityDamping = 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = PointEmissionVolume
End
Draw = RenderObjectDraw
End
End

FXParticleSystem DevastationRingBlue; Meneldil altered DevastationRing
System
    Priority = AREA_EFFECT
    ParticleName = EXLvlUpClutter.TGA
    Lifetime = 15 15
    SystemLifetime = 10; 1
    SortLevel = 1
    Size = 0 1
    BurstCount = 10 10
    IsGroundAligned = Yes
End
Color = DefaultColor
;    Color1 = R:0 G:200 B:250 0; Color1 = R:207 G:226 B:99 0
    Color1 = R:49 G:129 B:193 0; Meneldil changed to match FaramirArrowTrail
    Color2 = R:0 G:0 B:0 15
End
Update = DefaultUpdate
    SizeRate = 15 20
    SizeRateDamping = 0.5 0.58
    AngleZ = -7 7
    AngularRateZ = -0.5 0.5
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = PointEmissionVolume
    IsHollow = Yes

```

```
End
Draw = DefaultDraw
End
End
```

data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini

```
-----
;added by Meneldil
ChildObject GondorFighterTriangleHorde_Summoned GondorFighterHorde

    IsTrainable = No
    CommandPoints = 0
    CommandSet = GenericCommandSet
    EquivalentTo = GondorFighterHorde_Summoned

    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained =
        InitialPayload = GondorFighter_Summoned 3
        Slots = 3
        PassengerFilter = NONE +INFANTRY
        ShowPips = No
        ThisFormationIsTheMainFormation = Yes

        ; Positions for 3
        RankInfo = RankNumber:1 UnitType:GondorFighter_Summoned Position:X:0 Y:0
Position:X:-20 Y:11.5 Position:X:-20 Y:-11.5
        RanksToReleaseWhenAttacking = 1
    End

    Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
        UpgradeToGrant = Upgrade_GondorForgedBlades
    End

    Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
        UpgradeToGrant = Upgrade_GondorHeavyArmor
    End

    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime = 90000
        MaxLifetime = 120000
        DeathType = FADED
    End

End
```

```
-----
;added by Meneldil
ChildObject GondorFighterSquareHorde_Summoned GondorFighterHorde

    IsTrainable = No
    CommandPoints = 0
    CommandSet = GenericCommandSet
    EquivalentTo = GondorFighterHorde_Summoned

    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained =
        InitialPayload = GondorFighter_Summoned 4
        Slots = 4
        PassengerFilter = NONE +INFANTRY
        ShowPips = No
        ThisFormationIsTheMainFormation = Yes
```

```

    ; Positions for 4
    RankInfo = RankNumber:1 UnitType:GondorFighter_Summoned Position:X:0 Y:10
Position:X:0 Y:-10 Position:X:-20 Y:10 Position:X:-20 Y:-10
    RanksToReleaseWhenAttacking = 1
End

Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_GondorForgedBlades
End

Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_GondorHeavyArmor
End

Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    MinLifetime      = 90000
    MaxLifetime      = 120000
    DeathType        = FADED
End

End

```

```

;-----
;added by Meneldil

```

```

ChildObject GondorFighterPentagonHorde_Summoned GondorFighterHorde

```

```

    IsTrainable = No
    CommandPoints = 0
    CommandSet = GenericCommandSet
    EquivalentTo = GondorFighterHorde_Summoned

```

```

Behavior = HordeContain ModuleTag_HordeContain
    ObjectStatusOfContained =
    InitialPayload = GondorFighter_Summoned 5
    Slots = 5
    PassengerFilter = NONE +INFANTRY
    ShowPips = No
    ThisFormationIsTheMainFormation = Yes

```

```

    ; Positions for 5
    RankInfo = RankNumber:1 UnitType:GondorFighter_Summoned Position:X:0 Y:0
Position:X:-11.5 Y:15.8 Position:X:-11.5 Y:-15.8 Position:X:-30.0 Y:9.8
Position:X:-30.0 Y:-9.8
    RanksToReleaseWhenAttacking = 1
End

```

```

Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_GondorForgedBlades
End

```

```

Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_GondorHeavyArmor
End

```

```

Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    MinLifetime      = 90000
    MaxLifetime      = 120000
    DeathType        = FADED
End

```

```

End

```

data\ini\object\goodfaction\units\gondor\gondorinfantry.ini

```
;;-----  
-----  
ChildObject GondorFighter_Summoned GondorFighter; added by Meneldil  
  
  IsTrainable = No  
  CommandPoints = 0  
  CommandSet = GenericCommandSet  
  
  Body = ActiveBody ModuleTag_02  
    CheerRadius      = EMOTION_CHEER_RADIUS  
    MaxHealth        = 250  
    MaxHealthDamaged = 250  
  End  
  
  Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate  
    MinLifetime      = 90000  
    MaxLifetime      = 120000  
    DeathType        = FADED  
  End  
  
  Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades  
    UpgradeToGrant = Upgrade_GondorForgedBlades  
  End  
  
  Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor  
    UpgradeToGrant = Upgrade_GondorHeavyArmor  
  End  
  
  Behavior = SlowDeathBehavior ModuleTag_05  
    DeathTypes = NONE +FADED +KNOCKBACK  
    FadeDelay = 0  
    FadeTime = 0  
    DestructionDelay = 0  
    Sound = INITIAL ImpactRainOfFire ManCheerSingles  
GondorSoldierVoiceRetreat GondorSoldierVoiceDisengage  
    OCL = INITIAL OCL_FirePatriot OCL_FireBlue  
  End  
  
  Behavior = SlowDeathBehavior ModuleTag_07  
    DeathTypes = ALL -FADED -KNOCKBACK  
    SinkDelay = 20000  
    SinkRate = 0.2  
    DestructionDelay = 40000  
    Sound = INITIAL HumanVoiceDie  
  End  
  
End
```

data\ini\object\goodfaction\units\rohan\pippin.ini

```
;;-----Start Summon Gondor Swordsmen-----  
---  
; added by Meneldil  
  Behavior = UnpauseSpecialPowerUpgrade ModuleTag_GondorSoldiers; actual name not  
important but must be unique  
    SpecialPowerTemplate = SuperweaponGondorSoldiers  
    TriggeredBy = Upgrade_NewAbility3  
  End  
  
  Behavior = OCLSpecialPower SummonGondorSoldiers; actual name not important but  
must be unique
```

```

SpecialPowerTemplate = SuperweaponGondorSoldiers
OCL                  = OCL_SpawnGondorSoldiersEgg
TriggerFX            = FX_GondorSummon1
CreateLocation       = USE_OWNER_OBJECT
StartsPaused         = Yes
End
;-----End Summon Gondor Swordsmen-----
---
```

Note: This goes in the engineering parameters section with the other behaviors.

### data\ini\objectcreationlist.ini

```

;-----
; Gondor soldier summons added by Meneldil for Pippin
ObjectCreationList OCL_SpawnGondorSoldiersEgg
  CreateObject
    ObjectNames = GondorFighterTriangleHorde_Summoned
    Count = 1
    FadeIn = Yes
    FadeTime = 3000
    Offset = X:30 Y:30 Z:0
  End
  CreateObject
    ObjectNames = GondorFighterSquareHorde_Summoned
    Count = 1
    FadeIn = Yes
    FadeTime = 3000
    Offset = X:-30 Y:0 Z:0
  End
  CreateObject
    ObjectNames = GondorFighterPentagonHorde_Summoned
    Count = 1
    FadeIn = Yes
    FadeTime = 3000
    Offset = X:0 Y:-30 Z:0
  End
End
End
```

Note: I added this to the bottom of the file.

### data\ini\specialpower.ini

```

;-----
SpecialPower SuperweaponGondorSoldiers; added by Meneldil for Pippin
  Enum = SPECIAL_SPAWN_OATHBREAKERS
  ReloadTime = 240000; 4 minutes (number in milliseconds)
  PublicTimer = No
  InitiateAtLocationSound = GondorSoldierVoiceSalute
  RadiusCursorRadius = 90
End
```

Note: I added this to the bottom of the file.

### data\ini\upgrade.ini

```
Upgrade Upgrade_NewAbility3; added by Meneldil as generic upgrade tag
    Type = OBJECT
End
```

Note: I added this to the bottom of the file.

### data\lotr.str

```
CONTROLBAR:SummonGondorSoldiers
"Gon&dor Soldiers"
END
```

```
CONTROLBAR:ToolTipSummonGondorSoldiers
"Required: Rank 9 \n Call on swordsmen to aid you \n Left click to activate"
END
```

### Summary

1. Notice that new special effects can be created just by combining existing ones, changing their colors or making other tweaks. For example, I went with blue colors for Gondor.
2. To make a special effect last forever, don't include "**SystemLifetime**" or "**IsOneShot**" in the system code of the fxparticlesystem.ini file. You'll see that in some cases, I've added or deleted "**SystemLifetime**" in order to get the desired effect. For example, I wanted Pippin's level 8 upgrade to have a permanent visual indicator, but I wanted the effect for the summoned soldiers to be temporary.
3. This is also a good opportunity to show how new formations can be created. You'll notice that when the three battalions of Gondor Fighters are created, they form a triangle, square, and pentagon. I normally wouldn't do this, but it is good for illustrative purposes. You use the Rank Info line to indicate what unit type will be used to form the horde (in this case, GondorFighter\_Summoned). In addition, you give the X/Y coordinates for placing the units relative to one another. Think of a basic X/Y set of axes (X is horizontal, origin on the right, or 3 o'clock position). Experiment for yourself with some graph paper and develop your own horde formations.
4. I kept the slow death behavior module tags for the summoned units the same as what was in the original gondorfighter code. This makes sure the original behaviors aren't also included with the new ones.
5. If a horde member is killed, he falls to the ground and eventually sinks away. If his timer expires before he is killed, a special effect and voice clip are played. Note that more than one OCL and Sound can be listed. The game will randomly choose between the listed items, giving greater variety.
6. The horde timer is set to expire in two minutes but the unit timers expire between 1.5 and 2.5 minutes; however, I kept the average unit timer the same as the horde timer. You don't have to do this; you could keep the unit timer the same as the horde timer. I'm doing this here in order to show how you can use voices and special effects when summoned units expire. If the unit timer was the same as the horde timer, multiple voice clips would play simultaneously and that wouldn't sound good. I do admit the voice clips can get a bit annoying, so don't include it or comment it out if it bothers you.
7. In the specialpower.ini file, I used a sound from the existing voice clips called out in the GondorFighter code.

Now we'll give Pippin the ability to summon Ents.



## Provide Pippin the Ability to Summon Aid: Ents

Objective: Provide Pippin the ability to summon Ents at Level 10 every 8 minutes. Three of the four Ents will automatically fade after their allotted time has expired (unless killed first). The other one has no timer.

### data\ini\commandbutton.ini

```
CommandButton Command_SpawnFangornEnts; added by Meneldil for Pippin
  Command          = SPECIAL_POWER
  SpecialPower     = SuperweaponSpawnFangornEnts
  ButtonImage      = HIEnt
  Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND
  RadiusCursorType = ENT_ALLIES
  CursorName       = AttackObj
  InvalidCursorName = GenericInvalid
  ButtonBorderStyle = ACTION
  TextLabel        = CONTROLBAR:SummonFangornEnts
  DescriptorLabel  = CONTROLBAR:ToolTipSummonFangornEnts
  InPalantir       = Yes
End
```

### data\ini\commandset.ini

```
CommandSet RohanPippinCommandSet
  1 = Command_ToggleHobbitRockThrow
  2 = Command_SpecialAbilityElfCloak
  3 = Command_SpecialAbilitySeeingStone; added by Meneldil
  4 = Command_SpecialAbilityPippinForGondor; added by Meneldil
  5 = Command_SpawnGondorSoldiers; added by Meneldil
  6 = Command_SpawnFangornEnts; added by Meneldil
  13 = Command_AttackMove
  14 = Command_Stop
  15 = Command_Guard
End
```

### data\ini\experiencelevels.ini

```
ExperienceLevel PippinLevel10
  TargetNames          = RohanPippin
  RequiredExperience   = HOBBIT_LVL10_EXP_NEEDED
  ExperienceAward      = HOBBIT_LVL10_EXP_AWARD
  LevelUpFx            = FX:GandalfLevelUp1FX
  ;LevelUpOCL          = OCL_GandalfLevelUp1OCL
  Rank                 = 10
  AttributeModifiers  = HobbitLevelUpDamage9
  Upgrades             = Upgrade_NewAbility4; Added by
Meneldil for Ent summons
  SelectionDecal
    Texture            = decal_hero_good
    Style              = SHADOW_ALPHA_DECAL
    OpacityMin         = 50%
    OpacityMax         = 100%
    MinRadius          = 40
    MaxRadius          = 200
    MaxSelectedUnits  = 40
  End
End
```

### data\ini\object\goodfaction\units\rohan\pippin.ini

```
-----Start Summon Fangorn Ents-----
---
; added by Meneldil
Behavior = UnpauseSpecialPowerUpgrade ModuleTag_EntAllies
SpecialPowerTemplate = SuperweaponSpawnFangornEnts
```

```

        TriggeredBy = Upgrade_NewAbility4
    End

    Behavior = OCLSpecialPower SummonFangornEnts; ModuleTag_OCLSpecialPower already
used - actual name not important but must be unique
        SpecialPowerTemplate      = SuperweaponSpawnFangornEnts
        OCL                        = OCL_SpawnFangornEntsEgg
        TriggerFX                  = FX_EntSproutButterflies
        CreateLocation              = USE_OWNER_OBJECT
        StartsPaused                = Yes
    End
;-----End Summon Fangorn Ents-----
---
```

**data\ini\objectcreationlist.ini**

```

;-----
; Create Ents out of thin air ; added by Meneldil for Pippin
ObjectCreationList OCL_SpawnFangornEntsEgg
    CreateObject
        ObjectNames = RohanEntFir_Summoned; instead of RohanEntFir for limited
support
        Count = 1
        FadeIn = Yes
        FadeTime = 4000
        IgnoreCommandPointLimit = Yes
        Disposition = LIKE_EXISTING
        Offset = X:-30 Y:30 Z:0
    End
    CreateObject
        ObjectNames = RohanEntFir_Summoned; instead of RohanEntFir for limited
support
        Count = 1
        FadeIn = Yes
        FadeTime = 4000
        IgnoreCommandPointLimit = Yes
        Disposition = LIKE_EXISTING
        Offset = X:-30 Y:-30 Z:0
    End
    CreateObject
        ObjectNames = RohanEntBirch_Summoned; instead of RohanEntBirch for limited
support
        Count = 1
        FadeIn = Yes
        FadeTime = 4000
        IgnoreCommandPointLimit = Yes
        Disposition = LIKE_EXISTING
        Offset = X:30 Y:-30 Z:0
    End
    CreateObject
        ObjectNames = RohanEntBirch; have one not on timer (RohanEntAsh has graphics
problems)
        Count = 1
        FadeIn = Yes
        FadeTime = 4000
        IgnoreCommandPointLimit = Yes
        Disposition = LIKE_EXISTING
        Offset = X:30 Y:30 Z:0
    End
End
End
```

### data\ini\specialpower.ini

```
; -----  
SpecialPower SuperweaponSpawnFangornEnts; added by Meneldil for Pippin  
  Enum          = SPECIAL_SPAWN_OATHBREAKERS  
  ReloadTime    = 480000; 8 minutes (number in milliseconds)  
  PublicTimer   = No  
  InitiateAtLocationSound = TreebeardVoice  
  RadiusCursorRadius = 100  
End
```

### data\ini\upgrade.ini

```
Upgrade Upgrade_NewAbility4; added by Meneldil as generic upgrade tag  
  Type      = OBJECT  
End
```

### data\lotr.str

```
CONTROLBAR:SummonFangornEnts  
"&Fangorn Ents"  
END
```

```
CONTROLBAR:ToolTipSummonFangornEnts  
"Required: Rank 10 \n Call Ents to aid you \n Left click to activate"  
END
```

## Changing Hobbit Damage Amount

You may have notice that the hobbits have a relatively high damage amount. By the time they reach level 10, their melee and ranged damages are 155 and 165, respectively (not counting any additional bonuses). In contrast, level 10 Faramir's melee and ranged damages are 150 and 130, respectively. Level 10 Boromir has 135 melee damage. Also, Sam provides a 20% damage bonus. I could change that to a speed increase or something else, but instead we're going to change how much damage the hobbits gain as they level up.

From the gamedata.ini file, here are the hobbit damages as they level up:

```
#define      HOBBIT_LVL2_DAM_ADD      10
#define      HOBBIT_LVL3_DAM_ADD      10
#define      HOBBIT_LVL4_DAM_ADD      10
#define      HOBBIT_LVL5_DAM_ADD      10
#define      HOBBIT_LVL6_DAM_ADD      15
#define      HOBBIT_LVL7_DAM_ADD      15
#define      HOBBIT_LVL8_DAM_ADD      15
#define      HOBBIT_LVL9_DAM_ADD      20
#define      HOBBIT_LVL10_DAM_ADD     20
```

Recall from before that we can't change the gamedata.ini file in our mod. We also saw earlier that the weapon.ini file is a good place to add new variable names. The Elven Alliance mod did the same thing. There's no point in reinventing the wheel here for something so simple, so I'm just going to pretty much copy what "Celegin" did, except I'll use different values.

### attributemodifier.ini

Look for this bit of code:

```
;------HOBBIT LEVEL UP-----
```

Now just modify the code, as follows:

```
;------HOBBIT LEVEL UP-----
;Meneldil added new hobbit damage variables to weapon.ini file
ModifierList HobbitLevelUpDamage1
    Category = LEVEL
    Modifier = DAMAGE_ADD HOBBIT1_LVL2_DAM_ADD; Meneldil changed original
DAMAGE_ADD HOBBIT_LVL2_DAM_ADD
    Modifier = HEALTH HOBBIT_LVL2_HP_ADD
    Duration = 0
End

ModifierList HobbitLevelUpDamage2
    Category = LEVEL
    Modifier = DAMAGE_ADD HOBBIT1_LVL3_DAM_ADD; Meneldil changed original
HOBBIT_LVL3_DAM_ADD
    Modifier = HEALTH HOBBIT_LVL3_HP_ADD
    Duration = 0
End

ModifierList HobbitLevelUpDamage3
    Category = LEVEL
    Modifier = DAMAGE_ADD HOBBIT1_LVL4_DAM_ADD; Meneldil changed original
HOBBIT_LVL4_DAM_ADD
    Modifier = HEALTH HOBBIT_LVL4_HP_ADD
    Duration = 0
End

ModifierList HobbitLevelUpDamage4
    Category = LEVEL
    Modifier = DAMAGE_ADD HOBBIT1_LVL5_DAM_ADD; Meneldil changed original
HOBBIT_LVL5_DAM_ADD
```

```

    Modifier = HEALTH HOBBIT_LVL5_HP_ADD
    Duration = 0
End

ModifierList HobbitLevelUpDamage5
    Category = LEVEL
    Modifier = DAMAGE_ADD HOBBIT1_LVL6_DAM_ADD; Meneldil changed original
HOBBIT_LVL6_DAM_ADD
    Modifier = HEALTH HOBBIT_LVL6_HP_ADD
    Duration = 0
End

ModifierList HobbitLevelUpDamage6
    Category = LEVEL
    Modifier = DAMAGE_ADD HOBBIT1_LVL7_DAM_ADD; Meneldil changed original
HOBBIT_LVL7_DAM_ADD
    Modifier = HEALTH HOBBIT_LVL7_HP_ADD
    Duration = 0
End

ModifierList HobbitLevelUpDamage7
    Category = LEVEL
    Modifier = DAMAGE_ADD HOBBIT1_LVL8_DAM_ADD; Meneldil changed original
HOBBIT_LVL8_DAM_ADD
    Modifier = HEALTH HOBBIT_LVL8_HP_ADD
    Duration = 0
End

ModifierList HobbitLevelUpDamage8
    Category = LEVEL
    Modifier = DAMAGE_ADD HOBBIT1_LVL9_DAM_ADD; Meneldil changed original
HOBBIT_LVL9_DAM_ADD
    Modifier = HEALTH HOBBIT_LVL9_HP_ADD
    Duration = 0
End

ModifierList HobbitLevelUpDamage9
    Category = LEVEL
    Modifier = DAMAGE_ADD HOBBIT1_LVL10_DAM_ADD; Meneldil changed original
HOBBIT_LVL10_DAM_ADD
    Modifier = HEALTH HOBBIT_LVL10_HP_ADD
    Duration = 0
End

```

### weapon.ini

```

;----- MORE REALISTIC HOBBIT DAMAGE -----
#define HOBBIT1_LVL2_DAM_ADD    5; refer to attributemodifier.ini file
#define HOBBIT1_LVL3_DAM_ADD    5; refer to attributemodifier.ini file
#define HOBBIT1_LVL4_DAM_ADD    5; refer to attributemodifier.ini file
#define HOBBIT1_LVL5_DAM_ADD   10; refer to attributemodifier.ini file
#define HOBBIT1_LVL6_DAM_ADD   10; refer to attributemodifier.ini file
#define HOBBIT1_LVL7_DAM_ADD   10; refer to attributemodifier.ini file
#define HOBBIT1_LVL8_DAM_ADD   15; refer to attributemodifier.ini file
#define HOBBIT1_LVL9_DAM_ADD   15; refer to attributemodifier.ini file
#define HOBBIT1_LVL10_DAM_ADD  20; refer to attributemodifier.ini file
;-----

```

Note: This adds 95 additional damage points by the time the hobbits reach level 10, but they still have less than any of the other heroes. Adjust as you wish.



```

;6 = Command_ToggleNoAutoAcquire; Meneldil disabled this
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
End

```

### data\ini\experiencelevels.ini

```

ExperienceLevel FaramirLevel2
    TargetNames = GondorFaramir
GondorFaramirCavalry
    RequiredExperience = FARAMIR_LVL2_EXP_NEEDED
    ExperienceAward = FARAMIR_LVL2_EXP_AWARD
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    Rank = 2
    Upgrades = Upgrade_NewAbility1; added by
Meneldil for Athelas ability
    AttributeModifiers = HeroLevelUpDamage1
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
End

```

### data\ini\fxlist.ini

```

; -----
FXList FX_FaramirKingsfoil; Meneldil reapplication of FX_AragornAthelas
Sound
    Name = AragornAthelesEffect
End
ParticleSystem
    Name = FaramirKingsfoil; AragornAthelas
    Offset = X:0.0 Y:0.0 Z:14.0
    OrientToObject = Yes
End
ParticleSystem
    Name = FaramirKingsfoil2; AragornAthelas02
    Offset = X:0.0 Y:0.0 Z:14.0
    OrientToObject = Yes
End
End

```

### data\ini\fxparticlesystem.ini

```

FXParticleSystem FaramirKingsfoil; Meneldil altered AragornAthelas
System
    Priority = CRITICAL
    ParticleName = EXEclipseBlur.tga
    Lifetime = 30 30
    SystemLifetime = 20
    SortLevel = 1
    BurstCount = 1 1
    IsEmitAboveGroundOnly = Yes
End
Color = DefaultColor
    Color2 = R:0 G:30 B:95 15; Color2 = R:102 G:75 B:19 15

```

```

    Color3 = R:0 G:0 B:0 30
End
Alpha = DefaultAlpha
    Alpha1 = 1 1 0
End
Update = DefaultUpdate
    SizeRate = 5 6
    SizeRateDamping = 0.85 0.9
    AngleZ = -7 7
    AngularRateZ = -0.1 0.1
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0.8 0.9
End
EmissionVelocity = OutwardEmissionVelocity
    Speed = -3 -3
End
EmissionVolume = SphereEmissionVolume
    IsHollow = Yes
End
Draw = DefaultDraw
End
End

```

FXParticleSystem FaramirKingsfoil2; Meneldil altered AragornAthelas02

```

System
    Priority = CRITICAL
    ParticleName = EXEclipseBlur.tga
    Lifetime = 30 30
    SystemLifetime = 20
    SortLevel = 1
    Size = 5 5
    BurstCount = 1 1
    IsEmitAboveGroundOnly = Yes
End
Color = DefaultColor
    Color2 = R:0 G:30 B:95 15; Color2 = R:102 G:75 B:19 15
    Color3 = R:0 G:0 B:0 30
End
Alpha = DefaultAlpha
    Alpha1 = 1 1 0
End
Update = DefaultUpdate
    SizeRate = 2 2
    SizeRateDamping = 0.9 0.9
    AngleZ = 1.7 1.7
    AngularRateZ = -0.1 0.1
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0.8 0.9
End
EmissionVelocity = OutwardEmissionVelocity
    Speed = 2 2
End
EmissionVolume = PointEmissionVolume
End
Draw = DefaultDraw
End
End

```



data\ini\object\goodfaction\units\gondor\faramir.ini

```
-----Start Reapplication of Athelas Spell-----  
;Meneldil added  
  
Behavior = UnpauseSpecialPowerUpgrade ModuleTag_FaramirKingsfoil  
SpecialPowerTemplate = SpecialAbilityFaramirHealing  
TriggeredBy = Upgrade_NewAbility1  
End  
  
Behavior = SpecialPowerModule ModuleTag_Athelas  
SpecialPowerTemplate = SpecialAbilityFaramirHealing  
UpdateModuleStartsAttack = Yes  
StartsPaused = Yes  
TriggerFX = FX_FaramirKingsfoil  
SetModelCondition = ModelConditionState:USER_2  
SetModelConditionTime = 2.1  
End  
  
Behavior = SpecialAbilityUpdate ModuleTag_AthelasUpdate  
SpecialPowerTemplate = SpecialAbilityFaramirHealing  
StartAbilityRange = 1.6  
UnpackTime = 1 ; Nothing to touching it  
PreparationTime = 3 ; touching it to grabbing it  
PackTime = 2096 ; whacking it to holding it nice  
AwardXPForTriggering = 0  
End  
  
Behavior = AutoHealBehavior ModuleTag_AthelasHealing  
StartsActive = No; Yes; Active, as in no upgrade required  
ButtonTriggered = Yes; But doesn't actually run on its own.  
HealingAmount = 1200  
Radius = 250  
HealOnlyOthers = No  
SingleBurst = Yes  
UnitHealPulseFX = FX_FaramirKingsfoil  
KindOf = HERO CAVALRY INFANTRY  
End
```

```
-----End Reapplication of Athelas Spell-----
```

data\ini\specialpower.ini

```
-----  
SpecialPower SpecialAbilityFaramirHealing; added by Meneldil  
Enum = SPECIAL_ATHELAS  
ReloadTime = 120000  
PublicTimer = No  
RadiusCursorRadius = 250  
InitiateAtLocationSound = AragornAthelesEffect; if on, may hear this twice  
End
```

data\lotr.str

```
CONTROLBAR:FaramirHeal  
"Kings&foil"  
END
```

```
CONTROLBAR:ToolTipFaramirHeal  
"Required: Rank 2 \n Heals nearby troops, allies, and heroes \n Left click to  
activate"  
END
```

## Summary

1. The spell does not need to be in the first Palantir slot.
2. The original command in the #6 slot has been disabled so this can be used (we'll remedy that later).
3. The spell becomes active at level 2 instead of level 1.
4. The special effect has been modified to show a blue color instead of the golden color used by Aragorn.
5. The spell heals troops in addition to heroes.
6. The healing amount and radius has been increased over the original spell.
7. The sound effect is included in the special effect and the special power. It's not necessary to do this, but it does create an overlapping sound that you may prefer.
8. The spell has been renamed "Kingsfoil" to differentiate it from the original "Athelas" spell.

Now we'll create a special ability for when Farmir is using his sword. I'm going to base it on Aragorn's Blade Master ability. Before continuing, let's review the existing code to see what we can reapply.

## Aragorn's Blade Master Code (Original)

### data\ini\attributemodifier.ini

```
ModifierList AragornBladeMaster
    Category = SPELL ; LEADERSHIP
    Modifier = ARMOR 50% ; Additive. Sum of these are subtracted
from all entries in Armor.ini
    Modifier = DAMAGE_MULT 150% ; 200% ; Multiplicitive. Damage
multiplied by this, will compound in multiple bonuses
    Duration = 25000 ; 30000 ; lasts for 30 seconds
End
```

### data\ini\commandbutton.ini

```
CommandButton Command_SpecialAbilityBladeMaster
    Command = SPECIAL_POWER
    SpecialPower = SpecialAbilityAragornBladeMaster
    TextLabel = CONTROLBAR:BladeMaster
    ButtonImage = HSARagornBladeMaster
    ButtonBorderType = ACTION
    DescriptLabel = CONTROLBAR:ToolTipBladeMaster
    InPalantir = Yes
    AutoAbility = Yes
    AutoDelay = 30.0 ; this should sync with the Aragorn's hero
mode effect time
    PresetRange = 50.0
    UnitSpecificSound = AragornVoiceBladeMaster
End
```

### data\ini\commandset.ini

```
CommandSet GondorAragornCommandSet
    1 = Command_SpecialAbilityAthelas
    2 = Command_SpecialAbilityBladeMaster
    3 = Command_AragornFakeLeadershipButton
    4 = Command_SpecialAbilityElendil
    5 = Command_SpawnOathbreakers

    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard
End
```

### data\ini\experiencelevels.ini

```
ExperienceLevel AragornLevel2
    TargetNames = GondorAragorn
    RequiredExperience = ARAGORN_LVL2_EXP_NEEDED
    ExperienceAward = ARAGORN_LVL2_EXP_AWARD
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    Rank = 2
    AttributeModifiers = HeroLevelUpDamage1
    Upgrades = Upgrade_AragornBladeMaster
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
End
```

### data\ini\fxlist.ini

```
-----
FXList FX_BladeMasterHit
    ParticleSystem
        Name = ReceiveHeroDamageFlash
        Offset = X:10.0 Y:0.0 Z:0.0
    End
    ParticleSystem
        Name = HeroHitFX
        Offset = X:10.0 Y:0.0 Z:0.0
    End
End

-----
FXList FX_BladeMasterHitOrient
    FXListAtBonePos
        FX = FX_BladeMasterHit
        BoneName = B_SwordBone
    End
End
```

### data\ini\fxparticlesystem.ini

```
FXParticleSystem BladeMaster
System
    Priority = ALWAYS_RENDER
    ParticleName = EXRing01.tga
    Lifetime = 15 15
    SortLevel = 1
    Size = 10 15
    BurstCount = 1 1
End
Color = DefaultColor
    Color2 = R:91 G:30 B:30 5
    Color3 = R:0 G:0 B:0 15
    Color4 = R:32 G:32 B:32 0
End
Update = DefaultUpdate
    SizeRate = 1 1
    SizeRateDamping = 1 1
    AngleZ = 0 7
```

```

    AngularRateZ = -0.1 0.1
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    Gravity = -0.01
    VelocityDamping = 1 1
End
EmissionVelocity = OutwardEmissionVelocity
End
EmissionVolume = SphereEmissionVolume
    Radius = 10
End
Draw = DefaultDraw
End
End

```

**data\ini\object\goodfaction\units\gondor\aragorn.ini**

*Under ART Parameters:*

```

    ModelConditionState = WEAPONSET_HERO_MODE_USER_3
        ParticleSysBone = BAT_RIBS BladeMaster FollowBone:Yes
        ParticleSysBone = BAT_HEAD AragornElendill FollowBone:Yes
    End

    ModelConditionState = WEAPONSET_HERO_MODE
        ParticleSysBone = BAT_RIBS BladeMaster FollowBone:Yes
    End

    ModelConditionState = USER_3
        ParticleSysBone = BAT_HEAD AragornElendill FollowBone:Yes
    End

    AnimationState
WEAPONSET_HERO_MODE ; Blademaster Mode
        StateName = STATE_ready
        Animation = ATKF
            AnimationName = GUAragorn_SKL.GUAragorn_ATKF
            AnimationMode = ONCE
            UseWeaponTiming = Yes
        End
        Flags = RESTART_ANIM_WHEN_COMPLETE
        FXEvent = Frame:25 Name: FX_BladeMasterHitOrient
        FXEvent = Frame:45 Name: FX_BladeMasterHitOrient
    End

```

*Under Design Parameters:*

```

    WeaponSet
        Conditions = None
        Weapon = PRIMARY GondorAragornSword
    End
    WeaponSet
        Conditions = WEAPONSET_HERO_MODE
        Weapon = PRIMARY GondorAragornHeroSword
    End

```

*Under Engineering Parameters:*

```

    Behavior = UnpauseSpecialPowerUpgrade ModuleTag_AragornBladeMasterEnabler
        SpecialPowerTemplate = SpecialAbilityAragornBladeMaster
        TriggeredBy = Upgrade_AragornBladeMaster
    End

```

```

    Behavior = SpecialPowerModule ModuleTag_AragornBladeMasterStarter
; SpecialAbility is a SpecialPower, SpecialPower is anything special
    SpecialPowerTemplate      = SpecialAbilityAragornBladeMaster
    StartsPaused              = Yes
End

    Behavior = HeroModeSpecialAbilityUpdate ModuleTag_AragornBladeMasterUpdate
; So the difference in SpecialAbility is that it takes timing from this Update,
instead of simply firing.
    SpecialPowerTemplate      = SpecialAbilityAragornBladeMaster
    HeroAttributeModifier     = AragornBladeMaster
    HeroEffectDuration        = 25000 ; 30000 ; this should sync with
the auto ability delay re-fire time in commandButtons.ini
    UnpackTime                = 1 ; instant unpack
    TriggerSound              = AragornBladeMaster
End

```

### data\ini\specialpower.ini

```

;-----
SpecialPower SpecialAbilityAragornBladeMaster
    Enum          = SPECIAL_HERO_MODE
    ReloadTime    = 120000 ;60000
    PublicTimer   = No
End

```

### data\ini\upgrade.ini

```

Upgrade Upgrade_AragornBladeMaster
    Type          = OBJECT
End

```

### data\ini\weapon.ini

```

;-----
Weapon GondorAragornSword
    LeechRangeWeapon      = Yes
    AttackRange           = 30.0
    MeleeWeapon           = Yes

    DelayBetweenShots     = ARAGORN_DELAYBETWEENSHOTS           ; time between shots,
msec
    PreAttackDelay        = ARAGORN_PREATTACKDELAY               ; 400 is sword
swing delay time before contact with target.
    PreAttackType         = PER_SHOT                             ; Do the delay
each time we attack a new target
    FireFX                = FX_GondorSwordHit
;FireFX                  = FX_IsildurSword
    FiringDuration        = ARAGORN_FIRINGDURATION              ; Duration of the sword
swing

    RadiusDamageAffects  = ENEMIES NEUTRALS ;

    DamageNugget          =                                     ; A basic Nugget
that just does damage
    Damage                = ARAGORN_DAMAGE
    DamageScalar          = 50000% NONE +RohanOathbreaker
    Radius                = 2.0 ; 0.0
    DelayTime             = 0
    DamageType            = HERO
    DamageFXType          = SWORD_SLASH
    DeathType             = NORMAL
End
;

```

```

DamageNugget                                     ; A basic Nugget
that just does damage
    Damage           = 8 ;
    DamageScalar     = 50000% NONE +RohanOathbreaker
    Radius           = 14.0
    DelayTime        = 0
    DamageType       = HERO
    DamageFXType     = SWORD_SLASH
    DeathType        = NORMAL
End
End

```

```

;-----
Weapon GondorAragornHeroSword
    LeechRangeWeapon = Yes
    AttackRange       = 20.0
    MeleeWeapon       = Yes

    DelayBetweenShots = ARAGORN_DELAYBETWEENSHOTS           ; time between shots,
msec
    PreAttackDelay    = ARAGORN_PREATTACKDELAY               ; 400 is sword
swing delay time before contact with target.
    PreAttackType     = PER_SHOT                             ; Do the delay
each time we attack a new target
    FireFX            = FX_GondorSwordHit
;FireFX              = FX_IsildurSword
    FiringDuration    = ARAGORN_FIRINGDURATION               ; Duration of the sword
swing

```

```

    RadiusDamageAffects = ENEMIES NEUTRALS

```

```

DamageNugget                                     ; A basic Nugget
that just does damage
    Damage           = 33 ; ARAGORN_DAMAGE
    DamageScalar     = 50000% NONE +RohanOathbreaker
    Radius           = 2.0 ; 10
    DelayTime        = 0
    DamageType       = HERO
    DeathType        = NORMAL
End

```

```

;
DamageNugget                                     ; A basic Nugget that just does damage
    Damage           = 7
    DamageScalar     = 50000% NONE +RohanOathbreaker
    Radius           = 14.0 ; 0.0
    DelayTime        = 0
    DamageType       = HERO
    DamageFXType     = SWORD_SLASH
    DeathType        = NORMAL
End
End

```

### data\lotr.str

```

CONTROLBAR:BladeMaster
"&Blade Master"
END

```

```

CONTROLBAR:TooltipBladeMaster
"Required: Rank 2 \n +50% Damage, +50% Armor \n left click to activate"
END

```

“Celegin” reapplied the Blade Master spell to Haldir as well in his TEA mod. Although my version is not the same, I learned some things from him, so I wish to credit him. Here is my version for Faramir.

### Faramir Blade Master

Objective: Reapply Aragorn’s Blade Master ability to Faramir

#### data\ini\attributemodifier.ini

ModifierList FaramirBladeMaster; added by Meneldil

```
Category = SPELL
Modifier = ARMOR 100%
Modifier = DAMAGE_MULT 200%
Modifier = SPEED 130%
Duration = 30000
FX       = FX_BodyGlow
```

End

#### data\ini\commandbutton.ini

CommandButton Command\_SpecialAbilityFaramirBladeMaster; added by Meneldil

```
Command           = SPECIAL_POWER
SpecialPower      = SpecialAbilityAragornBladeMaster
ButtonImage      = HSElrondElvenSword
ButtonBorderStyle = ACTION
TextLabel        = CONTROLBAR:FaramirBladeMaster
DescriptorLabel  = CONTROLBAR:ToolTipFaramirBladeMaster
InPalantir       = Yes
AutoAbility      = Yes
AutoDelay        = 30.0 ; this should sync with the Aragorn's hero mode
effect time
PresetRange      = 50.0
EnableOnModelCondition = WEAPONSET_TOGGLE_1; enable if using sword (reference
SpecialAbilityLurtzCarnage)
```

End

#### data\ini\commandset.ini

CommandSet GondorFaramirCommandSet

```
1   = Command_ToggleFaramirWeapon
2   = Command_SpecialAbilityWoundArrow
3   = Command_FaramirFakeLeadershipButton
4   = Command_ToggleMounted
5   = Command_SpecialAbilityCaptainOfGondor
6   = Command_SpecialAbilityFaramirBladeMaster; Meneldil added this
;6  = Command_SpecialAbilityFaramirHeal; Meneldil added this
;6  = Command_ToggleNoAutoAcquire
13  = Command_AttackMove
14  = Command_Stop
15  = Command_Guard
```

End

#### data\ini\experiencelevels.ini

ExperienceLevel FaramirLevel4

```
TargetNames = GondorFaramir
```

GondorFaramirCavalry

```
RequiredExperience = FARAMIR_LVL4_EXP_NEEDED
ExperienceAward    = FARAMIR_LVL4_EXP_AWARD
LevelUpFx          = FX:GandalfLevelUp1FX
;LevelUpOCL       = OCL_GandalfLevelUp1OCL
Rank               = 4
AttributeModifiers = HeroLevelUpDamage3
```

```

    Upgrades = Upgrade_NewAbility2; added by
Meneldil for Blade Master ability
; Upgrades = Upgrade_HeroRadiateFear
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
    End
End

```

### data\ini\fxlist.ini

```

; -----
; added by Meneldil for 30 second version of generic leadership buff
FXList FX_BodyGlow
    BuffNugget
        BuffType = GloriousCharge
        BuffThingTemplate = LeadershipBuff
        BuffInfantryTemplate = LeadershipBuffInfantryLv11
        IsComplexBuff = No
        BuffLifeTime = 30000
    End
    TintDrawable
        Color = R:255 G:255 B:255
        PreColorTime = 0
        PostColorTime = 0
        SustainedColorTime = 900; 30 frames/sec * 30 sec
        Frequency = 0
        Amplitude = 0
    End
    ParticleSystem; taken from FX_TheodenGloriousChargeFX
        Name = GCglowWhite
        AttachToObject = Yes
        AttachToBone = BAT_SPINE2
    End
End

```

```

; -----
FXList FX_Anduril2; Meneldil reaplication of FX_Anduril
    Sound
        Name = LurtzCrippleEffect
    End
    ParticleSystem
        Name = Anduril2; Anduril
        AttachToObject = Yes
        AttachToBone = B_SWORDBONE
    End
End

```

### data\ini\fxparticlesystem.ini

```

FXParticleSystem Anduril2; Meneldil reapplied Anduril
    System
        Priority = AREA_EFFECT
        ParticleName = EXSplatHaze.tga
        Lifetime = 20 20
        SystemLifetime = 450
        SortLevel = 1
        Size = 0 10; 0 15
    End

```



```

    BurstCount = 1 2; 2 3
    InitialDelay = 0 0; 15 15
    IsParticleUpTowardsEmitter = Yes
End
Color = DefaultColor
    Color2 = R:140 G:205 B:215 5; Color2 = R:0 G:106 B:185 5
    Color3 = R:0 G:0 B:0 20
End
Update = DefaultUpdate
    SizeRate = -0.25 -0.25
    SizeRateDamping = 1 1
    AngleZ = -7 7
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = LineEmissionVolume
    EndPoint = X:0 Y:0 Z:15
End
Draw = DefaultDraw
End
End

```

### data\ini\object\goodfaction\units\gondor\faramir.ini

*Under ART Parameters:*

```

;;----- ATTACKING -----
-----
    ; Attacking Anims [Weapon_A] (search for this text)

;-----Start of Meneldil Faramir Hero Mode (Blade Master)-----
-----
    AnimationState = FIRING_OR_PREATTACK_A
WEAPONSET_HERO_MODE ; Hero Mode
    StateName = STATE_ready
    Animation = ATKF
        AnimationName = GUFaramir_SKL.GUFaramir_ATKD
        AnimationMode = ONCE

        AnimationSpeedFactorRange = 1.5 1.5; 1.2 1.2
        UseWeaponTiming = No; Yes
    End
    Flags = RESTART_ANIM_WHEN_COMPLETE
    FXEvent = Frame:25 Name: FX_BladeMasterHitOrient
    ;FXEvent = Frame:45 Name: FX_BladeMasterHitOrient
    EnteringStateFX = FX_Anduril2
    End
;-----End of Meneldil Faramir Hero Mode (Blade Master)-----
-----

```

*Under Engineering Parameters:*

```

;-----End Reapplication of Blade Master Spell-----
; Meneldil added
    Behavior = UnpauseSpecialPowerUpgrade ModuleTag_FaramirBladeMasterEnabler
        SpecialPowerTemplate = SpecialAbilityAragornBladeMaster
        TriggeredBy = Upgrade_NewAbility2
    End

    Behavior = SpecialPowerModule ModuleTag_FaramirBladeMasterStarter

```

```

        SpecialPowerTemplate      = SpecialAbilityAragornBladeMaster
        StartsPaused              = Yes
    End

    Behavior = HeroModeSpecialAbilityUpdate ModuleTag_FaramirBladeMasterUpdate
        SpecialPowerTemplate      = SpecialAbilityAragornBladeMaster
        HeroAttributeModifier     = FaramirBladeMaster
        HeroEffectDuration        = 30000 ; this should sync with the auto
ability delay re-fire time in commandButtons.ini
        UnpackTime                = 1 ; instant unpack
    End
;-----End Reapplication of Blade Master Spell-----

```

### data\ini\weapon.ini

```

;-----
Weapon FaramirSword
    LeechRangeWeapon             = Yes
    AttackRange                  = 30.0
    MeleeWeapon                  = Yes
    FireFX                       = FX_GondorSwordHit
    DelayBetweenShots            = FARAMIR_DELAYBETWEENSHOTS ; time between shots, msec
    PreAttackDelay               = FARAMIR_PREATTACKDELAY ; sword swing delay time
before contact with target
    PreAttackType                = PER_SHOT ; Do the delay each time we attack a new target
    FiringDuration               = FARAMIR_FIRINGDURATION ; Duration of the sword swing

    DamageNugget                 ; A basic Nugget that just does damage
        Damage                   = FARAMIR_DAMAGE
        Radius                    = 0.0
        DelayTime                 = 0
        DamageType                = HERO
        DamageFXType              = SWORD_SLASH
        DeathType                 = NORMAL
    End

    MetaImpactNugget ; Meneldil reapplied from Boromir's sword code
        HeroResist                = 0.85
        ShockWaveAmount           = 25
        ShockWaveRadius           = 8
        ShockWaveArc              = 120
        ShockWaveTaperOff        = 1
    End

```

End

### data\lotr.str

```

CONTROLBAR:FaramirBladeMaster
"Bloo&d of Numenor"
END

```

```

CONTROLBAR:ToolTipFaramirBladeMaster
"Required: Rank 4 \n Temporarily increase armor rating, sword damage, and speed. \n
Right click to auto-activate or \n Left click to manually activate."
END

```

### Summary

1. Faramir receives an armor, damage, and speed boost for 30 seconds.
2. I created some new special effects for this time.
3. I chose the sword image from Elrond's DDS file.
4. The spell becomes available at level 4.

5. I did not see the need to create a hero sword for Faramir, although I did add a shockwave to his normal sword.
6. The spell will work when he is on horseback, but I did not address special effects for his sword.
7. I disabled the previously created Athelas spell to allow this to work.

Now let's provide Faramir with the ability to summon cavalry. This is a direct reapplication of other summons that we've done. For now, disable any other ability in the #6 Palantir slot.

### Faramir Summon Gondor Cavalry Units

Objective: Summon temporary Gondor Knights at Level 8 every 6 minutes. Faramir must be mounted to do this.

#### data\ini\commandbutton.ini

```
CommandButton Command_SpawnGondorKnights; added by Meneldil for Faramir
  Command          = SPECIAL_POWER
  SpecialPower     = SuperweaponGondorKnights
  ButtonImage      = SP_Gondor_Horseman
  Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND MOUNTED_ONLY
  RadiusCursorType = ROHAN_ALLIES
  CursorName       = AttackObj
  InvalidCursorName = GenericInvalid
  ButtonBorderType = ACTION
  InPalantir       = Yes
  TextLabel        = CONTROLBAR:SummonGondorKnights
  DescriptLabel    = CONTROLBAR:ToolTipSummonGondorKnights
End
```

#### data\ini\commandset.ini

```
6 = Command_SpawnGondorKnights; added by Meneldil
```

#### data\ini\experiencelevels.ini

```
ExperienceLevel FaramirLevel8
  TargetNames = GondorFaramir
GondorFaramirCavalry
  RequiredExperience = FARAMIR_LVL8_EXP_NEEDED
  ExperienceAward    = FARAMIR_LVL8_EXP_AWARD
  LevelUpFx          = FX:GandalfLevelUp1FX
  ;LevelUpOCL        = OCL_GandalfLevelUp1OCL
  Rank               = 8
  Upgrades           = Upgrade_NewAbility3; added by
Meneldil for Knight summons
  AttributeModifiers = HeroLevelUpDamage7
  SelectionDecal
    Texture = decal_hero_good
    Style   = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 40
  End
End
```

#### data\ini\object\goodfaction\units\gondor\gondorcavalry.ini

```
-----
ChildObject GondorCavalry_Summoned GondorCavalry; added by Meneldil

  IsTrainable = No
  CommandPoints = 0
```

;EquivalentTo = GondorCavalry; Disabled so that the summoned units are not selected along with their regular counterparts.

CommandSet = GenericCommandSet

Behavior = LifetimeUpdate ModuleTag\_LifetimeUpdate

MinLifetime = 120000

MaxLifetime = 180000

DeathType = FADED

End

Body = ActiveBody ModuleTag\_Body

MaxHealth = 300

End

Behavior = GrantUpgradeCreate ModuleTag\_ForgedBlades

UpgradeToGrant = Upgrade\_GondorForgedBlades

End

Behavior = GrantUpgradeCreate ModuleTag\_HeavyArmor

UpgradeToGrant = Upgrade\_GondorHeavyArmor

End

Behavior = GrantUpgradeCreate ModuleTag\_HorseShields

UpgradeToGrant = Upgrade\_GondorKnightShield

End

Behavior = SlowDeathBehavior ModuleTag\_08; changed for instant departure

DeathTypes = NONE +FADED

FadeDelay = 0

FadeTime = 0

DestructionDelay = 0

Sound = INITIAL HorseWhinny GondorKnightVoiceDisengage

GondorKnightVoiceRetreat

OCL = FINAL OCL\_FirePatriot OCL\_FireDark

End

Behavior = SlowDeathBehavior ModuleTag\_09

DeathTypes = ALL -FADED

SinkDelay = 30000

SinkRate = 0.40 ; in Dist/Sec

DestructionDelay = 40000

Sound = INITIAL GondorSoldierVoiceDie

End

End

### data\ini\object\goodfaction\units\gondor\farimir.ini

;-----Start Summon Gondor Knights-----  
---

; added by Meneldil

Behavior = UnpauseSpecialPowerUpgrade ModuleTag\_GondorKnights; actual name not important but must be unique

SpecialPowerTemplate = SuperweaponGondorKnights

TriggeredBy = Upgrade\_NewAbility3

End

Behavior = OCLSpecialPower SummonGondorKnights; actual name not important but must be unique

SpecialPowerTemplate = SuperweaponGondorKnights

OCL = OCL\_SpawnGondorKnightsEgg

TriggerFX = FX\_RohirimSummon

```

        CreateLocation          = USE_OWNER_OBJECT
        StartsPaused            = Yes
    End
;-----End Summon Gondor Knights-----
---
```

Note: This goes in the engineering parameters section with the other behaviors.

### data\ini\objectcreationlist.ini

```

;-----
; Gondor knight summons added by Meneldil for Faramir
ObjectCreationList OCL_SpawnGondorKnightsEgg
    CreateObject
        ObjectNames = GondorCavalry_Summoned
        Count = 12
        FadeIn = Yes
        FadeTime = 5000
        Disposition = SPAWN_AROUND
        DispositionAngle = 135; SpawnAround uses this as the arc between guys
        DispositionIntensity = 300; and this for distance from center
    End
End
```

Note: I added this to the bottom of the file.

### data\ini\specialpower.ini

```

;-----
SpecialPower SuperweaponGondorKnights; added by Meneldil for Faramir
    Enum = SPECIAL_SPAWN_OATHBREAKERS
    ReloadTime = 360000; 6 minutes (number in milliseconds)
    PublicTimer = No
    InitiateAtLocationSound = GondorKnightVoiceSalute
    RadiusCursorRadius = 100
End
```

Note: I added this to the bottom of the file.

### data\ini\upgrade.ini

```

Upgrade Upgrade_NewAbility3; added by Meneldil as generic upgrade tag
    Type = OBJECT
End
```

Note: I added this to the bottom of the file.

### data\lotr.str

```

CONTROLBAR:SummonGondorKnights
"Gondor &Knights"
END
```

```

CONTROLBAR:ToolTipSummonGondorKnights
"Required: Rank 8 \n Call on cavalry to aid you \n Faramir must be mounted \n Left
click to activate"
END
```

Don't want to summon cavalry? How about rangers? I've added a new special effect, changed the formation of the rangers, and provided them with a heavy armor upgrade which they normally wouldn't get. Because these are tougher than regular rangers, we'll enable this ability when Faramir reaches level 10.

### Faramir Summon Gondor Ranger Battalions

Objective: Summon temporary Gondor Rangers at Level 10 every 6 minutes.

#### data\ini\commandbutton.ini

```
CommandButton Command_SpawnGondorRangers; added by Meneldil for Faramir
  Command      = SPECIAL_POWER
  SpecialPower = SuperweaponGondorRangers
  ButtonImage  = BGArcheryRange_Rangers
  Options      = NEED_TARGET_POS CONTEXTMODE_COMMAND UNMOUNTED_ONLY
  RadiusCursorType = ARROWSTORM
  CursorName   = AttackObj
  InvalidCursorName = GenericInvalid
  ButtonBorderType = ACTION
  InPalantir   = Yes
  TextLabel    = CONTROLBAR:SummonGondorRangers
  DescriptLabel = CONTROLBAR:ToolTipSummonGondorRangers
End
```

#### data\ini\commandset.ini

```
6 = Command_SpawnGondorRangers; added by Meneldil
```

#### data\ini\experiencelevels.ini

```
ExperienceLevel FaramirLevel10
  TargetNames = GondorFaramir
GondorFaramirCavalry
  RequiredExperience = FARAMIR_LVL10_EXP_NEEDED
  ExperienceAward = FARAMIR_LVL10_EXP_AWARD
  LevelUpFx = FX:GandalfLevelUp1FX
  ;LevelUpOCL = OCL_GandalfLevelUp1OCL
  Rank = 10
  Upgrades = Upgrade_NewAbility4; added by
Meneldil for Ranger summons
  Upgrades = Upgrade_FaramirWarSpeech;
restored by Meneldil
  AttributeModifiers = HeroLevelUpDamage9
  SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 40
  End
End
```

#### data\ini\fxlist.ini

```
;-----
FXList FX_GondorSummon2; Meneldil reapplication of FX_FueltheFires
  ParticleSystem
    Name = BlueAura; FueltheFiresEmbers
    Offset = X:0.0 Y:0.0 Z:0.0
  End
End
```

## data\ini\fxparticlesystem.ini

FXParticleSystem BlueAura; Meneldil reapplied FueltheFiresEmbers

System

Priority = ALWAYS\_RENDER  
ParticleName = EXGimliAxeSpecial.tga  
Lifetime = 30 30  
SortLevel = 1  
Size = 10 15  
BurstCount = 2 2  
IsGroundAligned = Yes  
IsParticleUpTowardsEmitter = Yes  
SystemLifetime = 120

End

Color = DefaultColor

Color2 = R:50 G:100 B:150 10; Meneldil changed original R:45 G:24 B:6 10  
Color3 = R:0 G:0 B:0 20

End

Update = DefaultUpdate

SizeRate = 15 15  
SizeRateDamping = 0.8 0.5  
AngleZ = 0 7  
AngularRateZ = -0.4 0.4  
AngularDamping = 0.9 0.95

End

Physics = DefaultPhysics

VelocityDamping = 0.8 0.9

End

EmissionVelocity = CylindricalEmissionVelocity

Radial = 0 5

End

EmissionVolume = CylinderEmissionVolume

IsHollow = Yes

Radius = 100; Meneldil changed original 75

Offset = X:0 Y:0 Z:5

End

Draw = DefaultDraw

End

End

## data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini

-----

;added by Meneldil

ChildObject GondorRangerHorde\_Summoned GondorRangerHorde

SelectPortrait = UPGondor\_Ranger  
DisplayName = OBJECT:HordeGondorRanger  
IsTrainable = No  
CommandPoints = 0  
CommandSet = GenericCommandSet  
EquivalentTo = GondorRangerHorde\_Summoned

Behavior = HordeContain ModuleTag\_HordeContain

ObjectStatusOfContained =

InitialPayload = GondorRanger\_Summoned 6

Slots = 6

PassengerFilter = NONE +INFANTRY

ShowPips = No

ThisFormationIsTheMainFormation = Yes ;Used to determine which

armorset to use (and anything else we want!)

RandomOffset=X:0 Y:0

```
        ; Positions for 6
        RankInfo = RankNumber:1 UnitType:GondorRanger_Summoned Position:X:0
Y:10 Position:X:0 Y:-10 Position:X:-15 Y:20 Position:X:-15 Y:-20 Position:X:-30
Y:10 Position:X:-30 Y:-10
```

```
        RanksToReleaseWhenAttacking = 1
        MeleeAttackLeashDistance = 25; How far the hordes can move from the
center of the horde when melee attacking.
    End
```

```
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime          = 90000
        MaxLifetime          = 150000
        DeathType            = FADED
    End
```

```
    Behavior = GrantUpgradeCreate ModuleTag_FireArrows
        UpgradeToGrant = Upgrade_GondorFireArrows
    End
```

```
    Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
        UpgradeToGrant = Upgrade_GondorHeavyArmor
    End
```

End

### data\ini\object\goodfaction\units\gondor\faramir.ini

```
-----Start Summon Gondor Rangers-----
---
; added by Meneldil
    Behavior = UnpauseSpecialPowerUpgrade ModuleTag_GondorRangers; actual name not
important but must be unique
        SpecialPowerTemplate = SuperweaponGondorRangers
        TriggeredBy = Upgrade_NewAbility4
    End

    Behavior = OCLSpecialPower SummonGondorRangers; actual name not important but
must be unique
        SpecialPowerTemplate = SuperweaponGondorRangers
        OCL                   = OCL_SpawnGondorRangersEgg
        TriggerFX              = FX_GondorSummon2
        CreateLocation         = USE_OWNER_OBJECT
        StartsPaused           = Yes
    End
-----End Summon Gondor Rangers-----
---
```

Note: This goes in the engineering parameters section with the other behaviors.

### data\ini\object\goodfaction\units\gondor\gondorinfantry.ini

```
-----
;;-----
ChildObject GondorRanger_Summoned GondorRanger; added by Meneldil

    SelectPortrait          = UPGondor_Ranger
    CommandSet              = GenericCommandSet
    IsTrainable             = No
    CommandPoints           = 0

    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime          = 90000
```



```

        MaxLifetime          = 150000
        DeathType            = FADED
    End

    Body = ActiveBody ModuleTag_Body
        CheerRadius          = EMOTION_CHEER_RADIUS
        MaxHealth             = 300
    End

    Behavior = GrantUpgradeCreate ModuleTag_FireArrows
        UpgradeToGrant = Upgrade_GondorFireArrows
    End

    Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
        UpgradeToGrant = Upgrade_GondorHeavyArmor
    End

    Behavior = SlowDeathBehavior ModuleTag_05
        DeathTypes = ALL -KNOCKBACK -FADED
        SinkDelay = 30000
        SinkRate = 0.20
        DestructionDelay = 30000
        Sound = INITIAL RangerVoiceDie
    End

    Behavior = SlowDeathBehavior ModuleTag_07
        ; Same as normal death, but no sound (sound already played by SoundImpact =
    ... )
        DeathTypes = NONE +KNOCKBACK +FADED
        FadeDelay = 0
        FadeTime = 0
        DestructionDelay = 0
        Sound = INITIAL ImpactRainOffFire ManCheerSingles RangerVoiceDisengage
    RangerVoiceRetreat
        OCL = INITIAL OCL_FireGreen OCL_FireRed OCL_FireGold
    End

End

```

### data\ini\objectcreationlist.ini

```

; -----
; Gondor Ranger summons added by Meneldil for Faramir
ObjectCreationList OCL_SpawnGondorRangersEgg
    CreateObject
        ObjectNames = GondorRangerHorde_Summoned
        Count = 2
        FadeIn = Yes
        FadeTime = 4000
        Disposition = SPAWN_AROUND
        DispositionAngle = 180; SpawnAround uses this as the arc between guys
        DispositionIntensity = 200; and this for distance from center
    End
End

```

Note: I added this to the bottom of the file.

### data\ini\specialpower.ini

```

; -----
SpecialPower SuperweaponGondorRangers; added by Meneldil for Faramir
    Enum = SPECIAL_SPAWN_OATHBREAKERS

```

```
ReloadTime           = 360000; 6 minutes (number in milliseconds)
PublicTimer          = No
InitiateAtLocationSound = RangerVoiceSalute
RadiusCursorRadius   = 100
End
```

Note: I added this to the bottom of the file.

### data\ini\upgrade.ini

```
Upgrade Upgrade_NewAbility3; added by Meneldil as generic upgrade tag
      Type = OBJECT
End
```

Note: I added this to the bottom of the file.

### data\lotr.str

```
CONTROLBAR:SummonGondorRangers
"Gondor Ra&ngers"
END
```

```
CONTROLBAR:ToolTipSummonGondorRangers
"Required: Rank 10 \n Call on Rangers to aid you \n Faramir must be on foot \n Left
click to activate"
END
```

## Restoring Faramir's War Speech Ability (or at least a reasonable facsimile)

Did you notice that Faramir was supposed to have a spell at level 10 that when he is on horseback, he provides a leadership bonus to himself and nearby cavalry whilst giving a speech? The idea is very similar to Theoden's Glorious Charge ability. Therefore, I'll reapply it here for Faramir. Here's my version of it. It becomes active at level 8 (instead of level 10). The new codes are listed below.

### data\ini\attributemodifier.ini

```
ModifierList FaramirGloriousCharge; added by Meneldil
    Category = SPELL
    Modifier = ARMOR 100%; Additive, high value has same effect as
invulnerability
    Modifier = DAMAGE_MULT 125%
    Modifier = SPEED 120%; Additive
    Modifier = CRUSH_DECELERATE 0%; Multiplicative. Zero would be no
deceleration.
    Duration = 20000; if you mess with this value, you must also change the times
in FX_TheodenGloriousChargeFX
End
```

### data\ini\commandbutton.ini

```
CommandButton Command_SpecialAbilityFaramirGloriousCharge; added by Meneldil
    Command = SPECIAL_POWER
    Options = MOUNTED_ONLY
    SpecialPower = SpecialAbilityFaramirGloriousCharge
    ButtonImage = HPTheodenGloriousCharge
    RadiusCursorType = TRAINING
    ButtonBorderType = ACTION
    TextLabel = CONTROLBAR:FaramirGloriousCharge
    DescriptLabel = CONTROLBAR:ToolTipFaramirGloriousCharge
    InPalantir = Yes
    AutoAbility = Yes
    PresetRange = 160.0
    UnitSpecificSound = FaramirKnightVoiceSpeech
End
```

### data\ini\commandset.ini

```
6 = Command_SpecialAbilityFaramirGloriousCharge; added by Meneldil
```

### data\ini\experiencelevels.ini

```
ExperienceLevel FaramirLevel8
    TargetNames = GondorFaramir
GondorFaramirCavalry
    RequiredExperience = FARAMIR_LVL8_EXP_NEEDED
    ExperienceAward = FARAMIR_LVL8_EXP_AWARD
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    Rank = 8
    Upgrades = Upgrade_FaramirWarSpeech;
relocated & restored by Meneldil
    AttributeModifiers = HeroLevelUpDamage7
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 40
End
```

End

### data\ini\object\goodfaction\units\gondor\faramir.ini

```
-----Start Faramir Glorious Charge-----  
---  
;added by Meneldil  
  Behavior = UnpauseSpecialPowerUpgrade ModuleTag_FaramirGloriousChargeEnabler  
    SpecialPowerTemplate = SpecialAbilityFaramirGloriousCharge  
    TriggeredBy = Upgrade_FaramirWarSpeech  
  End  
  Behavior = SpecialPowerModule ModuleTag_FaramirGloriousChargeUpdate  
    SpecialPowerTemplate      = SpecialAbilityFaramirGloriousCharge  
    UpdateModuleStartsAttack  = Yes  
    StartsPaused              = Yes  
    AttributeModifier         = FaramirGloriousCharge  
    AttributeModifierRange    = 300  
    AttributeModifierAffectsSelf = Yes  
    AttributeModifierAffects  = ANY +CAVALRY +HERO  
    AttributeModifierFX       = FX_TheodenGloriousChargeFX  
  End  
  Behavior = SpecialAbilityUpdate ModuleTag_GloriousChargeAnimation  
    UnpackTime                = 1000  
    UnpackingVariation        = 1  
    SpecialPowerTemplate      = SpecialAbilityFaramirGloriousCharge  
    PreparationTime           = 0  
    PersistentPrepTime        = 0  
    PackTime                  = 1330  
  End  
-----End Faramir Glorious Charge-----  
---
```

(this is placed in the Engineering parameters)

### data\ini\specialpower.ini

```
-----  
SpecialPower SpecialAbilityFaramirGloriousCharge  
  Enum          = SPECIAL_TRIGGER_ATTRIBUTE_MODIFIER  
  ReloadTime    = 80000 ; in milliseconds  
  PublicTimer   = No  
  InitiateAtLocationSound = GondorSoldierCelebratingLarge  
End
```

### data\ini\voice.ini

```
AudioEvent FaramirKnightVoicespeech  
  Sounds      = GUFarKn_voispea GUFarKn_voispeb GUFarKn_voispec  
  Volume      = UNIT_RESPONSE_VOLUME  
  MinVolume   = UNIT_RESPONSE_MINVOLUME  
  Delay       = 500 500  
  Type        = world shrouded everyone voice; Meneldil changed original world  
player voice  
  SubmixSlider = voice  
End
```

### data\lotr.str

```
CONTROLBAR:FaramirGloriousCharge  
"Lead &the Charge"  
END
```

```
CONTROLBAR:ToolTipFaramirGloriousCharge
```

"Required: Rank 8 \n Faramir and nearby cavalry gain +20% speed, +25% damage, +100% armor, and no slowing down when trampling.  
\n Faramir must be mounted to use ability. \n Left click to activate."  
END

### Creating a Second Command Set for Faramir

We now have at least 10 commands we'd like to be able to have command buttons for. There is a forum post that I wish to reference: <http://forums.revora.net/topic/21907-commandset-switch-bug/>. It provides for multiple command sets. Here is my version for Faramir. I have made it so that it can be readily applied to other heroes if desired.

#### data\ini\commandbutton.ini

CommandButton Command\_CommandSet1; added by Meneldil for double command set

```
Command      = OBJECT_UPGRADE
Upgrade      = Upgrade_CommandSet1
ButtonImage  = Set1
ButtonBorderType = UPGRADE
InPalantir   = Yes
TextLabel    = CONTROLBAR:CommandSet1
DescriptLabel = CONTROLBAR:ToolTipCommandSet1
```

End

CommandButton Command\_CommandSet2; added by Meneldil for double command set

```
Command      = OBJECT_UPGRADE
Upgrade      = Upgrade_CommandSet2
ButtonImage  = Set2
ButtonBorderType = UPGRADE
InPalantir   = Yes
TextLabel    = CONTROLBAR:CommandSet2
DescriptLabel = CONTROLBAR:ToolTipCommandSet2
```

End

#### data\ini\commandset.ini

CommandSet FaramirCommandSet1; added by Meneldil

```
1 = Command_ToggleFaramirWeapon
2 = Command_SpecialAbilityWoundArrow
3 = Command_SpecialAbilityFaramirHeal; added by Meneldil
4 = Command_SpecialAbilityFaramirBladeMaster; added by Meneldil
5 = Command_FaramirFakeLeadershipButton
6 = Command_CommandSet2; added by Meneldil
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
```

End

CommandSet FaramirCommandSet2; added by Meneldil

```
1 = Command_ToggleMounted
2 = Command_SpecialAbilityCaptainOfGondor
3 = Command_SpecialAbilityFaramirGloriousCharge
; 4 = Command_SpawnGondorKnights; added by Meneldil
4 = Command_SpawnGondorRangers; added by Meneldil
5 = Command_ToggleNoAutoAcquire
6 = Command_CommandSet1; added by Meneldil
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
```

End

**data\ini\mappedimages\aptimages\myimages.ini**

MappedImage Set1  
Texture = wb\_light1.tga  
TextureWidth = 256  
TextureHeight = 256  
Coords = Left:0 Top:0 Right:256 Bottom:256  
Status = NONE  
End

MappedImage Set2  
Texture = wb\_light2.tga  
TextureWidth = 256  
TextureHeight = 256  
Coords = Left:0 Top:0 Right:256 Bottom:256  
Status = NONE  
End

**data\ini\object\goodfaction\units\gondor\faramir.ini**

Under Design Paramters:  
;CommandSet = GondorFaramirCommandSet; disabled by Meneldil  
CommandSet = FaramirCommandSet1; added by Meneldil

Under Engineering Parameters:

;-----Start Double Command Set-----  
---  
; added by Meneldil  
Behavior = CommandSetUpgrade ModuleTag\_CommandSetUpgrade1  
TriggeredBy = Upgrade\_CommandSet1  
RemovesUpgrades = Upgrade\_CommandSet2  
CommandSet = FaramirCommandSet1  
End  
  
Behavior = CommandSetUpgrade ModuleTag\_CommandSetUpgrade2  
TriggeredBy = Upgrade\_CommandSet2  
RemovesUpgrades = Upgrade\_CommandSet1  
CommandSet = FaramirCommandSet2  
End  
  
Behavior = ProductionUpdate ProductionUpdateModuleTag  
GiveNoXP = Yes  
End  
;-----End Double Command Set-----  
---

**data\ini\upgrade.ini**

Upgrade Upgrade\_CommandSet1; added by Meneldil for double command sets  
Type = OBJECT  
End

Upgrade Upgrade\_CommandSet2; added by Meneldil for double command sets  
Type = OBJECT  
End

**data\lotr.str**

CONTROLBAR:CommandSet1  
"Primary A&bilities"  
END

CONTROLBAR:ToolTipTCommandSet1  
"Go back to the first menu"

END

```
CONTROLBAR:CommandSet2  
"Secondary Abilities"  
END
```

```
CONTROLBAR:ToolTipCommandSet2  
"View additional abilities"  
END
```

### Summary

1. This is a simple double command set. Check out “Grim’s” Hero Mod at <http://www.the3rdage.net/item-435?addview> for an impressive use of command set switching.
2. I used existing textures (numbers 1 and 2) for the command set button images (no asset.dat update).
3. I tried to keep the code generic enough that it can easily be reapplied to other heroes. The command button, upgrade, and string codes can be reused as is.
4. I added new upgrade codes for clarity and because I didn’t want a potential conflict with one of the “NewAbility” codes I created previously.
5. The original command set needs to be replaced with the primary command set. There is no reason to delete or comment out the original hero command set.
6. Be sure the Production Update behavior is included or it won’t work (refer to the referenced post – this is an important piece of information from “Hostile”).
7. Also from the post, you’ll see that there is problem if a pressable and non-pressable button occupy the same relative Palantir slot. When switching, the pressable button may become unpressable. Here are the ways to deal with this:
  - a. Don’t use non-pressable buttons if possible.
  - b. If you have to use a non-pressable button, try to use an even number and have them occupy the same relative slot position.
  - c. If you have to use an odd number of non-pressable buttons, don’t have a corresponding ability in the other command set.
  - d. If you can’t leave the relative space empty in the other command set, you can deselect your hero and then reselect it in order to restore the intended capability.
  - e. As a last resort, try making your non-pressable button into a pressable one.
8. Auto-activate may visually appear not to work when you switch command sets, but it does once the ability is called on. On the other hand, an ability that shouldn’t be auto-activated may appear to be if it corresponds with an ability that can be auto-activated and you’ve enabled that ability. For example, if you auto-activate Faramir’s Wounding Arrow and switch command sets, his Captain of Gondor ability will appear to be auto-activated. This is only a visual bug.

## Modifying Faramir's Passive Leadership

### data\ini\attributemodifier.ini

ModifierList FaramirPassiveLeadership

```
Category = LEADERSHIP
Modifier = ARMOR 50% ; Additive
Modifier = RESIST_FEAR 100%
Modifier = DAMAGE_MULT 120%; Multiplicative (restored by Meneldil)
Modifier = EXPERIENCE 300% ; Multiplicative (restored by Meneldil)
Modifier = SPEED 110% ; added by Meneldil
Duration = 3000 ; Matches RefreshRate of giving module
FX = FX_GenericLeadershipLvl1
FX2 = FX_GenericLeadershipLvl2
FX3 = FX_GenericLeadershipLvl3
MultiLevelFX = Yes
```

End

### data\ini\object\goodfaction\units\gondor\faramir.ini

```
Behavior = AttributeModifierAuraUpdate ModuleTag_FaramirLeadership
StartsActive = No ;If no, requires upgrade to turn on.
BonusName = FaramirPassiveLeadership
TriggeredBy = Upgrade_FaramirLeadership
RefreshDelay = 2500
Range = 200; Meneldil changed original 150 ; 200
ObjectFilter = ANY +INFANTRY +CAVALRY -HERO -STRUCTURE -
BASE_FOUNDATION; enable heroes if desired
End
```

### data\lotr.str

CONTROLBAR:ToolTipFaramirLeadership

"Required: Rank 5 \n Fear invulnerability, +50% Armor, +20% Damage, +10% speed, and 3x Experience to nearby troops and heroes \n Passive ability"

END

Note: I modified the existing text.

## Adjusting Faramir's Captain of Gondor

Provide a larger experience boost over a wider range. In Faramir's INI file, under "KINGS FAVOUR"

```
Experience = 300; Meneldil changed original 50
RadiusEffect = 200; Meneldil changed original 150
```

## Miscellaneous Faramir Adjustments

Add a new bounty value in Faramir's design parameters. The value was referenced previously.

```
BountyValue = GONDOR_FARAMIR_BOUNTY_VALUE_NEW; Meneldil appended "_NEW"
```

In the lotr.str file, I changed Faramir's recruit text to

CONTROLBAR:GondorFaramirRecruit

"Hero Unit. Recruit the future Steward of Gondor, versatile with bow, sword, or horse."

END



## Provide Faramir the Capability to Transport a Hobbit on Horseback

### data\ini\commandbutton.ini

CommandButton Command\_HeroMount; added by Meneldil (reference  
Command\_SpecialAbilityGrabPassenger)

```
Command          = SPECIAL_POWER
SpecialPower     = SpecialAbilityGrabPassenger
Options          = NEED_TARGET_ALLY_OBJECT OPTION_ONE
ButtonImage      = BRHeroicStatue
CursorName       = EnterFriendly
InvalidCursorName = EnterAggressive
ButtonBorderStyle = ACTION
TextLabel        = CONTROLBAR:HeroMount
DescriptLabel    = CONTROLBAR:ToolTipHeroMount
InPalantir       = Yes
```

End

CommandButton Command\_HeroDismount; added by Meneldil (reference  
Command\_TransportEvacuate)

```
Command          = EVACUATE
ButtonImage      = HSFaramirMountDismount
ButtonBorderStyle = SYSTEM
TextLabel        = CONTROLBAR:HeroDismount
DescriptLabel    = CONTROLBAR:ToolTipHeroDismount
InPalantir       = Yes
```

End

### data\ini\commandset.ini

CommandSet FaramirCommandSet2; added by Meneldil

```
1 = Command_ToggleMounted
2 = Command_SpecialAbilityCaptainOfGondor
3 = Command_SpecialAbilityFaramirGloriousCharge
; 4 = Command_SpawnGondorKnights; added by Meneldil
4 = Command_SpawnGondorRangers; added by Meneldil
5 = Command_ToggleNoAutoAcquire
6 = Command_CommandSet1; added by Meneldil
7 = Command_HeroMount; added by Meneldil
8 = Command_HeroDismount; added by Meneldil
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
```

End

Note that the Dismount command does not show up in Faramir's Palantir because I chose a slot number greater than 6. All you have to do is press the shortcut letter key ("D" in this case) to dismount and "P" to pick up.

### data\ini\object\goodfaction\units\gondor\faramir.ini

; Meneldil note: The following block was originally commented out.

; Uncommenting it allows a hobbit to ride, but Faramir would have to dismount so the hobbit can dismount.

; So that Faramir doesn't have to dismount, I added a new command set (HorseMountCommandSet)

; to allow the hobbit to dismount by pressing the letter D.

```
Behavior = TransportContain ModuleTag_TransportContainTag
ObjectStatusOfContained = CAN_ATTACK; Meneldil changed original
```

UNSELECTABLE

```
PassengerFilter = NONE +HOBBIT
Slots = 1
ShowPips = No
AllowEnemiesInside = No
```

```

    AllowNeutralInside = Yes
    AllowAlliesInside  = Yes
    DamagePercentToUnits = 0%
    TypeOneForWeaponSet      = HOBBIT
    PassengerBonePrefix      = PassengerBone:PASSENGERBONE    KindOf:HOBBIT
    EjectPassengersOnDeath = Yes
    KillPassengersOnDeath = No; added by Meneldil
    ConditionForEntry =      ModelConditionState: MOUNTED
End

```

### **data\lotr.str**

```

CONTROLBAR:ToolTipFaramirKnightRanger
"Required: Rank 3 \n Switch between Knight and Ranger modes. \n
Transport a hobbit on horseback. \n Press P to pick up. \n Press D to dismount. \n
Left click to activate."
END

CONTROLBAR:HeroDismount
"&Dismount"
END

CONTROLBAR:ToolTipHeroDismount
"Jump off the horse"
END

CONTROLBAR:HeroMount
"&Pick Up Ally"
END

CONTROLBAR:ToolTipHeroMount
"Provide a speedy ride"
END

```

The “FaramirKnightRanger” entry was already present; I modified the text. The “Dismount” entries are new.

Finally, be sure that the following is present in Sam’s and Frodo’s hero files (Merry & Pippin already have this):

```

    WeaponSet; added by Meneldil
    Conditions = CONTAINED
    Weapon = PRIMARY    HobbitRockThrowTreebeard
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
End

```

This is so they can throw rocks when on horseback.

That completes my modifications for Faramir. Feel free to add or modify for yourself. We’ll now turn to Boromir.



## data\lotr.str

```
CONTROLBAR:ToolTipHornofGondor
"Stuns enemies with terror \n Left click to activate"
END
```

## Boromir Blade Master (Reapplication of Aragorn's Blade Master Ability)

Refer to "Adding BladeMaster to Boromir" <http://www.the3rdage.net/item-90?addview> that "GothmogtheOrc" created. Also review Aragorn's Blade Master ability that was shown previously in this document. Here is my version of Blade Master for Boromir. It will become available at level 2. Note that I'm reusing a special effect I created earlier for Faramir.

## data\ini\attributemodifier.ini

```
ModifierList BoromirBladeMaster; added by Meneldil
    Category = SPELL
    Modifier = ARMOR 50%; Additive
    Modifier = DAMAGE_MULT 150%; Multiplicative
    Modifier = SPEED 130%; Multiplicative
    Duration = 30000; lasts for 30 seconds (matches HeroEffectDuration)
End
```

## data\ini\commandbutton.ini

```
CommandButton Command_SpecialAbilityBoromirBladeMaster; added by Meneldil
    Command = SPECIAL_POWER
    SpecialPower = SpecialAbilityAragornBladeMaster
    ButtonImage = HSBorimirLastStand; HSAragornBladeMaster
    ButtonBorderStyle = ACTION
    TextLabel = CONTROLBAR:BoromirBladeMaster
    DescriptLabel = CONTROLBAR:ToolTipBoromirBladeMaster
    InPalantir = Yes
    AutoAbility = Yes
    AutoDelay = 30.0 ; this should sync with the Aragorn's hero mode
effect time
    PresetRange = 50.0
    UnitSpecificSound = BoromirVoiceAttackCharge
End
```

## data\ini\commandset.ini

```
CommandSet BoromirCommandSet
    1 = Command_SpecialAbilityHornOfGondor; relocated by Meneldil
    2 = Command_SpecialAbilityBoromirBladeMaster; added by Meneldil
    3 = Command_SpecialAbilityBoromirForGondor; relocated by Meneldil
    4 = Command_SpecialAbilityCaptainOfGondorBoromir; relocated by Meneldil
;
    3 = Command_BoromirLastStandFakeButton
    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard
End
```

## data\ini\experiencelevels.ini

```
ExperienceLevel BoromirLevel2
    TargetNames = GondorBoromir
    RequiredExperience = BOROMIR_LVL2_EXP_NEEDED
    ExperienceAward = BOROMIR_LVL2_EXP_AWARD
    AttributeModifiers = HeroLevelUpDamage1
    Rank = 2
```

```

    Upgrades = Upgrade_NewAbility1; added by
Meneldil for blade master
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 1
    End
END

```

### data\ini\fxlist.ini

```

; -----
FXList FX_Anduril2; Meneldil reapplication of FX_Anduril
Sound
    Name = LurtzCrippleEffect
End
ParticleSystem
    Name = Anduril2; Anduril
    AttachToObject = Yes
    AttachToBone = B_SWORDBONE
End
End

```

```

; -----
FXList FX_BoromirBladeMaster; Meneldil added
ParticleSystem
    Name = BoromirBladeMaster
    AttachToObject = Yes
    AttachToBone = BAT_RIBS
End
End

```

### data\ini\fxparticlesystem.ini

```

FXParticleSystem Anduril2; Meneldil reapplied Anduril
System
    Priority = AREA_EFFECT
    ParticleName = EXSplatHaze.tga
    Lifetime = 20 20
    SystemLifetime = 450
    SortLevel = 1
    Size = 0 10; 0 15
    BurstCount = 1 2; 2 3
    InitialDelay = 0 0; 15 15
    IsParticleUpTowardsEmitter = Yes
End
Color = DefaultColor
    Color2 = R:140 G:205 B:215 5; Color2 = R:0 G:106 B:185 5
    Color3 = R:0 G:0 B:0 20
End
Update = DefaultUpdate
    SizeRate = -0.25 -0.25
    SizeRateDamping = 1 1
    AngleZ = -7 7
    AngularDamping = 1 1
End
Physics = DefaultPhysics

```

```

    VelocityDamping = 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = LineEmissionVolume
    EndPoint = X:0 Y:0 Z:15
End
Draw = DefaultDraw
End
End

```

```

FXParticleSystem BoromirBladeMaster; Meneldil changed original BladeMaster color
System
    Priority = ALWAYS_RENDER
    ParticleName = EXRing01.tga
    Lifetime = 15 15
    SortLevel = 1
    Size = 10 15
    BurstCount = 1 1
End
Color = DefaultColor
    Color2 = R:0 G:100 B:200 5; R:91 G:30 B:30 5
    Color3 = R:0 G:0 B:0 15
    Color4 = R:32 G:32 B:32 0
End
Update = DefaultUpdate
    SizeRate = 1 1
    SizeRateDamping = 1 1
    AngleZ = 0 7
    AngularRateZ = -0.1 0.1
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    Gravity = -0.01
    VelocityDamping = 1 1
End
EmissionVelocity = OutwardEmissionVelocity
End
EmissionVolume = SphereEmissionVolume
    Radius = 10
End
Draw = DefaultDraw
End
End

```

**data\ini\object\goodfaction\units\gondor\boromir.ini**

*Under ART Parameters:*

```

;-----Start of Meneldil Boromir Hero Mode (Blade Master)-----
-----
    ModelConditionState = WEAPONSET_HERO_MODE USER_3
        ParticleSysBone = BAT_RIBS BoromirBladeMaster FollowBone:Yes
        ParticleSysBone = BAT_HEAD AragornElendill FollowBone:Yes
    End

    ModelConditionState = WEAPONSET_HERO_MODE
        ParticleSysBone = BAT_RIBS BoromirBladeMaster FollowBone:Yes
    End

    ModelConditionState = USER_3
        ParticleSysBone = BAT_HEAD AragornElendill FollowBone:Yes
    End

```

```

        AnimationState                = FIRING_OR_PREATTACK_A
WEAPONSET_HERO_MODE ; Blademaster Mode
        StateName                    = STATE_ready
        Animation                    = GUBoromir_ATD1; ATKF
            AnimationName            = GUBoromir_SKL.GUBoromir_ATKB;
GUAragorn_SKL.GUAragorn_ATKF
        AnimationMode                = ONCE
        UseWeaponTiming              = Yes
    End
    Flags                            = RESTART_ANIM_WHEN_COMPLETE
    FXEvent                          = Frame:25 Name:
FX_BladeMasterHitOrient
    FXEvent                          = Frame:45 Name:
FX_BladeMasterHitOrient
    EnteringStateFX                 = FX_Anduril2
    End
;-----End of Meneldil Boromir Hero Mode (Blade Master)-----
-----

```

*Under Engineering Parameters:*

```

;-----Start Reapplication of Blade Master Spell-----
; Meneldil added
    Behavior = UnpauseSpecialPowerUpgrade ModuleTag_BoromirBladeMasterEnabler
        SpecialPowerTemplate = SpecialAbilityAragornBladeMaster
        TriggeredBy          = Upgrade_NewAbility1
    End

    Behavior = SpecialPowerModule ModuleTag_BoromirBladeMasterStarter
        SpecialPowerTemplate = SpecialAbilityAragornBladeMaster
        StartsPaused         = Yes
    End

    Behavior = HeroModeSpecialAbilityUpdate ModuleTag_BoromirBladeMasterUpdate
        SpecialPowerTemplate = SpecialAbilityAragornBladeMaster
        HeroAttributeModifier = BoromirBladeMaster
        HeroEffectDuration    = 30000; matches attributemodifier.ini value
        UnpackTime            = 1; instant unpack
        TriggerSound          = AragornBladeMaster
    End
;-----End Reapplication of Blade Master Spell-----

```

data\ini\specialpower.ini (already existing)

```

;-----
SpecialPower SpecialAbilityAragornBladeMaster
    Enum          = SPECIAL_HERO_MODE
    ReloadTime    = 120000; 60000
    PublicTimer   = No
End

```

data\lotr.str

```

CONTROLBAR:BoromirBladeMaster
"Champion o&f Gondor"
END

```

```

CONTROLBAR:ToolTipBoromirBladeMaster
"Required: Rank 2 \n Temporarily increase armor rating, sword damage, and speed. \n
Right click to auto-activate or \n Left click to manually activate."
END

```

You may not be aware that the game had a design option to create individual banner carriers for upgrading troops to level 2 versus buying the upgrade directly. You could add these as purchasable units at the barracks, but I plan to have them be summoned by Boromir once he reaches level 3, as follows.

### Summon Gondor Banner Carriers

Objective: Provide Boromir the ability to summon 4 banner carriers every 6 minutes at level 3.

#### data\ini\commandbutton.ini

CommandButton Command\_BannerCarrierUpgrade; Meneldil added

```
Command           = SPECIAL_POWER
Options           = OK_FOR_MULTI_SELECT
TextLabel         = CONTROLBAR:BannerGoCombine
DescribeLabel    = CONTROLBAR:ToolTipBannerGoCombine
SpecialPower      = SpecialAbilityGiveUpgradeNearest
ButtonImage       = UCPorter_DeliverUpgrade
ButtonBorderStyle = ACTION
InPalantir        = Yes
```

End

CommandButton Command\_SpawnGondorBannerCarriers; added by Meneldil for Boromir

```
Command           = SPECIAL_POWER
SpecialPower      = SuperweaponSpawnGondorBannerCarriers
ButtonImage       = BGBlacksmith_SilverTreeBanner
Options           = NEED_TARGET_POS CONTEXTMODE_COMMAND
RadiusCursorType = CAPTAIN_OF_GONDOR
CursorName        = AttackObj
InvalidCursorName = GenericInvalid
ButtonBorderStyle = ACTION
TextLabel         = CONTROLBAR:BannerCarriers
DescribeLabel    = CONTROLBAR:ToolTipBannerCarriers
InPalantir        = Yes
```

End

#### data\ini\commandset.ini

CommandSet BoromirCommandSet

```
1 = Command_SpecialAbilityHornOfGondor; relocated by Meneldil
2 = Command_SpecialAbilityBoromirBladeMaster; added by Meneldil
3 = Command_SpawnGondorBannerCarriers; added by Meneldil
4 = Command_SpecialAbilityBoromirForGondor; relocated by Meneldil
5 = Command_SpecialAbilityCaptainOfGondorBoromir; relocated by Meneldil
; 3 = Command_BoromirLastStandFakeButton
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
```

End

CommandSet GondorBannerCommandSet

```
1 = Command_Guard
;2 = Command_DeliverUpgrade; Meneldil disabled since this does not work
2 = Command_BannerCarrierUpgrade; Meneldil added
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
```

End

#### data\ini\experiencelevels.ini

ExperienceLevel BoromirLevel3

```
TargetNames           = GondorBoromir
RequiredExperience     = BOROMIR_LVL3_EXP_NEEDED
ExperienceAward        = BOROMIR_LVL3_EXP_AWARD
```



```

AttributeModifiers = HeroLevelUpDamage2
Rank = 3
Upgrades = Upgrade_NewAbility2; added by
Meneldil for banner carriers
LevelUpFx = FX:GandalfLevelUp1FX
;LevelUpOCL = OCL_GandalfLevelUp1OCL
;Upgrades = Upgrade_BoromirLastStand
SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 1
End
END

```

### data\ini\object\goodfaction\units\gondor\boromir.ini

```

;-----Start Gondor Banner Carriers-----
; added by Meneldil
    Behavior = UnpauseSpecialPowerUpgrade UnpauseBannerCarriers
        SpecialPowerTemplate = SuperweaponSpawnGondorBannerCarriers
        TriggeredBy = Upgrade_NewAbility2
    End
    Behavior = OCLSpecialPower GondorBannerCarriers
        SpecialPowerTemplate = SuperweaponSpawnGondorBannerCarriers
        OCL = OCL_SpawnGondorBannerCarriers
        TriggerFX = FX_HordeResurrection
        CreateLocation = USE_OWNER_OBJECT
        StartsPaused = Yes
    End
;-----End Gondor Banner Carriers-----

```

### data\ini\object\goodfaction\units\gondor\gondorinfantry.ini

Under "Object GondorBanner" engineering parameters, make the following modification.

```

;;; COMBINE WITH NEAREST HORDE SPECIAL POWER ;;;
Behavior = CombineHordeSpecialPower ModuleTag_CombineWithNearest
    SpecialPowerTemplate = SpecialAbilityGiveUpgradeNearest; Meneldil
changed original SpecialAbilityCombineWithNearest
    InitiateSound = GondorBannerVoiceJoin
    ScanRange = 15000.0 ; making it large enough to scan pretty much an
entire map
End

```

### data\ini\objectcreationlist.ini

```

;-----
; Create Gondor Banner Carriers; added by Meneldil for Boromir
ObjectCreationList OCL_SpawnGondorBannerCarriers
    CreateObject
        ObjectNames = GondorBanner
        Count = 4
        FadeIn = Yes
        FadeTime = 4000
        IgnoreCommandPointLimit = Yes
        Disposition = SPAWN_AROUND
        DispositionIntensity = 100; distance from center
    End
End

```

## data\ini\specialpower.ini

```
; -----  
SpecialPower SuperweaponSpawnGondorBannerCarriers; added by Meneldil for Boromir  
Enum = SPECIAL_SPAWN_OATHBREAKERS  
ReloadTime = 360000; 6 minutes (number in milliseconds)  
PublicTimer = No  
InitiateAtLocationSound = RohirrimSpeechCheer  
RadiusCursorRadius = 40  
End
```

## data\lotr.str

```
CONTROLBAR:BannerCarriers  
"&Banner Carriers"  
END
```

```
CONTROLBAR:ToolTipBannerCarriers  
"Required: Rank 3 \n Summon Banner Carriers \n They can be used for Level 2  
upgrades, as scouts, or even as basic soldiers"  
END
```

## Summary

1. The original banner carrier command set did not allow banner carriers to automatically seek out level one hordes, so I created my own version.
2. Instead of using the command button, you can click on the banner carrier and then click on the target horde (or vice versa).
3. As the above text indicates, banner carriers can also act as scouts or single soldiers.
4. When playing against Gondor, Boromir will not create banner carriers. We will fix that further below in the AI discussion.

## Modifying Boromir's Passive Leadership

The objective is to provide additional modifiers and relocate the ability from level 4 to level 5.

### data\ini\attributemodifier.ini

```
ModifierList BoromirPassiveLeadership
    Category = LEADERSHIP
    Modifier = ARMOR 20% ; Additive. Restored by Meneldil
    Modifier = DAMAGE_MULT 160% ; 200%; Multiplicitive. Damage multiplied by
this, will compound in multiple bonuses
    Modifier = EXPERIENCE 300% ; Multiplicitive. Restored by Meneldil
    Modifier = RESIST_FEAR 100% ; Added by Meneldil
    Modifier = SPEED 110% ; added by Meneldil
    Duration = 3000; Matches RefreshRate of giving module
    FX = FX_GenericLeadershipLv1
    FX2 = FX_GenericLeadershipLv2
    FX3 = FX_GenericLeadershipLv3
    MultiLevelFX = Yes
End
```

### data\ini\experiencelevels.ini

```
ExperienceLevel BoromirLevel5
    TargetNames = GondorBoromir
    RequiredExperience = BOROMIR_LVL5_EXP_NEEDED
    ExperienceAward = BOROMIR_LVL5_EXP_AWARD
    AttributeModifiers = HeroLevelUpDamage4
    Rank = 5
    ;Upgrades = Upgrade_BoromirHornOfGondor;
disabled by Meneldil
    Upgrades =
    Upgrade_BoromirForGondorSpeech; relocated by Meneldil
    LevelUpFx = FX:GandalfLevelUp1FX
    ;LevelUpOCL = OCL_GandalfLevelUp1OCL
    SelectionDecal
        Texture = decal_hero_good
        Style = SHADOW_ALPHA_DECAL
        OpacityMin = 50%
        OpacityMax = 100%
        MinRadius = 40
        MaxRadius = 200
        MaxSelectedUnits = 1
    End
END
```

### data\ini\object\goodfaction\units\gondor\boromir.ini

```
Behavior = AttributeModifierAuraUpdate ModuleTag_BoromirLeadership
    StartsActive = No; If no, requires upgrade to turn on.
    BonusName = BoromirPassiveLeadership
    TriggeredBy = Upgrade_BoromirForGondorSpeech
    RefreshDelay = 2000
    Range = 200
    ObjectFilter = ANY +INFANTRY +CAVALRY -HERO -STRUCTURE -
BASE_FOUNDATION; Enable heroes if desired
    End
```

### data\lotr.str

```
CONTROLBAR:ToolTipBoromirLeadership
"Required: Rank 5 \n Fear invulnerability, +20% Armor, +60% Damage, +10% Speed, and
3x Experience to nearby troops \n Passive ability"
END
```

### Adjusting Boromir's Captain of Gondor

In the experience.ini file, relocate the "Upgrade\_FaramirCaptainOfGondor" line so that the spell becomes active at level 7 instead of level 6.

Provide a larger experience boost over a wider range. In Boromir's INI file, under "KINGS FAVOUR"

```
Experience = 300; Meneldil changed original 50
RadiusEffect = 200; Meneldil changed original 150
```

In the lotr.str file, change the level requirement from 6 to 7.

```
CONTROLBAR:ToolTipCaptainofGondorBoromir
```

```
"Required: Rank 7 \n Give targeted units experience \n Left click then right click
on target"
```

```
END
```

### Adjusting Boromir's Bounty Value

Add a new bounty value in Boromir's design parameters. The value was referenced previously.

```
BountyValue = GONDOR_BOROMIR_BOUNTY_VALUE_NEW; Meneldil appended "_NEW"
```

The value is provided in the weapon.ini file. I did this in order to increase the bounty values for heroes.

## Provide Boromir the Ability to Summon Gondor Reinforcements

Objective: Boromir can summon aid at level 10 every 8 minutes. Specifically, he can summon temporary Tower Guards, Knights, and Trebuchets.

### data\ini\commandbutton.ini

```
CommandButton Command_SpawnGondorReinforcements; added by Meneldil for Boromir
  Command          = SPECIAL_POWER
  SpecialPower     = SuperweaponGondorReinforcements
  ButtonImage      = BGBlacksmith_banner
  Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND
  RadiusCursorType = CAPTAIN_OF_GONDOR
  CursorName       = AttackObj
  InvalidCursorName = GenericInvalid
  ButtonBorderType = ACTION
  InPalantir       = Yes
  TextLabel        = CONTROLBAR:SummonGondorReinforcements
  DescriptLabel    = CONTROLBAR:ToolTipSummonGondorReinforcements
End
```

### data\ini\commandset.ini

```
CommandSet BoromirCommandSet
  1 = Command_SpecialAbilityHornOfGondor; relocated by Meneldil
  2 = Command_SpecialAbilityBoromirBladeMaster; added by Meneldil
  3 = Command_SpawnGondorBannerCarriers; added by Meneldil
;
  3 = Command_BoromirLastStandFakeButton
  4 = Command_SpecialAbilityBoromirForGondor; relocated by Meneldil
  5 = Command_SpecialAbilityCaptainOfGondorBoromir; relocated by Meneldil
  6 = Command_SpawnGondorReinforcements; added by Meneldil
  13 = Command_AttackMove
  14 = Command_Stop
  15 = Command_Guard
End
```

### data\ini\experiencelevels.ini

```
ExperienceLevel BoromirLevel10
  TargetNames          = GondorBoromir
  RequiredExperience   = BOROMIR_LVL10_EXP_NEEDED
  ExperienceAward      = BOROMIR_LVL10_EXP_AWARD
  AttributeModifiers   = HeroLevelUpDamage9
  Rank                 = 10
  Upgrades             = Upgrade_NewAbility3; added by
Meneldil for summoning aid
  LevelUpFx            = FX:GandalfLevelUp1FX
  ;LevelUpOCL          = OCL_GandalfLevelUp1OCL
  SelectionDecal
    Texture            = decal_hero_good
    Style              = SHADOW_ALPHA_DECAL
    OpacityMin         = 50%
    OpacityMax         = 100%
    MinRadius          = 40
    MaxRadius          = 200
    MaxSelectedUnits   = 1
  End
END
```

### data\ini\fxlist.ini

```
; -----
FXList FX_GondorReinforcements; Meneldil added
  ParticleSystem; refer to GandalfBlast
  Name = GandalfBlastFinalLight
```

```

    Offset = X:0.0 Y:0.0 Z:60
End
ParticleSystem
    Name = shockwave
    Offset = X:0.0 Y:0.0 Z:20.0
End
ParticleSystem
    Name = GandalfBlastDust
    Offset = X:0.0 Y:0.0 Z:15.0
End
Sound
    Name = EarthRumbleStereo
End
ParticleSystem; refer to GondorSummon2
    Name = BlueAura; FueltheFiresEmbers
End
End

```

### data\ini\fxparticlesystem.ini

FXParticleSystem BlueAura; Meneldil reapplied FueltheFiresEmbers

```

System
    Priority = ALWAYS_RENDER
    ParticleName = EXGimliAxeSpecial.tga
    Lifetime = 30 30
    SortLevel = 1
    Size = 10 15
    BurstCount = 2 2
    IsGroundAligned = Yes
    IsParticleUpTowardsEmitter = Yes
    SystemLifetime = 120
End
Color = DefaultColor
    Color2 = R:0 G:175 B:255 10
    Color3 = R:0 G:0 B:0 20
End
Update = DefaultUpdate
    SizeRate = 15 15
    SizeRateDamping = 0.8 0.5
    AngleZ = 0 7
    AngularRateZ = -0.4 0.4
    AngularDamping = 0.9 0.95
End
Physics = DefaultPhysics
    VelocityDamping = 0.8 0.9
End
EmissionVelocity = CylindricalEmissionVelocity
    Radial = 0 5
End
EmissionVolume = CylinderEmissionVolume
    IsHollow = Yes
    Radius = 100
    Offset = X:0 Y:0 Z:5
End
Draw = DefaultDraw
End
End

```

### data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini

```

;-----
;added by Meneldil
ChildObject GondorKnightHorde_Summoned GondorKnightHorde

```

```

SelectPortrait = UPGondor_Knight
DisplayName     = OBJECT:HordeGondorKnight
IsTrainable    = No
CommandPoints  = 0
CommandSet     = GenericCommandSet
EquivalentTo   = GondorKnightHorde_Summoned

Behavior = HorseHordeContain ModuleTag_HordeContain
ObjectStatusOfContained =
  InitialPayload = GondorCavalry_Summoned 5
  Slots = 5
  PassengerFilter = NONE +CAVALRY
  ShowPips = No
  RandomOffset = X:0 y:0
  ThisFormationIsTheMainFormation = Yes; Used to determine which armorset
to use (and anything else we want!)
  RankInfo = RankNumber:1 UnitType:GondorCavalry_Summoned Position:X:0
Y:0 Position:X:-15 Y:15 Position:X:-15 Y:-15 Position:X:-30 Y:30 Position:X:-30 Y:-
30
  RanksToReleaseWhenAttacking = 1
  MeleeAttackLeashDistance = 45; How far the hordes can move from the
center of the horde when melee attacking.
End

Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
UpgradeToGrant = Upgrade_GondorForgedBlades
End

Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
UpgradeToGrant = Upgrade_GondorHeavyArmor
End

Behavior = GrantUpgradeCreate ModuleTag_KnightShield
UpgradeToGrant = Upgrade_GondorKnightShield
End

Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
MinLifetime     = 90000
MaxLifetime     = 150000
DeathType       = FADED
End

```

End

```

;-----
;added by Meneldil
ChildObject GondorTowerShieldGuardHorde_Summoned GondorTowerShieldGuardHorde

```

```

SelectPortrait = UPGondor_TowerGuard
DisplayName     = OBJECT:HordeGondorTowerGuard
IsTrainable    = No
CommandPoints  = 0
CommandSet     = GenericCommandSet
EquivalentTo   = GondorTowerShieldGuardHorde_Summoned

```

```

Behavior = HordeContain ModuleTag_HordeContain
ObjectStatusOfContained =
  InitialPayload = GondorTowerShieldGuard_Summoned 5
  Slots = 5
  PassengerFilter = NONE +INFANTRY

```

```

        ShowPips = No
        ThisFormationIsTheMainFormation = Yes; Used to determine which armorset
to use (and anything else we want!)
        RandomOffset=X:0 Y:0
        RankInfo = RankNumber:1 UnitType:GondorTowerShieldGuard_Summoned
Position:X:0 Y:0 Position:X:-15 Y:25 Position:X:-15 Y:-25 Position:X:0 Y:50
Position:X:0 Y:-50
        RanksThatStopAdvance = 1
        RanksToReleaseWhenAttacking = 1
        RanksToJustFreeWhenAttacking = 1
        MeleeAttackLeashDistance = 50; How far the hordes can move from the
center of the horde when melee attacking.
    End

    Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
        UpgradeToGrant = Upgrade_GondorForgedBlades
    End

    Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
        UpgradeToGrant = Upgrade_GondorHeavyArmor
    End

    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime      = 90000
        MaxLifetime      = 150000
        DeathType        = FADED
    End

End

```

### data\ini\object\goodfaction\units\gondor\boromir.ini

```

;-----Start Summon Gondor Reinforcements-----
; added by Meneldil
    Behavior = UnpauseSpecialPowerUpgrade ModuleTag_GondorReinforcements; actual
name not important but must be unique
        SpecialPowerTemplate = SuperweaponGondorReinforcements
        TriggeredBy = Upgrade_NewAbility3
    End

    Behavior = OCLSpecialPower SummonGondorReinforcements; actual name not
important but must be unique
        SpecialPowerTemplate      = SuperweaponGondorReinforcements
        OCL                        = OCL_SpawnGondorReinforcementsEgg
        TriggerFX                  = FX_GondorReinforcements
        CreateLocation              = USE_OWNER_OBJECT
        StartsPaused                = Yes
    End
;-----End Summon Gondor Reinforcements-----

```

Note: This goes in the engineering parameters section with the other behaviors.

### data\ini\object\goodfaction\units\gondor\gondorcavalry.ini

```

;-----
ChildObject GondorCavalry_Summoned GondorCavalry; added by Meneldil

    IsTrainable = No
    CommandPoints = 0
    ;EquivalentTo = GondorCavalry; Disabled so that the summoned units are not
selected along with their regular counterparts.
    CommandSet = GenericCommandSet

```



```

Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    MinLifetime      = 90000
    MaxLifetime      = 150000
    DeathType        = FADED
End

Body = ActiveBody ModuleTag_Body
    MaxHealth = 300
End

Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_GondorForgedBlades
End

Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_GondorHeavyArmor
End

Behavior = GrantUpgradeCreate ModuleTag_HorseShields
    UpgradeToGrant = Upgrade_GondorKnightShield
End

Behavior = SlowDeathBehavior ModuleTag_08; changed for instant departure
    DeathTypes = NONE +FADED
    FadeDelay = 0
    FadeTime = 0
    DestructionDelay = 0
    Sound = INITIAL HorseWhinny GondorKnightVoiceDisengage
GondorKnightVoiceRetreat
    OCL = FINAL OCL_FirePatriot OCL_FireDark
End

Behavior = SlowDeathBehavior ModuleTag_09
    DeathTypes = ALL -FADED
    SinkDelay = 30000
    SinkRate = 0.40 ; in Dist/Sec
    DestructionDelay = 40000
    Sound = INITIAL GondorSoldierVoiceDie
End

End

```

data\ini\object\goodfaction\units\gondor\gondorinfantry.ini

```

;;-----
ChildObject GondorTowerShieldGuard_Summoned GondorTowerShieldGuard; added by
Meneldil

    SelectPortrait      = UPGondor_TowerGuard
    CommandSet          = GenericCommandSet
    IsTrainable         = No
    CommandPoints       = 0

Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    MinLifetime      = 90000
    MaxLifetime      = 150000
    DeathType        = FADED
End

Body = ActiveBody ModuleTag_Body

```

```
CheerRadius      = EMOTION_CHEER_RADIUS
MaxHealth        = 300
```

End

```
Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
UpgradeToGrant = Upgrade_GondorForgedBlades
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
UpgradeToGrant = Upgrade_GondorHeavyArmor
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05
DeathTypes = ALL -KNOCKBACK -FADED
SinkDelay = 30000
SinkRate = 0.20
DestructionDelay = 30000
Sound = INITIAL TowerGuardVoiceDie HumanVoiceDie
End
```

```
Behavior = SlowDeathBehavior ModuleTag_07
DeathTypes = NONE +KNOCKBACK +FADED
FadeDelay = 0
FadeTime = 0
DestructionDelay = 0
Sound = INITIAL ImpactRainOfFire TauntHumanHitShield ManCheerSingles
TowerGuardVoiceDisengage TowerGuardVoiceRetreat
OCL = INITIAL OCL_FireBlue OCL_FirePatriot OCL_FireBold
End
```

End

### data\ini\object\goodfaction\units\gondor\trebuchet.ini

-----  
-----

ChildObject Trebuchet\_Summoned GondorTrebuchet; added by Meneldil

```
IsTrainable      = No
CommandPoints    = 0
```

```
LocomotorSet
Locomotor = CatapultLocomotor
Condition = SET_NORMAL
Speed      = 36; 20% faster than normal 30
End
```

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
MinLifetime = 90000
MaxLifetime = 150000
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_Firestones
UpgradeToGrant = Upgrade_GondorFireStones
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05
DeathTypes      = NONE +EXPLODED +BURNED
SinkDelay        = 10000
SinkRate         = 0.2
DestructionDelay = 30000
Sound            = INITIAL TrebuchetDie
```

```
FX = INITIAL FX_LeafPileFire
OCL = INITIAL OCL_GondorTrebuchetExplodeDeath
```

End

```
Behavior = SlowDeathBehavior ModuleTag_067
  DeathTypes = ALL -EXPLODED -BURNED
  SinkDelay = 0
  SinkRate = 0
  DestructionDelay = 0
  Sound = INITIAL TrebuchetDie
  FX = INITIAL FX_SarumanFireBallExplode
```

End

End

### data\ini\objectcreationlist.ini

```
; -----  
-----
```

```
; Gondor Reinforcements summons added by Meneldil for Boromir
```

```
ObjectCreationList OCL_SpawnGondorReinforcementsEgg
```

```
  CreateObject
```

```
    ObjectNames = GondorTowerShieldGuard_Summoned
```

```
    Count = 0
```

```
    FadeIn = Yes
```

```
    FadeTime = 2000
```

```
    Disposition = SPAWN_AROUND
```

```
    DispositionAngle = 180; SpawnAround uses this as the arc between guys
```

```
    DispositionIntensity = 150; and this for distance from center
```

```
  End
```

```
  CreateObject
```

```
    ObjectNames = GondorTowerShieldGuardHorde_Summoned
```

```
    Count = 1
```

```
    FadeIn = Yes
```

```
    FadeTime = 2000
```

```
    Disposition = LIKE_EXISTING
```

```
    Offset = X:30 Y:30 Z:0
```

```
  End
```

```
  CreateObject
```

```
    ObjectNames = GondorTowerShieldGuardHorde_Summoned
```

```
    Count = 1
```

```
    FadeIn = Yes
```

```
    FadeTime = 2000
```

```
    Disposition = LIKE_EXISTING
```

```
    Offset = X:-30 Y:-30 Z:0
```

```
  End
```

```
  CreateObject
```

```
    ObjectNames = GondorCavalry_Summoned
```

```
    Count = 0
```

```
    FadeIn = Yes
```

```
    FadeTime = 3000
```

```
    SpreadFormation = Yes
```

```
    MinDistanceAFormation = 0
```

```
    MinDistanceBFormation = 20
```

```
    MaxDistanceFormation = 50
```

```
  End
```

```
  CreateObject
```

```
    ObjectNames = GondorKnightHorde_Summoned
```

```
    Count = 1
```

```
    FadeIn = Yes
```

```
    FadeTime = 3000
```

```

Disposition = LIKE_EXISTING
Offset = X:50 Y:50 Z:0
End
CreateObject
ObjectNames = GondorKnightHorde_Summoned
Count = 1
FadeIn = Yes
FadeTime = 3000
Disposition = LIKE_EXISTING
Offset = X:-50 Y:-50 Z:0
End
CreateObject
ObjectNames = Trebuchet_Summoned
Count = 1
FadeIn = Yes
FadeTime = 5000
Offset = X:-25 Y:25 Z:0
End
CreateObject
ObjectNames = Trebuchet_Summoned
Count = 1
FadeIn = Yes
FadeTime = 5000
Offset = X:-25 Y:25 Z:0
End
End

```

Note: Tower Guard and Knight units are provided for if desired (currently shown as zero). Also, different positioning methods are shown.

### data\ini\specialpower.ini

```

; -----
SpecialPower SuperweaponGondorReinforcements; added by Meneldil for Boromir
Enum = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime = 480000; 8 minutes (number in milliseconds)
PublicTimer = No
InitiateAtLocationSound = ManGroupLargeCheer; Gui_VictoryCheerGood
RadiusCursorRadius = 120
End

```

Note: I added this to the bottom of the file.

### data\ini\upgrade.ini

```

Upgrade Upgrade_NewAbility3; added by Meneldil as generic upgrade tag
Type = OBJECT
End

```

Note: I added this to the bottom of the file.

### data\lotr.str

```

CONTROLBAR:SummonGondorReinforcements
"Gon&dor Reinforcements"
END

CONTROLBAR:ToolTipSummonGondorReinforcements
"Required: Rank 10 \n Summon aid from Minas Tirith \n Left click to activate"
END

```

That completes our modifications for Boromir. Feel free to make additional modifications for yourself. We'll now turn to Gandalf.



## data\ini\commandset.ini

```
CommandSet GondorGandalfCommandSet
  1 = Command_SpecialAbilityWizardBlast
  2 = Command_GondorGandalfLightningSword
  3 = Command_GandalfFakeLeadershipButton
  4 = Command_GandalfShadowfax
  5 = Command_GondorGandalfIstariLight
  6 = Command_SpecialAbilityWordOfPower
; 7 = Command_TransportEvacuate (disabled by Meneldil)
; 8 = Command_SpecialAbilityGrabPassenger (disabled by Meneldil)
  7 = Command_HeroMount; added by Meneldil
  8 = Command_HeroDismount; added by Meneldil
 13 = Command_AttackMove
 14 = Command_Stop
 15 = Command_Guard
End
```

## data\ini\object\goodfaction\units\gondor\gandalf.ini

### *Under Design Parameters:*

BountyValue = GONDOR\_GANDALF\_BOUNTY\_VALUE\_NEW; Meneldil appended "NEW" to the end and deleted "White" reference

### *Under Engineering Parameters:*

; Meneldil copied and modified Gondor Healing Well Behavior from goodfactionbuildings.ini.

```
Behavior = PassiveAreaEffectBehavior ModuleTag_SplashOfHealingWater_Ahh
  EffectRadius          = 300 ; Meneldil changed original 200
  PingDelay             = 2000;msec
  HealPercentPerSecond = 2%; Meneldil changed original 3%
  AllowFilter           = ANY +INFANTRY +CAVALRY +HERO +RohanEntFir
+RohanEntBirch -MACHINE -IMMOBILE; Meneldil added Heroes and Ents
End
```

; Meneldil note: The following block was originally commented out.

; Although Gandalf's original commands at 7 & 8 worked, their button images and text descriptions didn't make sense.

; Meneldil created two new command sets to take their place (press P to pick up and D to dismount).

```
Behavior = TransportContain ModuleTag_TransportContainTag
  ObjectStatusOfContained = CAN_ATTACK; Meneldil changed original
UNSELECTABLE (so hobbit can throw rocks)
  PassengerFilter = NONE +HOBBIT
  Slots = 1
  ShowPips = No
  AllowEnemiesInside = No
  AllowNeutralInside = Yes
  AllowAlliesInside = Yes
  DamagePercentToUnits = 0%
  TypeOneForWeaponSet = HOBBIT
  PassengerBonePrefix = PassengerBone:PASSENGERBONE KindOf:HOBBIT
  EjectPassengersOnDeath = Yes
  KillPassengersOnDeath = No; added by Meneldil
  ConditionForEntry = ModelConditionState: MOUNTED
End
```

```
Behavior = AttributeModifierAuraUpdate ModuleTag_Leadership
  StartsActive = No ;If no, requires upgrade to turn on.
  BonusName = GandalfPassiveLeadership
  TriggeredBy = Upgrade_GandalfLeadership
  RefreshDelay = 2000
  Range = 200
```

```

        ObjectFilter      = ANY +INFANTRY +CAVALRY -STRUCTURE -BASE_FOUNDATION
+HERO; Meneldil enabled HERO
    End

    Behavior = ExperienceLevelCreate ModuleTag_MPLevelBonus
        LevelToGrant = 1; Meneldil changed from original 5
        MPOnly = Yes
    End

```

### data\ini\specialpower.ini

```

;-----
SpecialPower SpecialAbilityWizardBlast
    Enum          = SPECIAL_WIZARD_BLAST
    ReloadTime    = 60000
    PublicTimer   = No
    InitiateSound = GandalfVoiceAttackWizardBlast; this plays when he fires,
not when he targets (Meneldil enabled)
End

```

```

;-----
SpecialPower SpecialAbilityWordOfPower
    Enum          = SPECIAL_WORD_OF_POWER
    ReloadTime    = 420000; Meneldil changed 540000 ; 360000
    PublicTimer   = No
End

```

### data\lotr.str

```

CONTROLBAR:ToolTipGandalfLeadership
"Required: Rank 4 \n Leadership bonus to nearby troops and heroes \n +50% Armor,
+25% Damage, +200% Combat Experience \n
Units nearby become invulnerable to fear \n Passive ability"
END

```

*Note: Changed existing description.*

```

CONTROLBAR:LightningSword
"Ligh&tning Sword"
END

```

*Note: Changed existing shortcut key so it doesn't conflict with hobbit dismount shortcut key.*

```

CONTROLBAR:ToolTipShadowfax
"Required: Rank 5 and Gandalf the White \n Left click to mount or dismount horse \n
+25% Armor vs. Footmen and Cavalry \n -50% Armor vs. Archers and Pikes \n\n
Transport a hobbit on horseback. \n Press P to pick up. \n Press D to dismount."
END

```

*Note: Changed existing description.*

```

CONTROLBAR:ToolTipGandalftheWhite
"+500 Health, +100% Damage \n Powers recharge twice as quickly \n Passive power"
END

```

*Note: Changed existing description.*

```

CONTROLBAR:GandalfTheWhiteRecruit
"Hero Unit. Recruit the greatest wizard in all of Middle Earth. Gandalf starts with
the ability to heal nearby allies. \n\n
Command Points: 10"
END

```

*Note: Changed existing description.*

## Summoning Rohan Heroes When Playing as Gondor

If Rohan is not playing (or even if they are), you may wish to add some of their heroes to the game to fight for Gondor. In this section, we'll provide Gandalf the ability to summon Aragorn, Gimli, Legolas, and Merry. Because of Gandalf's relatively high recruitment cost, he is generally added later in the game. Therefore, these summoning capabilities will not have any leveling requirements; however, Gandalf the White is required. Further, Gandalf will effectively only be able to summon these heroes one time. That's all that's needed because if they were to die, they would automatically be able to be resurrected at a citadel.

The code is presented so that you can add these summoning abilities via a double command set if you wish. However, I've chosen not to use a double command set for Gandalf. Instead, you will have to use hot keys to summon them ("R" for Aragorn, "I" for Gimli, "O" for Legolas, and "C" for Merry).

### data\ini\commandbutton.ini

**CommandButton Command\_SpawnAragorn; added by Meneldil for Gandalf**

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSpawnAragorn
TextLabel        = CONTROLBAR:SummonAragorn
DescriptLabel    = CONTROLBAR:ToolTipSummonAragorn
ButtonImage      = HIAragorn
Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND
RadiusCursorType = CAPTAIN_OF_GONDOR
CursorName       = Bombard
InvalidCursorName = GenericInvalid
ButtonBorderType = ACTION
InPalantir      = Yes
```

End

**CommandButton Command\_SpawnGimli; added by Meneldil for Gandalf**

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSpawnGimli
TextLabel        = CONTROLBAR:SummonGimli
DescriptLabel    = CONTROLBAR:ToolTipSummonGimli
ButtonImage      = HIGimli
Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND
RadiusCursorType = LEAP
CursorName       = Bombard
InvalidCursorName = GenericInvalid
ButtonBorderType = ACTION
InPalantir      = Yes
```

End

**CommandButton Command\_SpawnLegolas; added by Meneldil for Gandalf**

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSpawnLegolas
TextLabel        = CONTROLBAR:SummonLegolas
DescriptLabel    = CONTROLBAR:ToolTipSummonLegolas
ButtonImage      = HILegolas
Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND
RadiusCursorType = ELVEN_ALLIES
CursorName       = Bombard
InvalidCursorName = GenericInvalid
ButtonBorderType = ACTION
InPalantir      = Yes
```

End

**CommandButton Command\_SpawnMerry; added by Meneldil for Gandalf**

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSpawnMerry
TextLabel        = CONTROLBAR:SummonMerry
DescriptLabel    = CONTROLBAR:ToolTipSummonMerry
```



```

ButtonImage      = HIMerry
Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND
RadiusCursorType = KINGS_FAVOR
CursorName       = Bombard
InvalidCursorName = GenericInvalid
ButtonBorderStyle = ACTION
InPalantir       = Yes

```

End

### data\ini\commandset.ini

```

CommandSet GondorGandalfCommandSet
  1 = Command_SpecialAbilityWizardBlast
  2 = Command_GondorGandalfLightningSword
  3 = Command_GandalfFakeLeadershipButton
  4 = Command_GandalfShadowfax
  5 = Command_GondorGandalfIstariLight
  6 = Command_SpecialAbilityWordOfPower
; 7 = Command_TransportEvacuate (disabled by Meneldil)
; 8 = Command_SpecialAbilityGrabPassenger (disabled by Meneldil)
  7 = Command_HeroMount; added by Meneldil
  8 = Command_HeroDismount; added by Meneldil
  9 = Command_SpawnAragorn; added by Meneldil
 10 = Command_SpawnGimli; added by Meneldil
 11 = Command_SpawnLegolas; added by Meneldil
 12 = Command_SpawnMerry; added by Meneldil
 13 = Command_AttackMove
 14 = Command_Stop
 15 = Command_Guard

```

End

### data\ini\object\goodfaction\units\gondor\gandalf.ini

```

;-----Summon Aragorn-----
; added by Meneldil
  Behavior = OCLSpecialPower SummonAragorn
    SpecialPowerTemplate = SuperweaponSpawnAragorn
    OCL                  = OCL_SpawnAragornEgg
    TriggerFX            = FX_HordeResurrection
    CreateLocation       = USE_OWNER_OBJECT
    StartsPaused         = Yes
  End

  Behavior = UnpauseSpecialPowerUpgrade ModuleTag_SpawnAragorn
    SpecialPowerTemplate = SuperweaponSpawnAragorn
    TriggeredBy = Upgrade_GandalfWhite
  End
;-----

;-----Summon Gimli-----
; added by Meneldil
  Behavior = OCLSpecialPower SummonGimli
    SpecialPowerTemplate = SuperweaponSpawnGimli
    OCL                  = OCL_SpawnGimliEgg
    TriggerFX            = FX_HordeResurrection
    CreateLocation       = USE_OWNER_OBJECT
    StartsPaused         = Yes
  End

  Behavior = UnpauseSpecialPowerUpgrade ModuleTag_SpawnGimli
    SpecialPowerTemplate = SuperweaponSpawnGimli
    TriggeredBy = Upgrade_GandalfWhite
  End

```

```

;-----
;-----Summon Legolas-----
; added by Meneldil
  Behavior = OCLSpecialPower SummonLegolas
    SpecialPowerTemplate = SuperweaponSpawnLegolas
    OCL = OCL_SpawnLegolasEgg
    TriggerFX = FX_HordeResurrection
    CreateLocation = USE_OWNER_OBJECT
    StartsPaused = Yes
  End

  Behavior = UnpauseSpecialPowerUpgrade ModuleTag_SpawnLegolas
    SpecialPowerTemplate = SuperweaponSpawnLegolas
    TriggeredBy = Upgrade_GandalfWhite
  End
;-----

```

```

;-----Summon Merry-----
; added by Meneldil
  Behavior = OCLSpecialPower SummonMerry
    SpecialPowerTemplate = SuperweaponSpawnMerry
    OCL = OCL_SpawnMerryEgg
    TriggerFX = FX_HordeResurrection
    CreateLocation = USE_OWNER_OBJECT
    StartsPaused = Yes
  End

  Behavior = UnpauseSpecialPowerUpgrade ModuleTag_SpawnMerry
    SpecialPowerTemplate = SuperweaponSpawnMerry
    TriggeredBy = Upgrade_GandalfWhite
  End
;-----

```

**data\ini\objectcreationlist.ini**

```

;-----
; Summon Aragorn (added by Meneldil for Gandalf)
ObjectCreationList OCL_SpawnAragornEgg
  CreateObject
    ObjectNames = GondorAragornMP
    Count = 1; how many do you want?
    FadeIn = Yes; allows for transition
    FadeTime = 5000; in milliseconds; how long to transition
    IgnoreCommandPointLimit = Yes
    Disposition = LIKE_EXISTING
  End
End
;-----

```

```

;-----
; Summon Gimli (added by Meneldil for Gandalf)
ObjectCreationList OCL_SpawnGimliEgg
  CreateObject
    ObjectNames = RohanGimli
    Count = 1; how many do you want?
    FadeIn = Yes; allows for transition
    FadeTime = 5000; in milliseconds; how long to transition
    IgnoreCommandPointLimit = Yes
    Disposition = LIKE_EXISTING
  End
End
;-----

```

End

```
; -----  
-----  
; Summon Legolas (added by Meneldil for Gandalf)  
ObjectCreationList OCL_SpawnLegolasEgg  
  CreateObject  
    ObjectNames = RohanLegolas  
    Count = 1; how many do you want?  
    FadeIn = Yes; allows for transition  
    FadeTime = 5000; in milliseconds; how long to transition  
    IgnoreCommandPointLimit = Yes  
    Disposition = LIKE_EXISTING  
  End  
End
```

```
; -----  
-----  
; Summon Merry (added by Meneldil for Gandalf)  
ObjectCreationList OCL_SpawnMerryEgg  
  CreateObject  
    ObjectNames = RohanMerry  
    Count = 1; how many do you want?  
    FadeIn = Yes; allows for transition  
    FadeTime = 5000; in milliseconds; how long to transition  
    IgnoreCommandPointLimit = Yes  
    Disposition = LIKE_EXISTING  
  End  
End
```

data\ini\specialpower.ini

```
; -----  
SpecialPower SuperweaponSpawnAragorn; added by Meneldil for Gandalf  
  Enum = SPECIAL_SPAWN_OATHBREAKERS  
  ReloadTime = 999999; Aragorn can respawn from a citadel if he  
dies  
  PublicTimer = No  
  InitiateAtLocationSound = GandalfVoiceJoinAragorn  
  RadiusCursorRadius = 30  
End
```

```
; -----  
SpecialPower SuperweaponSpawnGimli; added by Meneldil for Gandalf  
  Enum = SPECIAL_SPAWN_OATHBREAKERS  
  ReloadTime = 999999; Gimli can respawn from a citadel if he  
dies  
  PublicTimer = No  
  InitiateAtLocationSound = GandalfVoiceJoinGimli  
  RadiusCursorRadius = 30  
End
```

```
; -----  
SpecialPower SuperweaponSpawnLegolas; added by Meneldil for Gandalf  
  Enum = SPECIAL_SPAWN_OATHBREAKERS  
  ReloadTime = 999999; Legolas can respawn from a citadel if he  
dies  
  PublicTimer = No  
  InitiateAtLocationSound = GandalfVoiceJoinLegolas  
  RadiusCursorRadius = 30  
End
```

```

; -----
SpecialPower SuperweaponSpawnMerry; added by Meneldil for Gandalf
  Enum          = SPECIAL_SPAWN_OATHBREAKERS
  ReloadTime    = 999999; Merry can respawn from a citadel if he
dies
  PublicTimer   = No
  InitiateAtLocationSound = GandalfVoiceJoinHobbit; MerryVoicesalute
  RadiusCursorRadius = 30
End

```

**data\lotr.str**

```

CONTROLBAR:SummonAragorn
"A&ragorn"
END

```

```

CONTROLBAR:ToolTipSummonAragorn
"Summon Aragorn to assist you \n Left click to activate"
END

```

```

CONTROLBAR:SummonGimli
"G&imli"
END

```

```

CONTROLBAR:ToolTipSummonGimli
"Summon Gimli to assist you \n Left click to activate"
END

```

```

CONTROLBAR:SummonLegolas
"Leg&olas"
END

```

```

CONTROLBAR:ToolTipSummonLegolas
"Summon Legolas to assist you \n Left click to activate"
END

```

```

CONTROLBAR:SummonMerry
"Meri&ado&c"
END

```

```

CONTROLBAR:ToolTipSummonMerry
"Summon Merry to assist you \n Left click to activate"
END

```

## Some thoughts on leadership special effects

You'll have noticed that some structures as well as heroes with passive leadership create a special effect (e.g., a glow) around affected units or hordes. For example, take a look at Gandalf's passive leadership attribute code.

### ModifierList GandalfPassiveLeadership

```
Category = LEADERSHIP
Modifier = EXPERIENCE 300% ; Multiplicative. All exp gained mult by this
Modifier = ARMOR 50% ; Additive. Sum of these are subtracted from all
entries in Armor.ini
Modifier = DAMAGE_MULT 125% ; Multiplicative. Damage multiplied by this,
will compound in multiple bonuses (Meneldil changed)
Modifier = RESIST_FEAR 100% ; Additive. Sum of these is a saving throw
against fear
Duration = 2500 ; Matches RefreshRate of giving module
FX = FX_GenericLeadershipLv1
FX2 = FX_GenericLeadershipLv2
FX3 = FX_GenericLeadershipLv3
MultiLevelFX = Yes
End
```

The highlighted section above is used consistently for most leadership special effects. As a result, it can sometimes be difficult to tell what is affecting what. You can change the generic special effects into something more specific if you like.

Below are examples of passive leadership special effect changes you can make in order to better differentiate amongst the various leadership bonuses.

### data\ini\attributemodifier.ini

#### ModifierList HeroicStatuePassiveLeadership

```
Category = LEADERSHIP
Modifier = ARMOR 50% ; Restored by Meneldil; Additive. Sum of these
are subtracted from all entries in Armor.ini
Modifier = DAMAGE_MULT 200% ; Multiplicative. Damage multiplied by this,
will compound in multiple bonuses
Duration = 5000 ; Matches RefreshRate of giving module
FX = FX_HeroicStatueAura; Added by Meneldil (uncomment/comment to
enable/disable this effect)
; FX = FX_GenericLeadershipLv1
; FX2 = FX_GenericLeadershipLv2
; FX3 = FX_GenericLeadershipLv3
; MultiLevelFX = Yes
End
```

#### ModifierList ElvenWoodPositiveSpell

```
Category = LEADERSHIP
Modifier = ARMOR 35% ; 50%; Additive. Sum of these are subtracted from
all entries in Armor.ini
Duration = 2500; Matches RefreshRate of giving module
FX = FX_ElvenWoodAura; added by Meneldil
; FX = FX_GenericLeadershipLv1
; FX2 = FX_GenericLeadershipLv2
; FX3 = FX_GenericLeadershipLv3
; MultiLevelFX = Yes
End
```

#### ModifierList GandalfPassiveLeadership

```
Category = LEADERSHIP
Modifier = EXPERIENCE 300% ; Multiplicative. All exp gained mult by this
Modifier = ARMOR 50% ; Additive. Sum of these are subtracted from all
entries in Armor.ini
```

```

    Modifier = DAMAGE_MULT 125% ; Multiplicative. Damage multiplied by this,
will compound in multiple bonuses (Meneldil changed)
    Modifier = RESIST_FEAR 100% ; Additive. Sum of these is a saving throw
against fear
    Duration = 2500 ; Matches RefreshRate of giving module
    FX = FX_GandalfLeadership; added by Meneldil (uncomment/comment to
enable/disable this effect)
;    FX = FX_GenericLeadershipLvl1
;    FX2 = FX_GenericLeadershipLvl2
;    FX3 = FX_GenericLeadershipLvl3
;    MultiLevelFX = Yes
End

```

#### ModifierList FaramirPassiveLeadership

```

    Category = LEADERSHIP
    Modifier = ARMOR 50% ; Additive
    Modifier = RESIST_FEAR 100%
    Modifier = DAMAGE_MULT 120%; Multiplicative (restored by Meneldil)
    Modifier = EXPERIENCE 300% ; Multiplicative (restored by Meneldil)
    Modifier = SPEED 110% ; added by Meneldil
    Duration = 3000 ; Matches RefreshRate of giving module
    FX = FX_FaramirLeadership; added by Meneldil (uncomment/comment to
enable/disable this effect)
;    FX = FX_GenericLeadershipLvl1
;    FX2 = FX_GenericLeadershipLvl2
;    FX3 = FX_GenericLeadershipLvl3
;    MultiLevelFX = Yes
End

```

#### ModifierList BoromirPassiveLeadership

```

    Category = LEADERSHIP
    Modifier = ARMOR 20% ; Additive. Restored by Meneldil
    Modifier = DAMAGE_MULT 160% ; 200%; Multiplicative. Damage multiplied by
this, will compound in multiple bonuses
    Modifier = EXPERIENCE 300% ; Multiplicative. Restored by Meneldil
    Modifier = RESIST_FEAR 100% ; Added by Meneldil
    Modifier = SPEED 110% ; added by Meneldil
    Duration = 3000; Matches RefreshRate of giving module
    FX = FX_BoromirLeadership; added by Meneldil (uncomment/comment to
enable/disable this effect)
;    FX = FX_GenericLeadershipLvl1
;    FX2 = FX_GenericLeadershipLvl2
;    FX3 = FX_GenericLeadershipLvl3
;    MultiLevelFX = Yes
End

```

#### ModifierList ElrondPassiveLeadership; (affects allies only)

```

    Category = LEADERSHIP
    Modifier = EXPERIENCE 300%
    Modifier = ARMOR 50% ; Additive. Sum of these are subtracted from
all entries in Armor.ini
    Modifier = DAMAGE_MULT 200% ; Multiplicative. Damage multiplied by this,
will compound in multiple bonuses
    Modifier = RESIST_FEAR 100% ; Additive (added by Meneldil)
    Duration = 2500 ; Matches RefreshRate of giving module
    FX = FX_ElrondLeadership; added by Meneldil (uncomment/comment to
enable/disable this effect)
;    FX = FX_GenericLeadershipLvl1
;    FX2 = FX_GenericLeadershipLvl2
;    FX3 = FX_GenericLeadershipLvl3
;    MultiLevelFX = Yes

```

End

ModifierList SamPassiveLeadership; added by Meneldil for Sam

```
Category      = LEADERSHIP
Modifier      = DAMAGE_MULT 120% ; Multiplicative
Duration      = 3000                ; Matches refresh rate of giving module
FX            = FX_SamLeadership; (uncomment/comment to enable/disable this
```

effect)

End

ModifierList FrodoPassiveLeadership; added by Meneldil for Frodo

```
Category      = LEADERSHIP
Modifier      = ARMOR 20%; Additive
Duration      = 3000
FX            = FX_FrodoLeadership; (uncomment/comment to enable/disable this
```

effect)

End

Note: No changes have been made to Pippin, so he's not shown here.

Now we have to provide the special effects that have been referenced.

### data\ini\fxlist.ini

```
; -----
; added by Meneldil for Heroic Statue Aura
FXList FX_HeroicStatueAura
  ParticleSystem
    Name = BlueRadialBarbs
    AttachToObject = Yes
  End
End
```

```
; -----
; added by Meneldil for ElvenWood Aura
FXList FX_ElvenWoodAura
  ParticleSystem
    Name = GreenRadialBarbs
    AttachToObject = Yes
  End
End
```

```
;-----
FXList FX_GandalfLeadership; Meneldil added for Gandalf
  ParticleSystem
    Name = WhiteGlimmer
    AttachToObject = Yes
  End
End
```

```
;-----
FXList FX_FaramirLeadership; Meneldil added for Faramir
  ParticleSystem
    Name = GreenGlow
    AttachToObject = Yes
  End
End
```

```
;-----
FXList FX_BoromirLeadership; Meneldil added for Boromir
  ParticleSystem
    Name = RedGlow
```

```

        AttachToObject = Yes
    End
End

;-----
FXList FX_ElrondLeadership; Meneldil added for Elrond
    ParticleSystem
        Name = BlueGlow
        AttachToObject = Yes
    End
End

;-----
FXList FX_SamLeadership; Meneldil added for Sam
    ParticleSystem
        Name = GreenGlimmer
        AttachToObject = Yes
    End
End

;-----
FXList FX_FrodoLeadership; Meneldil added for Frodo
    ParticleSystem
        Name = BlueGlimmer
        AttachToObject = Yes
    End
End

```

### data\ini\fxparticlesystem.ini

```

FXParticleSystem BlueRadialBarbs; Meneldil altered original AragornElendil
System
    Priority = ALWAYS_RENDER
    ParticleName = EXBarbStreaks.tga
    Lifetime = 10 10
    SystemLifetime = 10; Meneldil added
    SortLevel = 1
    Size = 1 3; Meneldil changed original 50 50
    BurstCount = 1 1
    IsGroundAligned = Yes
End
Color = DefaultColor
    Color2 = R:105 G:135 B:255 5; Meneldil changed original R:65 G:100 B:222 5
    Color3 = R:255 G:255 B:255 10; Meneldil changed original R:0 G:0 B:0 10
End
Alpha = DefaultAlpha
End
Update = DefaultUpdate
    SizeRate = 1 2; Meneldil changed original 5 5
    SizeRateDamping = 1 1
    AngleZ = -6 6
    AngularDamping = 1 1
    Rotation = ROTATE_Z
End
Physics = DefaultPhysics
    VelocityDamping = 0 1; Meneldil changed original 0 8.07921e+33
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = PointEmissionVolume
End
Draw = DefaultDraw

```



End  
End

FXParticleSystem GreenRadialBarbs; Meneldil altered original AragornElendill

```
System
  Priority = ALWAYS_RENDER
  ParticleName = EXBarbStreaks.tga
  Lifetime = 10 10
  SystemLifetime = 100; Meneldil added
  SortLevel = 1
  Size = 1 3; 50 50
  BurstCount = 1 2
  IsGroundAligned = Yes
End
Color = DefaultColor
  Color2 = R:0 G:100 B:0 5; R:65 G:100 B:222 5
  Color3 = R:255 G:255 B:255 10; R:0 G:0 B:0 10
End
Alpha = DefaultAlpha
End
Update = DefaultUpdate
  SizeRate = 1 2; 5 5
  SizeRateDamping = 1 1
  AngleZ = -6 6
  AngularDamping = 1 1
  Rotation = ROTATE_Z
End
Physics = DefaultPhysics
  VelocityDamping = 0 1; 0 8.07921e+33
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = PointEmissionVolume
End
Draw = DefaultDraw
End
End
```

FXParticleSystem WhiteGlimmer; Meneldil modified original GoldChestGlimmer

```
System
  Priority = CONSTANT
  ParticleName = EXSparkle.tga; Meneldil changed original EXGandalfStaffFlare.tga
  Lifetime = 10 90; Meneldil changed original 100 100
  SystemLifetime = 90; Meneldil added this line
  SortLevel = 1
  Size = 1 1; Meneldil changed original 5 5
  BurstDelay = 30 60; Meneldil added this line
  BurstCount = 1 1; Meneldil changed original 0.05 1.05
  IsEmitAboveGroundOnly = Yes
End
Color = DefaultColor
  Color2 = R:200 G:200 B:200 60; Meneldil changed original R:236 G:199 B:136 50
  Color3 = R:0 G:0 B:200 70; Meneldil changed original R:0 G:0 B:0 100
  Color4 = R:0 G:0 B:100 80; Meneldil added
  Color5 = R:0 G:0 B:0 90; Meneldil added
End
Alpha = DefaultAlpha
  Alpha1 = 1 1 0
End
Update = DefaultUpdate
  SizeRate = 0.1 0.1
```

```

    SizeRateDamping = 1 1
    AngleZ = -5 5
    AngularRateZ = -0.03 0.03
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0.85 0.95; Meneldil changed original 0.85 0.85
End
EmissionVelocity = OrthoEmissionVelocity
    X = -1 1
    Y = -1 1
    Z = 0.25 0.5
End
EmissionVolume = LineEmissionVolume
    StartPoint = X:-7 Y:0 Z:22; Meneldil changed original X:-7 Y:0 Z:8
    EndPoint = X:7 Y:0 Z:20; Meneldil changed original X:3 Y:0 Z:8
End
Draw = DefaultDraw
End
End

FXParticleSystem GreenGlow; Meneldil changed original glowGold
System
    Priority = ALWAYS_RENDER
    ParticleName = EXglow.tga
    Lifetime = 10 10
    SystemLifetime = 100
    Size = 40 40
    BurstCount = 1 1
End
Color = DefaultColor
    Color2 = R:0 G:25 B:0 25; Meneldil changed original R:62 G:41 B:0 25
End
Update = DefaultUpdate
End
Physics = DefaultPhysics
    Gravity = 0.08
    VelocityDamping = 0.8 0.85
End
EmissionVelocity = OutwardEmissionVelocity
End
EmissionVolume = LineEmissionVolume
    StartPoint = X:-5 Y:3 Z:0
    EndPoint = X:-5 Y:3 Z:0
End
Draw = DefaultDraw
End
End

FXParticleSystem RedGlow; Meneldil changed original glowGold
System
    Priority = ALWAYS_RENDER
    ParticleName = EXglow.tga
    Lifetime = 10 10
    SystemLifetime = 100
    Size = 40 40
    BurstCount = 1 1
End
Color = DefaultColor
    Color2 = R:25 G:0 B:0 25; Meneldil changed original R:62 G:41 B:0 25
End

```

```

Update = DefaultUpdate
End
Physics = DefaultPhysics
    Gravity = 0.08
    VelocityDamping = 0.8 0.85
End
EmissionVelocity = OutwardEmissionVelocity
End
EmissionVolume = LineEmissionVolume
    StartPoint = X:-5 Y:3 Z:0
    EndPoint = X:-5 Y:3 Z:0
End
Draw = DefaultDraw
End
End

```

FXParticleSystem BlueGlow; Meneldil changed original glowGold

```

System
    Priority = ALWAYS_RENDER
    ParticleName = EXglow.tga
    Lifetime = 10 10
    SystemLifetime = 100
    Size = 40 40
    BurstCount = 1 1
End
Color = DefaultColor
    Color2 = R:0 G:0 B:25 25; Meneldil changed original R:62 G:41 B:0 25
End
Update = DefaultUpdate
End
Physics = DefaultPhysics
    Gravity = 0.08
    VelocityDamping = 0.8 0.85
End
EmissionVelocity = OutwardEmissionVelocity
End
EmissionVolume = LineEmissionVolume
    StartPoint = X:-5 Y:3 Z:0
    EndPoint = X:-5 Y:3 Z:0
End
Draw = DefaultDraw
End
End

```

FXParticleSystem GreenGlimmer; Meneldil modified original GoldChestGlimmer

```

System
    Priority = CONSTANT
    ParticleName = EXGandalfStaffFlare.tga
    Lifetime = 90 90; Meneldil changed original 100 100
    SystemLifetime = 90; Meneldil added this line
    SortLevel = 1
    Size = 1 1; Meneldil changed original 5 5
    BurstDelay = 30 60; Meneldil added this line
    BurstCount = 1 2; Meneldil changed original 0.05 1.05
    IsEmitAboveGroundOnly = Yes
End
Color = DefaultColor
    Color2 = R:50 G:200 B:100 60; Meneldil changed original R:236 G:199 B:136 50
    Color3 = R:0 G:255 B:0 85; Meneldil changed original R:0 G:0 B:0 100
End
Alpha = DefaultAlpha

```

```

    Alpha1 = 1 1 0
End
Update = DefaultUpdate
    SizeRate = 0.1 0.1
    SizeRateDamping = 1 1
    AngleZ = -5 5
    AngularRateZ = -0.03 0.03
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0.85 0.95; Meneldil changed original 0.85 0.85
End
EmissionVelocity = OrthoEmissionVelocity
    X = -1 1
    Y = -1 1
    Z = 0.25 0.5
End
EmissionVolume = LineEmissionVolume
    StartPoint = X:-7 Y:0 Z:20; Meneldil changed original X:-7 Y:0 Z:8
    EndPoint = X:7 Y:0 Z:18; Meneldil changed original X:3 Y:0 Z:8
End
Draw = DefaultDraw
End
End

FXParticleSystem BlueGlimmer; Meneldil modified original GoldChestGlimmer
System
    Priority = CONSTANT
    ParticleName = EXGandalfStaffFlare.tga
    Lifetime = 90 90; Meneldil changed original 100 100
    SystemLifetime = 90; Meneldil added this line
    SortLevel = 1
    Size = 1 1; Meneldil changed original 5 5
    BurstDelay = 30 60; Meneldil added this line
    BurstCount = 1 2; Meneldil changed original 0.05 1.05
    IsEmitAboveGroundOnly = Yes
End
Color = DefaultColor
    Color2 = R:105 G:135 B:255 60; Meneldil changed original R:236 G:199 B:136 50
    Color3 = R:0 G:0 B:255 85; Meneldil changed original R:0 G:0 B:0 100
End
Alpha = DefaultAlpha
    Alpha1 = 1 1 0
End
Update = DefaultUpdate
    SizeRate = 0.1 0.1
    SizeRateDamping = 1 1
    AngleZ = -5 5
    AngularRateZ = -0.03 0.03
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0.85 0.95; Meneldil changed original 0.85 0.85
End
EmissionVelocity = OrthoEmissionVelocity
    X = -1 1
    Y = -1 1
    Z = 0.25 0.5
End
EmissionVolume = LineEmissionVolume
    StartPoint = X:-7 Y:0 Z:20; Meneldil changed original X:-7 Y:0 Z:8

```

```

EndPoint = X:7 Y:0 Z:18; Meneldil changed original X:3 Y:0 Z:8
End
Draw = DefaultDraw
End
End

```

Summary:

1. The leadership effects are now all unique.
2. When choosing a special effect, but sure that “**SystemLifetime**” or “**IsOneShot**” appears in the code otherwise the FX will continue even after the source of the aura is no longer present.
3. Use FX that don’t bog down your CPU or that cause your computer screen to become overwhelmed.
4. In the above example, I created red, green, and blue effects (“redglow,” “greenglow,” and “blueglow”). Depending on which heroes are nearby, the colors will blend to create secondary colors.
5. You may find that leadership effects can become overwhelming. If so, simply comment them out in the attributemodifier.ini file. My personal preference is to turn off leadership effects generated by heroes but to keep them present for leadership effects generated by structures (e.g., Elven Wood & Heroic Statues).

There are a number of existing special effects that have a system lifetime in the fxparticlesystem.ini file that you may want to try. Here is a partial listing:

<b>AODLightShafts</b>	<b>EntSproutButterflies</b>
<b>AODsummonLightShafts</b>	<b>FireworkSpark</b>
<b>balrogFireRingSparksTest</b>	<b>GandalfCrystalPixies</b>
<b>BalrogFootEmbers</b>	<b>GandalfHeavenRaysMotes</b>
<b>balrogGroundGlow</b>	<b>GandalfHeavenRaysMotesSmall</b>
<b>BalrogHandEmbers</b>	<b>glowGenericBuff</b>
<b>balrogHandGlow</b>	<b>glowGold</b>
<b>balrogLandingEmbers</b>	<b>GoldChestPickupSparkle</b>
<b>balrogPixelDisplEfx</b>	<b>LeadershipFlareReceive</b>
<b>balrogPixelDisplScrm</b>	<b>LeadershipFlareReceive02</b>
<b>BatteringRamUpgradesparks</b>	<b>LightningCharge</b>
<b>BloodyHeadDust</b>	<b>LitePoint</b>
<b>BoromirForGondor</b>	<b>MinePoof</b>
<b>BoromirForGondorFollower</b>	<b>PhialofGaladriel</b>
<b>DoughnutCloud</b>	<b>WitchKingCursed</b>
<b>Draft</b>	<b>WitchKingDeathRays</b>
<b>ElvenAlliesButterflies</b>	<b>WitchKingPoison</b>
<b>ElvenCloak</b>	<b>HowlGlowWargRear</b>
<b>ElvenWoodButterflies</b>	<b>HowlGlowWarg</b>
<b>ElvenWoodSummonShafts</b>	<b>TreeBeardAuraShafts</b>

This completes our Gondor hero modifications. We'll now turn to other Gondor faction modifications.

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

### **Disabling Gondor Knight Combo Hordes**

What if there are some existing horde combinations that you don't like? In this example, we'll be disabling the following combinations:

- Knights and Soldiers
- Knights and Tower Guards

To do this, we have to look at knights, soldiers, and tower guards, including each of their formations. In the data\ini\objects\goodfaction\hordes\gondor\gondorhordes.ini file, search for the following codes and comment them out, as shown below.

#### **Under "Object GondorFighterHorde"**

```
;ComboHorde = Target:GondorKnightHorde      Result:GondorKnightFighterComboHorde  
InitiateVoice:GondorSoldierVoiceJoinAnybody; (Meneldil disabled)
```

```
;ComboHorde = Target:GondorKnightHordeWedgeFormation  
Result:GondorKnightFighterComboHorde      InitiateVoice:TowerGuardVoiceJoinKnights;  
(Meneldil disabled)
```

#### **Under "ChildObject GondorFighterHordeBlock"**

```
;ComboHorde = Target:GondorKnightHorde Result:GondorKnightFighterComboHorde  
InitiateVoice:GondorSoldierVoiceJoinAnybody (Meneldil disabled)
```

```
;ComboHorde = Target:GondorKnightHordeWedgeFormation  
Result:GondorKnightFighterComboHorde      InitiateVoice:TowerGuardVoiceJoinKnights  
(Meneldil disabled)
```

#### **Under "Object GondorTowerShieldGuardHorde"**

```
;ComboHorde = Target:GondorKnightHorde  
Result:GondorKnightTowerShieldGuardComboHorde  
InitiateVoice:TowerGuardVoiceJoinKnights; (Meneldil disabled)
```

```
;ComboHorde = Target:GondorKnightHordeWedgeFormation  
Result:GondorKnightTowerShieldGuardComboHorde  
InitiateVoice:TowerGuardVoiceJoinKnights; (Meneldil disabled)
```

#### **Under "ChildObject GondorTowerShieldGuardHordeWallFormation"**

```
;ComboHorde = Target:GondorKnightHorde  
Result:GondorKnightTowerShieldGuardComboHorde  
InitiateVoice:TowerGuardVoiceJoinKnights; (Meneldil disabled)
```

```
;ComboHorde = Target:GondorKnightHordeWedgeFormation  
Result:GondorKnightTowerShieldGuardComboHorde  
InitiateVoice:TowerGuardVoiceJoinKnights; (Meneldil disabled)
```

#### **Under "Object GondorKnightHorde"**

```
;ComboHorde = Target:GondorFighterHorde  
Result:GondorKnightFighterComboHorde  
InitiateVoice:GondorKnightVoiceJoinAnybody (Meneldil disabled)
```

```
;ComboHorde = Target:GondorTowerShieldGuardHorde  
Result:GondorKnightTowerShieldGuardComboHorde  
InitiateVoice:GondorKnightVoiceJoinAnybody (Meneldil disabled)
```

```
;ComboHorde = Target:GondorFighterHordeBlock  
Result:GondorKnightFighterComboHorde  
InitiateVoice:GondorKnightVoiceJoinAnybody (Meneldil disabled)
```

```
;ComboHorde = Target:GondorTowerShieldGuardHordeWallFormation  
Result:GondorKnightTowerShieldGuardComboHorde  
InitiateVoice:GondorKnightVoiceJoinAnybody (Meneldil disabled)
```

Under “ChildObject GondorKnightHordeWedgeFormation”

```
;ComboHorde = Target:GondorFighterHorde  
Result:GondorKnightFighterComboHorde  
InitiateVoice:GondorKnightVoiceJoinAnybody (Meneldil disabled)
```

```
;ComboHorde = Target:GondorTowerShieldGuardHorde  
Result:GondorKnightTowerShieldGuardComboHorde  
InitiateVoice:GondorKnightVoiceJoinAnybody (Meneldil disabled)
```

```
;ComboHorde = Target:GondorFighterHordeBlock  
Result:GondorKnightFighterComboHorde  
InitiateVoice:GondorKnightVoiceJoinAnybody (Meneldil disabled)
```

```
;ComboHorde = Target:GondorTowerShieldGuardHordeWallFormation  
Result:GondorKnightTowerShieldGuardComboHorde  
InitiateVoice:GondorKnightVoiceJoinAnybody (Meneldil disabled)
```

Doing this will prevent knights from combining with swordmen or spearmen. You should be able to easily figure this out from the above codes.

Later on, we’ll show how to split a combo horde. Therefore, you may want to leave these combinations in place and add the ability to split the horde if desired.

## Adding Tower Guard – Fighter Combo Horde

What if you want to create an all new combo horde (or battalion)? In this example, we'll make it such that Gondor Fighters and Tower Guards can combine if they are both in block and shield wall formations, respectively (makes it harder to accidentally combine battalions).

### data\ini\attributemodifier.ini

ModifierList PhalanxComboHorde; added by Meneldil for combo horde alternate formation

```
Category = FORMATION
Modifier = DAMAGE_MULT 110%; 10% damage increase
Modifier = ARMOR 10% ; 10% armor increase
Duration = 0 ; Duration is forever when zero
```

End

### data\ini\commandset.ini

CommandSet GondorTowerFighterComboHordeCommandSet; added by Meneldil

```
1 = Command_Guard
2 = Command_AttackMove
3 = Command_Stop
4 = Command_PurchaseUpgradeGondorBasicTraining
5 = Command_PurchaseUpgradeGondorHeavyArmor
6 = Command_PurchaseUpgradeGondorForgedBlades
```

End

### data\ini\experiencelevels.ini

Add "GondorTowerFighterComboHorde" to "GoodEliteLevel1" through "GoodEliteLevel10" so that the new battalion can level up properly. I also commented out "TowerGuardLevel2" and moved the target names to "GoodEliteLevel1" and "GoodEliteLevel2" (just the names that weren't already present).

### data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini

Under "Object GondorFighterHorde" object code, add this to the alternate formation:

```
ComboHorde = Target:GondorTowerShieldGuardHordeWallFormation
Result:GondorFighterArcherComboHorde InitiateVoice:GondorSoldierVoiceJoinAnybody;
added by Meneldil
```

Under "ChildObject GondorFighterHordeBlock" object code, add this to the normal formation:

```
ComboHorde = Target:GondorTowerShieldGuardHorde
Result:GondorTowerFighterComboHorde InitiateVoice:GondorSoldierVoiceJoinAnybody;
added by Meneldil
```

Under "ChildObject GondorFighterHordeBlock" object code, add this to the alternate formation:

```
ComboHorde = Target:GondorTowerShieldGuardHordeWallFormation
Result:GondorTowerFighterComboHorde InitiateVoice:GondorSoldierVoiceJoinAnybody;
added by Meneldil
```

Under "Object GondorTowerShieldGuardHorde" object code, add this to the alternate formation:

```
ComboHorde = Target:GondorFighterHordeBlock Result:GondorTowerFighterComboHorde
InitiateVoice:TowerGuardVoiceJoinAnybody; added by Meneldil
```

Under "ChildObject GondorTowerShieldGuardHordeWallFormation" object code, add this to the normal formation:

```
ComboHorde = Target:GondorFighterHorde Result:GondorTowerFighterComboHorde
InitiateVoice:TowerGuardVoiceJoinAnybody; added by Meneldil
```

Under "ChildObject GondorTowerShieldGuardHordeWallFormation" object code, add this to the alternate formation:

```
ComboHorde = Target:GondorFighterHordeBlock Result:GondorTowerFighterComboHorde
InitiateVoice:TowerGuardVoiceJoinAnybody; added by Meneldil
```



Add this to the bottom of the file:

```
-----  
ChildObject GondorTowerFighterComboHorde GondorTowerArcherComboHorde; added by  
Meneldil  
  
    DisplayName = OBJECT:HordeGondorTowerGuardFighterCombo; added this to the  
lotr.str file  
    CommandSet = GondorTowerFighterComboHordeCommandSet; added this to CommandSet  
ini file  
  
    WeaponSet  
        Conditions = None  
        Weapon = PRIMARY NormalMeleeHordeRangefinder  
    End  
  
    KindOf = SELECTABLE CAN_ATTACK ATTACK_NEEDS_LINE_OF_SIGHT INFANTRY HORDE  
MELEE_HORDE NOTIFY_OF_PREATTACK ARMY_SUMMARY  
  
    Behavior = HordeAIUpdate ModuleTag_HordeAIUpdate  
        AutoAcquireEnemiesWhenIdle = Yes ATTACK_BUILDINGS  
        MoodAttackCheckRate = 500  
        MaxCowerTime = 5000  
        MinCowerTime = 3000  
        CanAttackWhileContained = No  
        AILuaEventsList = InfantryFunctions  
        AttackPriority = AttackPriority_Spearman  
    End  
  
    Behavior = HordeContain ModuleTag_HordeContain  
        ObjectStatusOfContained =  
        InitialPayload = GondorFighter 5  
        InitialPayload = GondorTowerShieldGuard 5  
        Slots = 10  
        PassengerFilter = NONE +INFANTRY  
        ShowPips = No  
        ThisFormationIsTheMainFormation = Yes ;Used to determine which armorset  
to use (and anything else we want!)  
        SplitHorde = SplitResult:GondorTowerShieldGuardHorde  
UnitType:GondorTowerShieldGuard  
        SplitHorde = SplitResult:GondorFighterHorde  
UnitType:GondorFighter  
        AttributeModifiers = PhalanxComboHorde  
  
        ; Banner Carrier info  
        BannerCarriersAllowed = GondorBanner  
        ; Arrange the troop in a phalanx (positions use X-Y grid)  
        BannerCarrierPosition = UnitType:GondorFighter Pos:X:20 Y:0  
        RankInfo = RankNumber:1 UnitType:GondorFighter Position:X:-20  
Y:0 Position:X:-10 Y:20 Position:X:-10 Y:-20 Position:X:-20 Y:40 Position:X:-20 Y:-  
40  
        RankInfo = RankNumber:2 UnitType:GondorTowerShieldGuard Position:X:0 Y:0  
Position:X:10 Y:20 Position:X:10 Y:-20 Position:X:0 Y:40 Position:X:0 Y:-40  
  
        RanksThatStopAdvance = 1  
        RanksToReleaseWhenAttacking = 1 2  
        RanksToJustFreeWhenAttacking = 1 2  
        MeleeAttackLeashDistance = 60; How far the hordes can move from the center  
of the horde when melee attacking.  
    End  
  
End
```

## **data\lotr.str**

OBJECT:HordeGondorTowerGuardFighterCombo

"Tower Guard - Soldier Battalion"

END

CONTROLBAR:ToolTipToggleGFighterLineToBlockFormation

"+25% Armor, -40% Speed \n Can combine with Shield Wall Formation Tower Guards"

END

CONTROLBAR:ToolTipToggleTowerGuardLineToShieldWallFormation

"+40% Armor, -50% Speed \n Can combine with Block Formation Soldiers"

END

Note: The last 2 are existing entries – I just modified the text.

For additional information about combo hordes, you may want to check out this tutorial by “GothmogtheOrc”:

<http://www.the3rdage.net/item-66?addview>

## Adding a New Toggle Formation

Objective: Provide the ability to put a combo horde into an alternative formation.

In this example, we'll provide our new Gondor Tower Guard/Fighter combo horde the ability to toggle between the Phalanx Formation we previously created and a new Dispersed Formation. The purpose of the Dispersed Formation is to allow the battalion to run quickly (e.g., away from an eagle or fell beast); in this case 100% faster. To compensate for the 2x speed, we'll take a 100% armor hit and totally remove the ability to inflict damage. We'll also create new voice references (using existing files).

### data\ini\attributemodifier.ini

ModifierList PhalanxComboHorde; added by Meneldil for combo horde alternate formation

```
Category = FORMATION
Modifier = DAMAGE_MULT 110%; 10% damage increase
Modifier = ARMOR 10% ; 10% armor increase
Duration = 0 ; Duration is forever when zero
```

End

ModifierList DispersedComboHorde; added by Meneldil for running combo horde formation

```
Category = FORMATION
Modifier = DAMAGE_MULT 0%; No damage
Modifier = ARMOR -100% ; 100% armor reduction
Modifier = SPEED 200% ; 100% speed increase
Duration = 0 ; Duration is forever when zero
```

End

### data\ini\commandbutton.ini

CommandButton Command\_ToggleFormationGondorTowerFighterComboHorde; added by Meneldil for Gondor Soldier/Tower Guard Combo Hordes

```
Command = HORDE_TOGGLE_FORMATION
Options = TOGGLE_IMAGE_ON_FORMATION OK_FOR_MULTI_SELECT
ButtonImage = UCFormation_Tight UCFormation_Loose
ButtonBorderStyle = ACTION; Identifier for the User as to what kind of
button this is
TextLabel = CONTROLBAR:TogglePhalanxFormation
CONTROLBAR:ToggleDispersedFormation
DescriptLabel = CONTROLBAR:ToolTipTogglePhalanxComboFormation
CONTROLBAR:ToolTipToggleDispersedComboFormation
InPalantir = Yes
DoubleClick = Yes
UnitSpecificSound = GondorTowerFighterVoicePhalanx
```

GondorTowerFighterVoiceDisperse

End

### data\ini\commandset.ini

CommandSet GondorTowerFighterComboHordeCommandSet; added by Meneldil

```
1 = Command_Guard
2 = Command_AttackMove
3 = Command_ToggleFormationGondorTowerFighterComboHorde
4 = Command_PurchaseUpgradeGondorForgedBlades
5 = Command_PurchaseUpgradeGondorHeavyArmor
6 = Command_PurchaseUpgradeGondorBasicTraining
7 = Command_Stop
```

End

## data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini

```
-----  
ChildObject GondorTowerFighterComboHorde GondorTowerArcherComboHorde; added by  
Meneldil  
  
    DisplayName = OBJECT:HordeGondorTowerGuardFighterCombo; added this to the  
LOTR.str file  
    CommandSet = GondorTowerFighterComboHordeCommandSet; added this to CommandSet  
ini file  
  
    WeaponSet  
        Conditions = None  
        Weapon = PRIMARY NormalMeleeHordeRangefinder  
    End  
  
    KindOf = SELECTABLE CAN_ATTACK ATTACK_NEEDS_LINE_OF_SIGHT INFANTRY HORDE  
MELEE_HORDE NOTIFY_OF_PREATTACK ARMY_SUMMARY  
  
    Behavior = HordeAIUpdate ModuleTag_HordeAIUpdate  
        AutoAcquireEnemiesWhenIdle = Yes ATTACK_BUILDINGS  
        MoodAttackCheckRate = 500  
        MaxCowerTime = 5000  
        MinCowerTime = 3000  
        CanAttackWhileContained = No  
        AILuaEventsList = InfantryFunctions  
        AttackPriority = AttackPriority_Spearman  
    End  
  
    Behavior = HordeContain ModuleTag_HordeContain  
        ObjectStatusOfContained =  
        InitialPayload = GondorFighter 5  
        InitialPayload = GondorTowerShieldGuard 5  
        Slots = 10  
        PassengerFilter = NONE +INFANTRY  
        ShowPips = No  
        ThisFormationIsTheMainFormation = No  
        SplitHorde = SplitResult:GondorTowerShieldGuardHorde  
UnitType:GondorTowerShieldGuard  
        SplitHorde = SplitResult:GondorFighterHorde  
UnitType:GondorFighter  
        AttributeModifiers = PhalanxComboHorde  
  
        ; Banner Carrier info  
        BannerCarriersAllowed = GondorBanner  
  
        ; Arrange the troop in a phalanx (positions use X-Y grid)  
        BannerCarrierPosition = UnitType:GondorFighter Pos:X:20 Y:0  
        RankInfo = RankNumber:1 UnitType:GondorTowerShieldGuard Position:X:0  
Y:40 Position:X:10 Y:20 Position:X:0 Y:0 Position:X:10 Y:-20 Position:X:0 Y:-  
40  
        RankInfo = RankNumber:2 UnitType:GondorFighter Position:X:-20  
Y:40 Position:X:-10 Y:20 Position:X:-20 Y:0 Position:X:-10 Y:-20 Position:X:-20 Y:-  
40  
  
        RanksThatStopAdvance = 1  
        RanksToReleaseWhenAttacking = 1 2  
        RanksToJustFreeWhenAttacking = 1 2  
  
        MeleeAttackLeashDistance = 60; How far the hordes can move from the center  
of the horde when melee attacking.
```

```

        AlternateFormation = GondorTowerFighterComboHordeDispersed; added to allow
new formation
    End

End

;-----
ChildObject GondorTowerFighterComboHordeDispersed GondorTowerFighterComboHorde;
added by Meneldil

    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained =
        InitialPayload = GondorFighter 5
        InitialPayload = GondorTowerShieldGuard 5
        Slots = 10
        PassengerFilter = NONE +INFANTRY
        ShowPips = No
        ThisFormationIsTheMainFormation = Yes
        SplitHorde = SplitResult:GondorTowerShieldGuardHorde
UnitType:GondorTowerShieldGuard
        SplitHorde = SplitResult:GondorFighterHorde
UnitType:GondorFighter
        AttributeModifiers = DispersedComboHorde

        ; Banner Carrier info
        BannerCarriersAllowed = GondorBanner

        ; Spread the troops out (positions use X-Y grid)
        BannerCarrierPosition = UnitType:GondorFighter Pos:X:80 Y:0
        RankInfo = RankNumber:1 UnitType:GondorFighter Position:X:40 Y:0
Position:X:0 Y:0 Position:X:-40 Y:-40 Position:X:-40 Y:40 Position:X:-80 Y:0
        RankInfo = RankNumber:2 UnitType:GondorTowerShieldGuard Position:X:40
Y:40 Position:X:40 Y:-40 Position:X:0 Y:80 Position:X:0 Y:-80 Position:X:-40
Y:0
        AlternateFormation = GondorTowerFighterComboHorde
    End

End

```

Note: I highlighted the key code differences above. Did you notice that I changed the main formation status for the regular combo horde from “Yes” to “No?” This is so that the tower guards “run” with their shields by their sides when in the dispersed formation. They will have their shields up in the phalanx formation as well as shield wall formation. As a result, the command button entries for “ButtonImage,” “TextLabel,” “DescriptLabel,” and “UnitSpecificSound” are switched from what they would normally be.

### data\ini\voice.ini

```

AudioEvent GondorTowerFighterVoicePhalanx; added by Meneldil
    Sounds = gusoldg_voilineb gusoldg_voilinec gusoldg_voifera gusoldg_voiferb
gusoldg_voiferd gusoldg_voiferg gutower_voifera gutower_voiferc gutower_voiferd
    Volume = UNIT_RESPONSE_VOLUME
    MinVolume = UNIT_RESPONSE_MINVOLUME
    Type = world player voice
    SubmixSlider = voice
End

AudioEvent GondorTowerFighterVoiceDisperse; added by Meneldil
    Sounds = gusoldg_voiretb gusoldg_voiretd gusoldg_voimovb gusoldg_voimovh
gusoldg_voimovi gusoldg_voimovk gutower_voimovd gutower_voimovh gutower_voireta
    Volume = UNIT_RESPONSE_VOLUME
    MinVolume = UNIT_RESPONSE_MINVOLUME
    Type = world player voice

```

```
SubmixSlider = voice
End
```

Note: Making the above voice changes is optional. I did it to help reinforce the formation changes.

### **data\lotr.str**

```
CONTROLBAR:TogglePhalanxFormation
"Sword/Spear Fo&rmation"
END
```

```
CONTROLBAR:ToolTipTogglePhalanxComboFormation
"+10% Damage, +10% Armor"
END
```

```
CONTROLBAR:ToggleDispersedFormation
"Dispersed Fo&rmation"
END
```

```
CONTROLBAR:ToolTipToggleDispersedComboFormation
"No Damage, -100% Armor, +100% Speed"
END
```

Note: Instead of creating the “ToolTipTogglePhalanxComboFormation” control bar, I could have used an existing one, such as “**MeleeRangedComboHorde**” or “**PikeRangedComboHorde**.” However, I wanted to provide the option for using different attribute modifiers if desired.

Refer to <http://www.the3rdage.net/item-462?addview> for another tutorial on alternate formations.

## **Splitting a Combo Horde**

Objective: Split a combo horde back into its two original hordes, except that the combo horde upgrades and levels are maintained in the individual hordes.

The original game does not allow you to split combo hordes back into their primary hordes, probably because it provides a sneaky way to upgrade hordes. However, what if wish to recombine your hordes (or battalions)? It turns out that the capability is there if you want to use it. When you split a horde, armor and weapon upgrades are maintained. Also, each separate horde will be at the same rank as the combo horde just before splitting. If you like, you can recombine the hordes back into the same or a new combo horde. Recall that when combining hordes, the new combo horde will incorporate the best upgrades of the individual hordes. Note that if you split a combo horde while an upgrade is in progress, you will most likely lose that upgrade and will have to purchase it again.

In this example, we'll provide this capability to our Gondor Tower Guard/Fighter combo horde by adjusting the command set as follows:

```
CommandSet GondorTowerFighterComboHordeCommandSet; added by Meneldil
  1 = Command_ToggleFormationGondorTowerFighterComboHorde
  2 = Command_Guard
  3 = Command_PurchaseUpgradeGondorForgedBlades
  4 = Command_PurchaseUpgradeGondorHeavyArmor
  5 = Command_PurchaseUpgradeGondorBasicTraining
  6 = Command_SplitHorde
  7 = Command_AttackMove
  8 = Command_Stop
End
```

As you can see, all we had to do was add “Command\_SplitHorde” to the command set. This is because the main coding is already present in the horde's ini file.

Be sure the following code block is in your horde (or the parent horde if using a child object):

```
Behavior = SplitHordeSpecialPower ModuleTag_SplitHorde
SpecialPowerTemplate = SpecialAbilitySplitHorde
End
```

The above code block already exists, so we didn't have to add it. Also, you'll need to be sure that the coding is in place for how to split the combo horde. For example, here's the relevant code for the Gondor Fighter/Archer combo horde (“GondorFighterArcherComboHorde”):

```
SplitHorde = SplitResult:GondorFighterHorde      UnitType:GondorFighter
SplitHorde = SplitResult:GondorArcherHorde      UnitType:GondorArcher
```

Originally, we made it so that Tower Guards and Fighters could only combine if they were in their Shield Wall and Block Formations, respectively. This was to make it more difficult to accidentally combine battalions and permanently create a new formation. Now that we can easily split our combo battalion back into its constituent hordes, we can change the coding such that Tower Guards and Fighters can combine regardless of their formations. All you need to do is go back to your gondorhordes.ini file and update the formation code blocks.

Under “Object GondorFighterHorde” here is the formation code section:

```
; Normal Formations
ComboHorde = Target:GondorArcherHorde
Result:GondorFighterArcherComboHorde
InitiateVoice:GondorSoldierVoiceJoinAnybody
ComboHorde = Target:GondorRangerHorde
Result:GondorFighterRangerComboHorde
InitiateVoice:GondorSoldierVoiceJoinAnybody
```

```

        ;ComboHorde = Target:GondorKnightHorde
Result:GondorKnightFighterComboHorde
InitiateVoice:GondorSoldierVoiceJoinAnybody; (Meneldil disabled)
        ComboHorde = Target:GondorTowerShieldGuardHorde
Result:GondorTowerFighterComboHorde  InitiateVoice:GondorSoldierVoiceJoinAnybody;
added by Meneldil

```

```

        ; Alternate formations
        ;ComboHorde = Target:GondorKnightHordeWedgeFormation
Result:GondorKnightFighterComboHorde
InitiateVoice:TowerGuardVoiceJoinKnights; (Meneldil disabled)
        ComboHorde = Target:GondorArcherHordeWedgeFormation
Result:GondorFighterArcherComboHorde
InitiateVoice:TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorRangerHordeAmbushFormation
Result:GondorFighterRangerComboHorde
InitiateVoice:TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorTowerShieldGuardHordeWallFormation
Result:GondorTowerFighterComboHorde  InitiateVoice:GondorSoldierVoiceJoinAnybody;
added by Meneldil

```

Under “Object GondorFighterHordeBlock” here is the formation code section:

```

        ; Normal formations
        ComboHorde = Target:GondorArcherHorde
Result:GondorFighterArcherComboHorde
        InitiateVoice:GondorSoldierVoiceJoinAnybody
        ComboHorde = Target:GondorRangerHorde
Result:GondorFighterRangerComboHorde
        InitiateVoice:GondorSoldierVoiceJoinAnybody
        ;ComboHorde = Target:GondorKnightHorde
Result:GondorKnightFighterComboHorde
        InitiateVoice:GondorSoldierVoiceJoinAnybody; (Meneldil disabled)
        ComboHorde = Target:GondorTowerShieldGuardHorde
Result:GondorTowerFighterComboHorde  InitiateVoice:GondorSoldierVoiceJoinAnybody;
added by Meneldil

```

```

        ; Alternate formations
        ;ComboHorde = Target:GondorKnightHordeWedgeFormation
Result:GondorKnightFighterComboHorde
InitiateVoice:TowerGuardVoiceJoinKnights; (Meneldil disabled)
        ComboHorde = Target:GondorArcherHordeWedgeFormation
Result:GondorFighterArcherComboHorde
InitiateVoice:TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorRangerHordeAmbushFormation
Result:GondorFighterRangerComboHorde
InitiateVoice:TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorTowerShieldGuardHordeWallFormation
Result:GondorTowerFighterComboHorde  InitiateVoice:GondorSoldierVoiceJoinAnybody;
added by Meneldil

```

Under “Object GondorTowerShieldGuardHorde” here is the formation code section:

```

        ; Normal formations
        ;ComboHorde = Target:GondorKnightHorde
Result:GondorKnightTowerShieldGuardComboHorde
InitiateVoice:TowerGuardVoiceJoinKnights; (Meneldil disabled)
        ComboHorde = Target:GondorArcherHorde
Result:GondorTowerArcherComboHorde
InitiateVoice:TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorRangerHorde
Result:GondorTowerRangerComboHorde
InitiateVoice:TowerGuardVoiceJoinArchers

```



```

        ComboHorde = Target:GondorFighterHorde
Result:GondorTowerFighterComboHorde  InitiateVoice: TowerGuardVoiceJoinAnybody;
added by Meneldil

        ; Alternate formations
        ; ComboHorde = Target:GondorKnightHordeWedgeFormation
Result:GondorKnightTowerShieldGuardComboHorde
InitiateVoice: TowerGuardVoiceJoinKnights; (Meneldil disabled)
        ComboHorde = Target:GondorArcherHordeWedgeFormation
Result:GondorTowerArcherComboHorde
InitiateVoice: TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorRangerHordeAmbushFormation
Result:GondorTowerRangerComboHorde
InitiateVoice: TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorFighterHordeBlock
Result:GondorTowerFighterComboHorde  InitiateVoice: TowerGuardVoiceJoinAnybody;
added by Meneldil

```

Under “Object GondorTowerShieldGuardHordeWallFormation” here is the formation code section:

```

        ; Normal formations
        ; ComboHorde = Target:GondorKnightHorde
Result:GondorKnightTowerShieldGuardComboHorde
InitiateVoice: TowerGuardVoiceJoinKnights; (Meneldil disabled)
        ComboHorde = Target:GondorArcherHorde
Result:GondorTowerArcherComboHorde
InitiateVoice: TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorRangerHorde
Result:GondorTowerRangerComboHorde
InitiateVoice: TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorFighterHorde
Result:GondorTowerFighterComboHorde  InitiateVoice: TowerGuardVoiceJoinAnybody;
added by Meneldil

        ; Alternate formations
        ; ComboHorde = Target:GondorKnightHordeWedgeFormation
Result:GondorKnightTowerShieldGuardComboHorde
InitiateVoice: TowerGuardVoiceJoinKnights; (Meneldil disabled)
        ComboHorde = Target:GondorArcherHordeWedgeFormation
Result:GondorTowerArcherComboHorde
InitiateVoice: TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorRangerHordeAmbushFormation
Result:GondorTowerRangerComboHorde
InitiateVoice: TowerGuardVoiceJoinArchers
        ComboHorde = Target:GondorFighterHordeBlock
Result:GondorTowerFighterComboHorde  InitiateVoice: TowerGuardVoiceJoinAnybody;
added by Meneldil

```

We can also return the control bars back to their original text descriptions, as shown below.

### data\lotr.str

```

CONTROLBAR:ToolTipToggleGFighterLineToBlockFormation
"+25% Armor, -40% Speed"
END

```

```

CONTROLBAR:ToolTipToggleTowerGuardLineToShieldWallFormation
"+40% Armor, -50% Speed"
END

```

Generally, I think of evil factions (Mordor & Isengard) having “hordes” and good factions (Gondor & Rohan) having “battalions” even though they really are the same. If you like, you can create a new command for splitting

battalions. Functionally, it will be the same as splitting a horde, except that the text descriptors will read differently.

### data\ini\commandbutton.ini

```
CommandButton Command_SplitHorde
  Command          = SPECIAL_POWER
  SpecialPower     = SpecialAbilitySplitHorde
  Options          = OK_FOR_MULTI_SELECT
  TextLabel        = CONTROLBAR:SplitHorde
  ButtonImage      = UCFormation_Split
  DescriptLabel    = CONTROLBAR:TooltipSplitHorde
  InPalantir       = Yes
End
```

Copy the above original and modify it as follows:

```
CommandButton Command_SplitBattalion; added by Meneldil for Rohan and Gondor
  Command          = SPECIAL_POWER
  SpecialPower     = SpecialAbilitySplitHorde
  Options          = OK_FOR_MULTI_SELECT
  TextLabel        = CONTROLBAR:SplitBattalion
  ButtonImage      = UCFormation_Split
  DescriptLabel    = CONTROLBAR:TooltipSplitBattalion
  InPalantir       = Yes
End
```

### data\lotr.str

```
CONTROLBAR:SplitHorde
"Split Horde"
END
```

```
CONTROLBAR:TooltipSplitHorde
"Split double horde back into two single hordes"
END
```

Note: The above control bars already exist – I just changed the text descriptions. The ones below are new.

```
CONTROLBAR:SplitBattalion
"Split Ba&ttalion"
END
```

```
CONTROLBAR:TooltipSplitBattalion
"Split double battalion back into two single battalions"
END
```

Let's go ahead and provide "Disperse Formation" and "Split Battalion" capabilities to the remaining Gondor combo hordes (excluding the Knight combo hordes we previously disabled):

- Soldier – Archer Battalion (Object GondorFighterArcherComboHorde)
- Soldier – Ranger Battalion (Object GondorFighterRangerComboHorde)
- Tower Guard – Archer Battalion (Object GondorTowerArcherComboHorde)
- Tower Guard – Range Battalion (Object GondorTowerRangerComboHorde)

### data\ini\attributemodifier.ini

```
ModifierList MeleeRangedComboHorde
  Category = SPELL
  Modifier = DAMAGE_MULT 110%
  Modifier = ARMOR 10%
```

```
Duration = 0
End
```

```
ModifierList PikeRangedComboHorde
  Category = SPELL
  Modifier = DAMAGE_MULT 120%
  Duration = 0
End
```

```
ModifierList DispersedComboHorde; added by Meneldil for running combo horde
formation
  Category = FORMATION
  Modifier = DAMAGE_MULT 0%; No damage
  Modifier = ARMOR -100% ; 100% armor reduction
  Modifier = SPEED 200% ; 100% speed increase
  Duration = 0 ; Duration is forever when zero
End
```

Note: The first 2 attribute modifiers above already exist and are shown for reference; the third we already added.

### data\ini\commandbutton.ini

CommandButton Command\_ToggleFormationGondorFighterRangerComboHorde; added by Meneldil for Gondor Soldier/Ranger Combo Hordes

```
  Command = HORDE_TOGGLE_FORMATION
  Options = TOGGLE_IMAGE_ON_FORMATION_OK_FOR_MULTI_SELECT
  ButtonImage = UCFormation_Loose UCFormation_Tight
  ButtonBorderType = ACTION ; Identifier for the User as to what kind of
button this is
  TextLabel = CONTROLBAR:ToggleDispersedFormation
CONTROLBAR:ToggleMeleeRangedComboHorde
  DescriptLabel = CONTROLBAR:ToolTipToggleDispersedComboFormation
CONTROLBAR:ToolTipToggleMeleeRangedComboHorde
  InPalantir = Yes
  DoubleClick = Yes
  UnitSpecificSound = GondorFighterRangerVoiceDisperse
GondorFighterRangerVoicePhalanx
End
```

CommandButton Command\_ToggleFormationGondorFighterArcherComboHorde; added by Meneldil for Gondor Soldier/Archer Combo Hordes

```
  Command = HORDE_TOGGLE_FORMATION
  Options = TOGGLE_IMAGE_ON_FORMATION_OK_FOR_MULTI_SELECT
  ButtonImage = UCFormation_Loose UCFormation_Tight
  ButtonBorderType = ACTION ; Identifier for the User as to what kind of
button this is
  TextLabel = CONTROLBAR:ToggleDispersedFormation
CONTROLBAR:ToggleMeleeRangedComboHorde
  DescriptLabel = CONTROLBAR:ToolTipToggleDispersedComboFormation
CONTROLBAR:ToolTipToggleMeleeRangedComboHorde
  InPalantir = Yes
  DoubleClick = Yes
  UnitSpecificSound = GondorFighterArcherVoiceDisperse
GondorFighterArcherVoicePhalanx
End
```

CommandButton Command\_ToggleFormationGondorTowerArcherComboHorde; added by Meneldil for Gondor Tower Guard/Archer Combo Hordes

```
  Command = HORDE_TOGGLE_FORMATION
  Options = TOGGLE_IMAGE_ON_FORMATION_OK_FOR_MULTI_SELECT
  ButtonImage = UCFormation_Tight UCFormation_Loose
```

```

        ButtonBorderType      = ACTION ; Identifier for the User as to what kind of
button this is
        TextLabel             = CONTROLBAR:ToggleMeleePikeRangedComboHorde
CONTROLBAR:ToggleDispersedFormation
        DescriptLabel         = CONTROLBAR:ToolTipTogglePikeRangedComboHorde
CONTROLBAR:ToolTipToggleDispersedComboFormation
        InPalantir            = Yes
        DoubleClick           = Yes
        UnitSpecificSound     = GondorTowerArcherVoicePhalanx
GondorTowerArcherVoiceDisperse
End

```

CommandButton Command\_ToggleFormationGondorTowerRangerComboHorde; added by Meneldil  
for Gondor Tower Guard/Ranger Combo Hordes

```

        Command               = HORDE_TOGGLE_FORMATION
        Options                = TOGGLE_IMAGE_ON_FORMATION OK_FOR_MULTI_SELECT
        ButtonImage           = UCFormation_Tight UCFormation_Loose
        ButtonBorderType      = ACTION ; Identifier for the User as to what kind of
button this is
        TextLabel             = CONTROLBAR:ToggleMeleePikeRangedComboHorde
CONTROLBAR:ToggleDispersedFormation
        DescriptLabel         = CONTROLBAR:ToolTipTogglePikeRangedComboHorde
CONTROLBAR:ToolTipToggleDispersedComboFormation
        InPalantir            = Yes
        DoubleClick           = Yes
        UnitSpecificSound     = GondorTowerRangerVoicePhalanx
GondorTowerRangerVoiceDisperse
End

```

### data\ini\commandset.ini

```

CommandSet GondorFighterRangerComboHordeCommandSet
    1 = Command_ToggleFormationGondorFighterRangerComboHorde; added by Meneldil
    2 = Command_PurchaseUpgradeGondorForgedBlades
    3 = Command_PurchaseUpgradeGondorHeavyArmor
    4 = Command_PurchaseUpgradeGondorFireArrows
    5 = Command_PurchaseUpgradeGondorBasicTraining; added by Meneldil
    6 = Command_SplitBattalion; added by Meneldil
    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard
End

```

```

CommandSet GondorFighterArcherComboHordeCommandSet
    1 = Command_ToggleFormationGondorFighterArcherComboHorde; added by Meneldil
    2 = Command_PurchaseUpgradeGondorForgedBlades
    3 = Command_PurchaseUpgradeGondorHeavyArmor
    4 = Command_PurchaseUpgradeGondorFireArrows
    5 = Command_PurchaseUpgradeGondorBasicTraining
    6 = Command_SplitBattalion; added by Meneldil
    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard
End

```

```

CommandSet GondorTowerArcherComboHordeCommandSet
    1 = Command_ToggleFormationGondorTowerArcherComboHorde; added by Meneldil
    2 = Command_PurchaseUpgradeGondorForgedBlades
    3 = Command_PurchaseUpgradeGondorHeavyArmor
    4 = Command_PurchaseUpgradeGondorFireArrows
    5 = Command_PurchaseUpgradeGondorBasicTraining
    6 = Command_SplitBattalion; added by Meneldil

```

```
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
```

End

CommandSet GondorTowerRangerComboHordeCommandSet

```
1 = Command_ToggleFormationGondorTowerRangerComboHorde; added by Meneldil
2 = Command_PurchaseUpgradeGondorForgedBlades
3 = Command_PurchaseUpgradeGondorHeavyArmor
4 = Command_PurchaseUpgradeGondorFireArrows
5 = Command_PurchaseUpgradeGondorBasicTraining
6 = Command_SplitBattalion; added by Meneldil
13 = Command_AttackMove
14 = Command_Stop
15 = Command_Guard
```

End

### data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini

```
;-----
Object GondorFighterArcherComboHorde
Blah blah blah (existing code – just the alternate formation line is added)
AttributeModifiers = MeleeRangedComboHorde
AlternateFormation = GondorFighterArcherComboHordeDispersed; added by
Meneldil

;-----
ChildObject GondorFighterArcherComboHordeDispersed GondorFighterArcherComboHorde;
added by Meneldil
Behavior = HordeContain ModuleTag_HordeContain
ObjectStatusOfContained =
InitialPayload = GondorFighter 5
InitialPayload = GondorArcher 5
Slots = 10
PassengerFilter = NONE +INFANTRY
ShowPips = No
ThisFormationIsTheMainFormation = No

; Banner Carrier info
BannerCarriersAllowed = GondorBanner
BannerCarrierPosition = UnitType:GondorFighter Pos:X:-60 Y:0

; Positions for 10
RankInfo = RankNumber:1 UnitType:GondorArcher Position:X:0 Y:0
Position:X:-30 Y:30 Position:X:-30 Y:-30 Position:X:-60 Y:60 Position:X:-60
Y:-60
RankInfo = RankNumber:2 UnitType:GondorFighter Position:X:80 Y:0
Position:X:50 Y:30 Position:X:50 Y:-30 Position:X:20 Y:60 Position:X:20 Y:-60

SplitHorde = SplitResult:GondorFighterHorde UnitType:GondorFighter
SplitHorde = SplitResult:GondorArcherHorde UnitType:GondorArcher

AttributeModifiers = DispersedComboHorde
AlternateFormation = GondorFighterArcherComboHorde

End
End
```

```

;-----
Object GondorFighterRangerComboHorde
Blah blah blah (existing code – just the alternate formation line is added)
    AttributeModifiers = MeleeRangedComboHorde
    AlternateFormation = GondorFighterRangerComboHordeDispersed; added by
Meneldil

;-----
ChildObject GondorFighterRangerComboHordeDispersed GondorFighterRangerComboHorde;
added by Meneldil
    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained =
        InitialPayload = GondorFighter 5
        InitialPayload = GondorRanger 5
        Slots = 10
        PassengerFilter = NONE +INFANTRY
        ShowPips = No
        ThisFormationIsTheMainFormation = No

        ; Banner Carrier info
        BannerCarriersAllowed = GondorBanner
        BannerCarrierPosition = UnitType:GondorFighter Pos:X:80 Y:0

        ; Positions for 10
        RankInfo = RankNumber:1 UnitType:GondorRanger Position:X:80 Y:40
        Position:X:80 Y:-40 Position:X:0 Y:0 Position:X:-80 Y:80 Position:X:-80 Y:-80
        RankInfo = RankNumber:2 UnitType:GondorFighter Position:X:80 Y:80
        Position:X:80 Y:-80 Position:X:0 Y:40 Position:X:0 Y:-40 Position:X:-80 Y:0

        SplitHorde = SplitResult:GondorFighterHorde UnitType:GondorFighter
        SplitHorde = SplitResult:GondorRangerHorde UnitType:GondorRanger

        AttributeModifiers = DispersedComboHorde
        AlternateFormation = GondorFighterRangerComboHorde
    End
End

;-----
Object GondorTowerArcherComboHorde
Blah blah blah (existing code)
    ThisFormationIsTheMainFormation = No; Meneldil changed original Yes

    AttributeModifiers = PikeRangedComboHorde
    AlternateFormation = GondorTowerArcherComboHordeDispersed; added by
Meneldil

;-----
ChildObject GondorTowerArcherComboHordeDispersed GondorTowerArcherComboHorde; added
by Meneldil
    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained =
        InitialPayload = GondorArcher 5
        InitialPayload = GondorTowerShieldGuard 5
        Slots = 10
        PassengerFilter = NONE +INFANTRY
        ShowPips = No
        ThisFormationIsTheMainFormation = Yes

        ; Banner Carrier info
        BannerCarriersAllowed = GondorBanner
        BannerCarrierPosition = UnitType:GondorTowerShieldGuard Pos:X:0 Y:0

```

```

; Positions for 10
RankInfo = RankNumber:1 UnitType:GondorArcher Position:X:40
Y:40 Position:X:40 Y:-40 Position:X:-80 Y:80 Position:X:-80 Y:0 Position:X:-80 Y:-
80
RankInfo = RankNumber:2 UnitType:GondorTowerShieldGuard Position:X:80
Y:80 Position:X:80 Y:0 Position:X:80 Y:-80 Position:X:-40 Y:40 Position:X:-40 Y:-
40

SplitHorde = SplitResult:GondorTowerShieldGuardHorde
UnitType:GondorTowerShieldGuard
SplitHorde = SplitResult:GondorArcherHorde
UnitType:GondorArcher

AttributeModifiers = DispersedComboHorde
AlternateFormation = GondorTowerArcherComboHorde
End
End

;-----
ChildObject GondorTowerRangerComboHorde GondorTowerArcherComboHorde

ThisFormationIsTheMainFormation = No; Meneldil changed original Yes
Blah blah blah (existing code)
; BannerCarrierPosition = UnitType:GondorRanger
Pos:X:20. Y:0.0 ; position of banner carrier for archer horde
(Meneldil disabled)
Blah blah blah
AttributeModifiers = PikeRangedComboHorde
AlternateFormation = GondorTowerRangerComboHordeDispersed; added by
Meneldil

;-----
ChildObject GondorTowerRangerComboHordeDispersed GondorTowerArcherComboHorde; added
by Meneldil
Behavior = HordeContain ModuleTag_HordeContain
ObjectStatusOfContained =
InitialPayload = GondorRanger 5
InitialPayload = GondorTowerShieldGuard 5
Slots = 10
PassengerFilter = NONE +INFANTRY
ShowPips = No
ThisFormationIsTheMainFormation = Yes

; Banner Carrier info
BannerCarriersAllowed = GondorBanner
BannerCarrierPosition = UnitType:GondorTowerShieldGuard Pos:X:80
Y:0

; Positions for 10
RankInfo = RankNumber:1 UnitType:GondorRanger Position:X:-40
Y:40 Position:X:-40 Y:-40 Position:X:-80 Y:80 Position:X:-80 Y:0 Position:X:-80
Y:-80
RankInfo = RankNumber:2 UnitType:GondorTowerShieldGuard Position:X:80
Y:80 Position:X:40 Y:40 Position:X:0 Y:0 Position:X:40 Y:-40 Position:X:80
Y:-80

SplitHorde = SplitResult:GondorTowerShieldGuardHorde
UnitType:GondorTowerShieldGuard
SplitHorde = SplitResult:GondorRangerHorde
UnitType:GondorRanger

```

```
AttributeModifiers = DispersedComboHorde
AlternateFormation = GondorTowerRangerComboHorde
```

```
End
```

```
End
```

Note: Don't forget that you can easily adjust the shape of the formation by using a simple X-Y coordinate reference. Position the units as desired on Cartesian coordinates and then transcribe their positions to the "RankInfo" code.

### data\ini\voice.ini

```
AudioEvent GondorFighterRangerVoicePhalanx; added by Meneldil
```

```
  Sounds      = gusoldg_voilinb gusoldg_voilinc gusoldg_voifera gusoldg_voiferb
gusoldg_voiferg gurange_voilinc gurange_voimovc gurange_voiferd gurange_voijana
gurange_voijanb gurange_voijanc
```

```
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume   = UNIT_RESPONSE_MINVOLUME
  Type        = world player voice
  SubmixSlider = voice
```

```
End
```

```
AudioEvent GondorFighterRangerVoiceDisperse; added by Meneldil
```

```
  Sounds      = gusoldg_voiretb gusoldg_voiretd gusoldg_voimovb gusoldg_voimovh
gusoldg_voimovi gusoldg_voimovk gurange_voireta gurange_voiretc gurange_voifede
gurange_voiamfc
```

```
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume   = UNIT_RESPONSE_MINVOLUME
  Type        = world player voice
  SubmixSlider = voice
```

```
End
```

```
AudioEvent GondorFighterArcherVoicePhalanx; added by Meneldil
```

```
  Sounds      = gusoldg_voilinb gusoldg_voilinc gusoldg_voifera gusoldg_voiferb
gusoldg_voiferg guarchg_voiferc guarchg_voiferf guarchg_voijana guarchg_voijanb
guarchg_voiweda
```

```
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume   = UNIT_RESPONSE_MINVOLUME
  Type        = world player voice
  SubmixSlider = voice
```

```
End
```

```
AudioEvent GondorFighterArcherVoiceDisperse; added by Meneldil
```

```
  Sounds      = gusoldg_voiretb gusoldg_voimovb gusoldg_voimovi gusoldg_voimovl
guarchg_voilinc guarchg_voiretb guarchg_voimovf
```

```
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume   = UNIT_RESPONSE_MINVOLUME
  Type        = world player voice
  SubmixSlider = voice
```

```
End
```

```
AudioEvent GondorTowerArcherVoicePhalanx; added by Meneldil
```

```
  Sounds      = gutower_voifera gutower_voiferc gutower_voiferd guarchg_voijana
guarchg_voijanb guarchg_voiweda
```

```
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume   = UNIT_RESPONSE_MINVOLUME
  Type        = world player voice
  SubmixSlider = voice
```

```
End
```

```
AudioEvent GondorTowerArcherVoiceDisperse; added by Meneldil
```



```
Sounds      = gutower_voimovd gutower_voimovh gutower_voireta guarchg_voilinc
guarchg_voimovf
Volume      = UNIT_RESPONSE_VOLUME
MinVolume   = UNIT_RESPONSE_MINVOLUME
Type        = world player voice
SubmixSlider = voice
End
```

```
AudioEvent GondorTowerRangerVoicePhalanx; added by Meneldil
Sounds      = gutower_voifera gutower_voiferc gutower_voiferd gurange_voilinc
gurange_voijanc gurange_voiat2c
Volume      = UNIT_RESPONSE_VOLUME
MinVolume   = UNIT_RESPONSE_MINVOLUME
Type        = world player voice
SubmixSlider = voice
End
```

```
AudioEvent GondorTowerRangerVoiceDisperse; added by Meneldil
Sounds      = gutower_voimovd gutower_voimovh gutower_voireta gurange_voifede
gurange_voiamfb gurange_voiamfc
Volume      = UNIT_RESPONSE_VOLUME
MinVolume   = UNIT_RESPONSE_MINVOLUME
Type        = world player voice
SubmixSlider = voice
End
```

### **data\lotr.str**

```
CONTROLBAR:TogglePhalanxFormation
"Sword/Spear Fo&rmation"
END
```

```
CONTROLBAR:ToolTipTogglePhalanxComboFormation
"+10% Damage, +10% Armor"
END
```

```
CONTROLBAR:ToggleMeleeRangedComboHorde
"Sword/Bow Fo&rmation"
END
```

```
CONTROLBAR:ToolTipToggleMeleeRangedComboHorde
"+10% Damage, +10% Armor"
END
```

```
CONTROLBAR:ToggleMeleePikeRangedComboHorde
"Spear/Bow Fo&rmation"
END
```

```
CONTROLBAR:ToolTipTogglePikeRangedComboHorde
"+20% Damage"
END
```

```
CONTROLBAR:ToggleDispersedFormation
"Dispersed Fo&rmation"
END
```

```
CONTROLBAR:ToolTipToggleDispersedComboFormation
"No Damage, -100% Armor, +100% Speed"
END
```

## Adding Additional Formations to Single Hordes

Objective: Add additional formations to single hordes (or battalions)

We have added formation toggle capability to Gondor combination battalions. What if we wanted to provide a single horde with additional formations? Let's look at the Gondor Fighter Horde. As you know, it can toggle between a line formation and a block formation. Of course, you could replace the block formation with the disperse formation, but what if you don't want to give up the block formation?

It turns out you can add more than two formations to a horde. Go to the gondorhordes.ini file. The Gondor Fighter Horde happens to be the first object, so we'll use that. Observe the following original code sections.

```
Object GondorFighterHorde
AlternateFormation = GondorFighterHordeBlock

ChildObject GondorFighterHordeBlock GondorFighterHorde
AlternateFormation = GondorFighterHorde
```

The "AlternateFormation" line tells the program which formation to go to next when the horde's formation toggle button (or "M" hot key) is pressed. Let's say you wanted a total of 4 formations. Here's an example of what the general structure would look like for any horde.

```
Object FirstHordeFormation
AlternateFormation = SecondHordeFormation

ChildObject SecondHordeFormation FirstHordeFormation
AlternateFormation = ThirdHordeFormation

ChildObject ThirdHordeFormation FirstHordeFormation
AlternateFormation = FourthHordeFormation

ChildObject FourthHordeFormation FirstHordeFormation
AlternateFormation = FirstHordeFormation
```

You would also want to update the "AttributeModifiers" and "RankInfo" code lines. I don't know how many different formations you can add. I know it works for up to four. However, there is a problem that I've not been able to overcome. In the commandbutton.ini file, the horde toggle formation command only lets you alternate between two choices for button images, text labels, descript labels, and unit specific sounds. I've tried adding additional options, similar to what is shown below.

```
CommandButton Command_ToggleFormationGondorFighter
  Command          = HORDE_TOGGLE_FORMATION      ;;Gondor Soldier
  Options          = TOGGLE_IMAGE_ON_FORMATION OK_FOR_MULTI_SELECT
  ButtonImage      = UCFormation_Block UCFormation_Line UCFormation_3
UCFormation_4
  ButtonBorderType = ACTION ; Identifier for the User as to what kind of
button this is
  TextLabel       = CONTROLBAR:ToggleBlockFormation
CONTROLBAR:ToggleLineFormation CONTROLBAR:ToggleBlockFormation2
CONTROLBAR:ToggleLineFormation2
  DescriptLabel   =
CONTROLBAR:ToolTipToggleGFighterLineToBlockFormation
CONTROLBAR:ToolTipToggleGFighterBlockToLineFormation
CONTROLBAR:ToolTipToggleGFighterLineToBlockFormation2
CONTROLBAR:ToolTipToggleGFighterBlockToLineFormation2
  InPalantir      = Yes
  DoubleClick     = Yes
```

```

UnitSpecificSound      = GondorSoldierVoiceBlockFormationOn
GondorSoldierVoiceLineFormation GondorSoldierVoiceFormation3
GondorSoldierVoiceFormation4
End

```

All the formations work. However, the button image will only toggle between block and line formations. If someone knows how to fix this (e.g., toggle through more than two button images), I sure would like to know.

So, how do we deal with this limitation? The short answer is that you create new formations that can be considered general line or block formations (or whatever the formation buttons are). In this example, we'll add a new dispersed line formation as well as a new phalanx block formation for single hordes. Note that up to four formations will be used in total.

**data\ini\attributemodifier.ini**

ModifierList DispersedSingleHorde; added by Meneldil for running single horde formation

```

Category = FORMATION
Modifier = DAMAGE_MULT 50%; 50% damage reduction
Modifier = ARMOR -25%      ; 25% armor reduction
Modifier = SPEED 170%     ; 70% speed increase
Duration = 0              ; Duration is forever when zero

```

End

ModifierList PhalanxSingleHorde; added by Meneldil for single horde alternate formation

```

Category = FORMATION
Modifier = DAMAGE_MULT 125%; 25% damage increase
Modifier = ARMOR -20%      ; 20% armor reduction
Modifier = SPEED 80%       ; 20% speed reduction
Duration = 0              ; Duration is forever when zero

```

End

**data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini**

ChildObject GondorFighterHordeBlock GondorFighterHorde  
AlternateFormation = GondorFighterHordeDispersed; Meneldil changed original  
GondorFighterHorde

Note: The only change to the above code block is to the "AlternateFormation" line. The following is new.

```

;-----
ChildObject GondorFighterHordeDispersed GondorFighterHorde; added by Meneldil
  Behavior = HordeContain ModuleTag_HordeContain
    ObjectStatusOfContained      =
    InitialPayload               = GondorFighter 5
    Slots                       = 5
    PassengerFilter              = NONE +INFANTRY
    ShowPips                    = No
    ThisFormationIsTheMainFormation = Yes; Allows alternating button image
between block & line formations
    RandomOffset                 = X:4 Y:4

    BannerCarriersAllowed       = GondorBanner
    BannerCarrierPosition       = UnitType:GondorFighter Pos:X:90 Y:0
    RankInfo = RankNumber:1 UnitType:GondorFighter Position:X:60 Y:0
Position:X:0 Y:0 Position:X:-60 Y:0
    RankInfo = RankNumber:2 UnitType:GondorFighter Position:X:30 Y:0
Position:X:-30 Y:0
    RanksToReleaseWhenAttacking = 1 2

    AlternateFormation = GondorFighterHordePhalanx

```

```
AttributeModifiers = DispersedSingleHorde
```

```
End
```

```
End
```

Note: There is an important change in the above code block. I have changed the “**ThisFormationIsTheMainFormation**” value from “No” to “Yes.” This is to allow the toggle button image to alternate between block and line formations. If we leave this as “No,” then the button images will not alternate. That is, the button image will start with the block formation as normal. Selecting it will put the soldiers in block formation and the button image will change to the line formation as expected. However, the button image will show line formation until the last formation is selected. In other words, the button image will stay on the second image until the formation rotation reaches its end.

```
-----  
ChildObject GondorFighterHordePhalanx GondorFighterHorde; added by Meneldil  
  Behavior = HordeContain ModuleTag_HordeContain  
    ObjectStatusOfContained =  
    InitialPayload = GondorFighter 5  
    Slots = 5  
    PassengerFilter = NONE +INFANTRY  
    ShowPips = No  
    ThisFormationIsTheMainFormation = No  
    RandomOffset = X:4 Y:4  
    RanksToReleaseWhenAttacking = 1  
    MeleeAttackLeashDistance = 50  
  
    BannerCarriersAllowed = GondorBanner  
    BannerCarrierPosition = UnitType:GondorFighter Pos:X:30 Y:0  
    RankInfo = RankNumber:1 UnitType:GondorFighter Position:X:-30 Y:40  
Position:X:-30 Y:0 Position:X:-30 Y:-40  
    RankInfo = RankNumber:2 UnitType:GondorFighter Position:X:0 Y:20  
Position:X:0 Y:-20  
    RanksToReleaseWhenAttacking = 1 2  
  
    AlternateFormation = GondorFighterHorde  
    AttributeModifiers = PhalanxSingleHorde  
  
End  
End
```

### data\lotr.str

```
CONTROLBAR:ToolTipToggleGFighterLineToBlockFormation  
"Pentagon: +25% Armor, -40% Speed \n  
Triangle: +25% Damage, -20% Armor, -20% Speed"  
END
```

Note: Recall that earlier we altered the Gondor Fighter Block Formation to the shape of a pentagon.

```
CONTROLBAR:ToolTipToggleGFighterBlockToLineFormation  
"Single File: -50% Damage, -25% Armor, +70% Speed \n  
Side by Side: No bonuses or penalties"  
END
```

Note: These are existing control bars; I simply modified the text.

I’ll leave it to you to see if you can add additional formations. Note that we alternated our new formations as a block and a line. This keeps our button, text, and sound choices more consistent. Keep that in mind when adding other formations. Finally, we did not allow for these new horde formations to combine with other hordes. By now, you should know how to add this capability if you wish.

Please note that adding these alternative formations can cause problems when playing against Gondor. This is why I didn't make the "Dispersed" formation have zero damage like I did for the combo horde. Since the game AI doesn't know this additional capability exists, it would have made it such that troops would be unable to attack because they are in the "Disperse" formation. I plan to address this in the game AI.

Here's what the code would look like if we wanted to add similar formations to Tower Guards, Archers, and Rangers. I don't see the point of adding a Disperse formation to the Knights since they can already move very quickly. Feel free to add this (or any other) formation capability if you wish.

**data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini**

```
ChildObject GondorTowerShieldGuardHordeWallFormation GondorTowerShieldGuardHorde
AlternateFormation = GondorTowerShieldGuardHordeDispersed; Meneldil changed
original GondorTowerShieldGuardHorde

;-----
ChildObject GondorTowerShieldGuardHordeDispersed GondorTowerShieldGuardHorde; added
by Meneldil
    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained =
        InitialPayload = GondorTowerShieldGuard 5
        Slots = 5
        PassengerFilter = NONE +INFANTRY
        ShowPips = No
        ThisFormationIsTheMainFormation = Yes; Keeps tower guard shields in
appropriate position & allows alternating button image
        RandomOffset = X:4 Y:4

        BannerCarriersAllowed = GondorBanner
        BannerCarrierPosition = UnitType:GondorTowerShieldGuard Pos:X:90 Y:0
        RankInfo = RankNumber:1 UnitType:GondorTowerShieldGuard Position:X:60
Y:0 Position:X:30 Y:0 Position:X:0 Y:0 Position:X:-30 Y:0 Position:X:-60 Y:0
        RanksToReleaseWhenAttacking = 1

        AlternateFormation = GondorTowerShieldGuardHordePhalanx
        AttributeModifiers = DispersedSingleHorde
    End
End
```

Note: Setting "ThisFormationIsTheMainFormation" to "Yes" also allows the Tower Guards to position their shields in what I consider a more appropriate position. That is, the shields are loose at their sides versus being up in front. This makes more sense when running.

```
;-----
ChildObject GondorTowerShieldGuardHordePhalanx GondorTowerShieldGuardHorde; added
by Meneldil
    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained =
        InitialPayload = GondorTowerShieldGuard 5
        Slots = 5
        PassengerFilter = NONE +INFANTRY
        ShowPips = No
        ThisFormationIsTheMainFormation = No
        RanksToReleaseWhenAttacking = 1
        MeleeAttackLeashDistance = 50

        BannerCarriersAllowed = GondorBanner
        BannerCarrierPosition = UnitType:GondorTowerShieldGuard Pos:X:30 Y:0
        RankInfo = RankNumber:1 UnitType:GondorTowerShieldGuard Position:X:0
Y:20 Position:X:0 Y:-20 Position:X:-30 Y:40 Position:X:-30 Y:0 Position:X:-30 Y:-40
        RanksToReleaseWhenAttacking = 1
```

```

        AlternateFormation      = GondorTowerShieldGuardHorde
        AttributeModifiers      = PhalanxSingleHorde
    End
End

```

For the Archer and Ranger battalions, we won't be adding a fourth formation. This will therefore provide an example of what it would look like to have an odd number of formations.

```

;////////////////////////////////////
ChildObject GondorArcherHordeWedgeFormation GondorArcherHorde
AlternateFormation = GondorArcherHordeDispersed; Meneldil changed original
GondorArcherHorde

;-----
ChildObject GondorArcherHordeDispersed GondorArcherHorde; added by Meneldil
    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained      =
        InitialPayload                = GondorArcher 5
        Slots                        = 5
        PassengerFilter                = NONE +INFANTRY
        ShowPips                      = No
        ThisFormationIsTheMainFormation = No
        RandomOffset                  = X:4 Y:4

        BannerCarriersAllowed        = GondorBanner
        BannerCarrierPosition         = UnitType:GondorArcher Pos:X:90 Y:0
        RankInfo = RankNumber:1 UnitType:GondorArcher Position:X:60 Y:0
Position:X:30 Y:0 Position:X:0 Y:0 Position:X:-30 Y:0 Position:X:-60 Y:0
        RanksToReleaseWhenAttacking = 1

        AlternateFormation = GondorArcherHorde
        AttributeModifiers = DispersedSingleHorde
    End
End

;////////////////////////////////////
ChildObject GondorRangerHordeAmbushFormation GondorRangerHorde
    AlternateFormation = GondorRangerHordeDispersed; Meneldil changed
original GondorRangerHorde

;-----
ChildObject GondorRangerHordeDispersed GondorRangerHorde; added by Meneldil
    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained      =
        InitialPayload                = GondorRanger 5
        Slots                        = 5
        PassengerFilter                = NONE +INFANTRY
        ShowPips                      = No
        ThisFormationIsTheMainFormation = No
        RandomOffset                  = X:4 Y:4

        BannerCarriersAllowed        = GondorBanner
        BannerCarrierPosition         = UnitType:GondorRanger Pos:X:90 Y:0
        RankInfo = RankNumber:1 UnitType:GondorRanger Position:X:60 Y:0
Position:X:30 Y:0 Position:X:0 Y:0 Position:X:-30 Y:0 Position:X:-60 Y:0
        RanksToReleaseWhenAttacking = 1

        AlternateFormation = GondorRangerHorde
        AttributeModifiers = DispersedSingleHorde

```

End

End

### data\ini\voice.ini

AudioEvent GondorArcherVoiceLineFormation

Sounds = GUArchg\_voilina GUArchg\_voilinc; Meneldil disabled GUArchg\_voilinb

Volume = UNIT\_RESPONSE\_VOLUME

MinVolume = UNIT\_RESPONSE\_MINVOLUME

Type = world player voice

SubmixSlider = voice

End

Note: I commented out the above “standard formation” voice clip because it no longer seemed appropriate. Decide for yourself whether or not you want to do this, too.

### data\lotr.str

CONTROLBAR:ToolTipToggleTowerGuardLineToShieldWallFormation

"Tight: +40% Armor, -50% Speed \n

Offset: +25% Damage, -20% Armor, -20% Speed"

END

CONTROLBAR:ToolTipToggleTowerGuardShieldWallToLineFormation

"Single File: -50% Damage, -25% Armor, +70% Speed \n

Side by Side: No bonuses or penalties"

END

CONTROLBAR:ToolTipToggleGARcherWedgeToLineFormation

"Single File: -50% Damage, -25% Armor, +70% Speed \n

Side by Side: No bonuses or penalties"

END

CONTROLBAR:ToolTipToggleRangerLineToSkirmishFormation

"+50% Damage, -75% Armor"

END

CONTROLBAR:ToolTipToggleRangerSkirmishToLineFormation

"Single File: -50% Damage, -25% Armor, +70% Speed \n

Side by Side: No bonuses or penalties"

END

Note: These are existing entries. The text was modified to allow for the additional formations. For the Archer For the Ranger Line to Skirmish Formation, the text was changed to match the “**GondorRangerAmbush**” attribute modifier. The “ToolTipToggleGARcherLineToWedgeFormation” text is correct. Even though we didn’t modify it, I’ll show it below for reference.

CONTROLBAR:ToolTipToggleGARcherLineToWedgeFormation

"+25% Damage, -50% Armor"

END

## **Gondor Construction Worker (Porter Reapplication)**

Objective: Add a new hero (a temporary construction worker) based on the porter. Instead of delivering upgrades, the worker can create speciality items.

The porter was originally a unit designed to deliver upgrades. It was not used; instead, upgrades are purchased directly from various buildings. This section creates a new hero unit based on the Gondor generic porter.

We'll use a double command set with the following capabilities:

1. A temporary firestone equipped trebuchet escorted by Gondor swordsmen (fighters)
2. A temporary firestone equipped trebuchet escorted by Gondor spearmen (tower guards)
3. A temporary healing well that heals at 3x normal rate
4. A temporary statue that slows down and weakens nearby enemies
5. A ruined tower for garrisoning troops (up to 4 units or battalions)
6. A totem that grants an increase in rank for a unit or battalion
7. A temporary pillar that explodes as either a mine or as Gandalf's Word of Power
8. A temporary Sentry Tower Foundation
9. A temporary Building Foundation
10. A permanent Outpost Foundation

Note: This is the order in which I did the coding. At the end, I changed the command set sequence.

Note: There is a lot of code for this. The general approach I took was to first create the porter, including voices. Once I was satisfied with how he moved and talked, I added the various command abilities.

Note: If something is referenced that has already been documented above, it is not shown again.

### **data\ini\attributemodifier.ini**

**ModifierList DefenderOfGondor ; added by Meneldil for Gondor Workshop Porter**

```
Category = LEADERSHIP
Modifier = SPEED 5% ; Multiplicative
Modifier = ARMOR -50% ; Additive
Modifier = DAMAGE_MULT 50% ; Multiplicative
Modifier = RANGE -75% ; Additive
Duration = 5000 ; Matches RefreshRate of giving module
FX = FX_BodyGlow ; Affected units are illuminated
```

End

### **data\ini\commandbutton.ini**

**CommandButton Command\_ConstructWorkshopPorter; added by Meneldil for Gondor Workshop Porter**

```
Command = UNIT_BUILD
Object = WorkshopPorter_Summoned
Options = CANCELABLE
TextLabel = CONTROLBAR:GondorWorkshopPorter
DescriptLabel = CONTROLBAR:ToolTipGondorWorkshopPorter
ButtonImage = UPGondor_Porter
ButtonBorderStyle = BUILD
Radial = Yes
InPalantir = Yes
ShowProductionCount = Yes
```

End

**CommandButton Command\_SpawnSwordGuardTrebuchet; added by Meneldil for Gondor Workshop Porter**

```
Command = SPECIAL_POWER
SpecialPower = SuperweaponSpawnSwordGuardTrebuchet
Options = NEED_TARGET_POS
```



```

TextLabel          = CONTROLBAR:SpawnSwordGuardTrebuchet
DescriptLabel      = CONTROLBAR:TooltipSpawnSwordGuardTrebuchet
ButtonImage        = UCTreb_Acquire
ButtonBorderType   = BUILD
RadiusCursorType   = INDUSTRY
InvalidCursorName  = GenericInvalid
InPalantir         = Yes
End

```

```

CommandButton Command_SpawnSpearGuardTrebuchet; added by Meneldil for Gondor
Workshop Porter
Command            = SPECIAL_POWER
SpecialPower       = SuperweaponSpawnSpearGuardTrebuchet
Options            = NEED_TARGET_POS
TextLabel          = CONTROLBAR:SpawnSpearGuardTrebuchet
DescriptLabel      = CONTROLBAR:TooltipSpawnSpearGuardTrebuchet
ButtonImage        = UCTreb_Acquire
ButtonBorderType   = BUILD
RadiusCursorType   = INDUSTRY
InvalidCursorName  = GenericInvalid
InPalantir         = Yes
End

```

```

CommandButton Command_SpawnGondorWell; added by Meneldil for Gondor Workshop Porter
Command            = SPECIAL_POWER
SpecialPower       = SuperweaponSpawnGondorWell
Options            = NEED_TARGET_POS
TextLabel          = CONTROLBAR:SpawnGondorWell
DescriptLabel      = CONTROLBAR:TooltipSpawnGondorWell
ButtonImage        = BPGWell
ButtonBorderType   = BUILD
RadiusCursorType   = INDUSTRY
InvalidCursorName  = GenericInvalid
InPalantir         = Yes
End

```

```

CommandButton Command_SpawnGondorDefender; added by Meneldil for Gondor Workshop
Porter
Command            = SPECIAL_POWER
SpecialPower       = SuperweaponSpawnGondorDefender
Options            = NEED_TARGET_POS
TextLabel          = CONTROLBAR:SpawnGondorDefender
DescriptLabel      = CONTROLBAR:TooltipSpawnGondorDefender
ButtonImage        = BGHeroicStatue
ButtonBorderType   = BUILD
RadiusCursorType   = INDUSTRY
InvalidCursorName  = GenericInvalid
InPalantir         = Yes
End

```

```

CommandButton Command_SpawnGondorRuinedTower; added by Meneldil for Gondor Workshop
Porter
Command            = SPECIAL_POWER
SpecialPower       = SuperweaponSpawnGondorRuinedTower
Options            = NEED_TARGET_POS
TextLabel          = CONTROLBAR:SpawnRuinedTower
DescriptLabel      = CONTROLBAR:TooltipSpawnRuinedTower
ButtonImage        = BGKeep
ButtonBorderType   = BUILD
RadiusCursorType   = INDUSTRY
InvalidCursorName  = GenericInvalid

```

```
InPalantir          = Yes
End
```

```
CommandButton Command_SpawnExperienceObject; added by Meneldil for Gondor Workshop
Porter
```

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSpawnExperienceObject
Options         = NEED_TARGET_POS
TextLabel       = CONTROLBAR:SpawnExperienceObject
DescriptLabel   = CONTROLBAR:TooltipSpawnExperienceObject
ButtonImage     = HSTheodenLeadership; HPTheodenKing'sFavor;
ButtonBorderType = ACTION
RadiusCursorType = SPEECH_CRAFT
InvalidCursorName = GenericInvalid
InPalantir      = Yes
```

```
End
```

```
CommandButton Command_SpawnExplosiveDevice; added by Meneldil for Gondor Workshop
Porter
```

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSpawnExplosiveDevice
Options         = NEED_TARGET_POS
TextLabel       = CONTROLBAR:SpawnExplosiveDevice
DescriptLabel   = CONTROLBAR:TooltipSpawnExplosiveDevice
ButtonImage     = Skull
ButtonBorderType = ACTION
RadiusCursorType = TAINT
InvalidCursorName = GenericInvalid
InPalantir      = Yes
```

```
End
```

```
CommandButton Command_SelfDestruct; added by Meneldil to manually destroy objects
```

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSelfDestruct
ButtonImage     = BCSell
Options         = NEED_TARGET_POS
ButtonBorderType = ACTION
TextLabel       = CONTROLBAR:SelfDestruct
DescriptLabel   = CONTROLBAR:ToolTipSelfDestruct
InPalantir      = Yes
```

```
End
```

```
CommandButton Command_SpawnGondorSentryTowerFoundation; added by Meneldil for
Gondor Workshop Porter
```

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSpawnGondorSentryTowerFoundation
Options         = NEED_TARGET_POS
TextLabel       = CONTROLBAR:SpawnGondorSentryTowerFoundation
DescriptLabel   = CONTROLBAR:TooltipSpawnGondorSentryTowerFoundation
ButtonImage     = BPGSentryTwr
ButtonBorderType = BUILD
RadiusCursorType = INDUSTRY
InvalidCursorName = GenericInvalid
InPalantir      = Yes
```

```
End
```

```
CommandButton Command_SpawnGondorBuildingFoundation; added by Meneldil for Gondor
Workshop Porter
```

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSpawnGondorBuildingFoundation
Options         = NEED_TARGET_POS
```

```

TextLabel          = CONTROLBAR:SpawnGondorBuildingFoundation
DescriptLabel      = CONTROLBAR:TooltipSpawnGondorBuildingFoundation
ButtonImage        = BGStoneworker_NumenorStonework
ButtonBorderStyle  = BUILD
RadiusCursorType   = INDUSTRY
InvalidCursorName  = GenericInvalid
InPalantir         = Yes

```

End

CommandButton Command\_SpawnGondorOutpostFlag; added by Meneldil for Gondor Workshop Porter

```

Command           = SPECIAL_POWER
SpecialPower      = SuperweaponSpawnGondorOutpostFlag
Options           = NEED_TARGET_POS
TextLabel         = CONTROLBAR:SpawnOutpostFlag
DescriptLabel     = CONTROLBAR:ToolTipSpawnOutpostFlag
ButtonImage       = BPRCamp_Citadel
ButtonBorderStyle = BUILD
RadiusCursorType  = INDUSTRY
InvalidCursorName = GenericInvalid
InPalantir        = Yes

```

End

### data\ini\commandset.ini

CommandSet GenericOutpostCommandSet; Meneldil restored Generic Revive Slot 8

```

1 = Command_GenericReviveSlot1 ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
2 = Command_GenericReviveSlot2 ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
3 = Command_GenericReviveSlot3 ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
4 = Command_GenericReviveSlot4 ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
5 = Command_GenericReviveSlot5 ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
6 = Command_GenericReviveSlot6 ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
7 = Command_GenericReviveSlot7 ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
8 = Command_GenericReviveSlot8 ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
9 = Command_StartCitadelSelfRepair
10 = Command_ExitGarrison; Meneldil relocated
11 = Command_ExitGarrison; Meneldil added

```

End

CommandSet GondorWorkshopCommandSet

```

1 = Command_ConstructGondorTrebuchet
2 = Command_PurchaseTechnologyGondorFireStones
3 = Command_ConstructWorkshopPorter; added by Meneldil
4 = Command_Sell; Meneldil relocated from 3 to 4

```

End

CommandSet WorkshopPorterCommandSet1; added by Meneldil for Gondor Workshop Porter

```

1 = Command_SpawnSwordGuardTrebuchet
2 = Command_SpawnSpearGuardTrebuchet
3 = Command_SpawnGondorWell
4 = Command_SpawnGondorDefender
5 = Command_SpawnExplosiveDevice
6 = Command_CommandSet2

```

End

```

CommandSet WorkshopPorterCommandSet2; added by Meneldil for Gondor Workshop Porter
    1 = Command_SpawnExperienceObject
    2 = Command_SpawnGondorRuinedTower
    3 = Command_SpawnGondorSentryTowerFoundation
    4 = Command_SpawnGondorBuildingFoundation
    5 = Command_SpawnGondorOutpostFlag
    6 = Command_CommandSet1

```

End

```

CommandSet RuinedTowerCommandSet; added by Meneldil for Ruined Towers
    1 = Command_ExitGarrison
    2 = Command_ExitGarrison
    3 = Command_ExitGarrison
    4 = Command_ExitGarrison
    6 = Command_Sell

```

End

```

CommandSet SelfDestructCommandSet; added by Meneldil (refer to Gondor Workshop
Porter)
    1 = Command_SelfDestruct

```

End

### data\ini\experiencelevels.ini

```

;----- GONDOR -----; Meneldil added WorkshopPorter_Summoned
ExperienceLevel GondorPorters
    TargetNames = GondorPorterInterface
GondorSwordsPorter GondorHeavyArmorPorter GondorKnightShieldPorter
GondorFireStonePorter GondorFireArrowPorter GondorFireArrowPorterForGoodIthilien
WorkshopPorter_Summoned
    RequiredExperience = 1
    ExperienceAward = 0
    Rank = 1
    SelectionDecal
        Texture = decal_G_level1
        Texture2 = decal_good_CO
        Style = SHADOW_MERGE_DECAL
        OpacityMin = 80%
        OpacityMax = 100%
        MinRadius = 70
        MaxRadius = 200
        MaxSelectedUnits = 40

```

End

End

*Note: I made the porter's hero image show an experience level of 1.*

### data\ini\fxlist.ini

```

; -----
FXList FX_DevastationBlue; Meneldil reapplication of FX_Devastation
    ParticleSystem
        Name = DevastationLightBlue; DevastationLight
        Offset = X:0.0 Y:0.0 Z:1.0
    End
    ParticleSystem
        Name = DevastationRingBlue; DevastationRing
        Offset = X:0.0 Y:0.0 Z:3.0
    End

```

End

End

```

; -----
FXList FX_OutpostFlagCreation; Meneldil added for Workshop Porter
    ParticleSystem; refer to GandalfBlast

```

```

    Name = GandalfBlastFinalLight
    Offset = X:0.0 Y:0.0 Z:10
End
ParticleSystem
    Name = ExplosiveMineShockwave
End
ParticleSystem
    Name = GandalfBlastDust
    Offset = X:0.0 Y:0.0 Z:15.0
End
End

```

### data\ini\fxparticlesystem.ini

FXParticleSystem StatueHeroFX2; Meneldil changed original StatueHeroFX (yellow)

```

System
    Priority = AREA_EFFECT
    ParticleName = EXLnzFlar1.tga
    Lifetime = 100 100
    SortLevel = 1
    BurstDelay = 100 100
    BurstCount = 4 5
    IsGroundAligned = Yes
End
Color = DefaultColor
    Color2 = R:255 G:255 B:20 25; R:119 G:75 B:32 25
    Color3 = R:0 G:0 B:0 100
End
Update = DefaultUpdate
    SizeRate = 1 2
    SizeRateDamping = 1 1
    AngleZ = 0 7
    AngularRateZ = -0.05 0.05
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0.5 0.5; 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = LineEmissionVolume
    StartPoint = X:0 Y:0 Z:5
    EndPoint = X:0 Y:0 Z:50
End
Draw = DefaultDraw
End
End

```

FXParticleSystem StatueHeroFX3; Meneldil changed original StatueHeroFX (blue)

```

System
    Priority = AREA_EFFECT
    ParticleName = EXLnzFlar1.tga
    Lifetime = 100 100
    SortLevel = 1
    BurstDelay = 100 100
    BurstCount = 4 5
    IsGroundAligned = Yes
End
Color = DefaultColor
    Color2 = R:15 G:215 B:255 25; R:119 G:75 B:32 25
    Color3 = R:0 G:0 B:0 100
End

```

```

Update = DefaultUpdate
  SizeRate = 1 2
  SizeRateDamping = 1 1
  AngleZ = 0 7
  AngularRateZ = -0.05 0.05
  AngularDamping = 1 1
End
Physics = DefaultPhysics
  VelocityDamping = 0.5 0.5; 1 1
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = LineEmissionVolume
  StartPoint = X:0 Y:0 Z:5
  EndPoint = X:0 Y:0 Z:50
End
Draw = DefaultDraw
End
End

```

### data\ini\mappedimages\aptimages\myimages.ini

```

MappedImage Skull
  Texture = exskull.tga
  TextureWidth = 256
  TextureHeight = 256
  Coords = Left:0 Top:0 Right:256 Bottom:256
  Status = NONE
End

```

```

MappedImage StarBurst2
  Texture = exstarburstbw.tga
  TextureWidth = 256
  TextureHeight = 256
  Coords = Left:0 Top:0 Right:256 Bottom:256
  Status = NONE
End

```

### data\ini\object\civilian\civilianbuildings.ini

```

;-----
Object ExpansionFlag

SelectPortrait = BPCCamp; uncommented by Meneldil

```

### data\ini\object\civilian\civilianprop.ini

```

;-----
ChildObject DefenderOfGondor MinisStoneGuard1; added by Meneldil for Gondor
Workshop Porter

  Draw = W3DScriptedModelDraw ModuleTag_01
    DefaultModelConditionState
      Model = GPStoneGuard1
      ParticleSysBone = NONE StatueHeroFX2
    End
  End

EditorSorting          = STRUCTURE
ThreatLevel            = 4.0
PlacementViewAngle     = 0
VisionRange            = 160
Scale                  = 1.6
KindOf                 = IMMOBILE STRUCTURE MADE_OF_STONE SELECTABLE NO_COLLIDE

```

```

CommandSet          = SellableCommandSet
SelectPortrait      = BPGHeroicStatue
DisplayName          = OBJECT:GondorDefender
Description          = OBJECT:GondorDefenderDescription

Body                = ActiveBody ModuleTag_03
    MaxHealth        = 500
End

ArmorSet
    Conditions       = None
    Armor            = StructureArmor
End

Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    MinLifetime      = 300000
    MaxLifetime      = 300000
    DeathType        = FADED
End

Behavior = AttributeModifierAuraUpdate ModuleTag_DefenderOfGondor
    StartsActive     = Yes
    BonusName        = DefenderOfGondor
    RefreshDelay     = 1000; Enemies will be affected in this amount of time
(doesn't match what's in attribute modifier)
    Range            = 200
    TargetEnemy      = Yes
    ObjectFilter      = ANY +ORC +URUK +MONSTER +INFANTRY +CAVALRY +MACHINE
End

Behavior = SlowDeathBehavior ModuleTag_05
    DeathTypes       = NONE +FADED
    Sound            = INITIAL ManCheerSingles
    FX               = INITIAL FX_GoldChestPickup
    OCL              = FINAL OCL_FireBlue
End

Behavior = SlowDeathBehavior ModuleTag_067
    DeathTypes       = ALL -FADED
    Sound            = INITIAL TrebuchetDie
    FX               = INITIAL FX_GoldChestPickup
    OCL              = INITIAL OCL_GondorCaptain
End

End

```

*Note: There are other monuments you can choose from here as well. Since I'm choosing not to make artwork changes here, I used the Gondor Hero Statue artwork in the Palantir. If you prefer to have the artwork better match, you can modify the "GondorHeroStatue" object in the "goodfactionbuildings.ini" file instead.*

### data\ini\object\evilfaction\evilfactionunits.ini

```

;-----
Object SelfDestruct; added by Meneldil
    Draw = W3DScriptedModelDraw ModuleTag_Draw
        DefaultModelState
            Model = None
        End
    End
End

KindOf = INERT UNATTACKABLE IMMOBILE
Body = ActiveBody ModuleTag_MakesKillWork

```

```

    MaxHealth = 1
End
Behavior = LifetimeUpdate ModuleTag_HatchTrigger
    MinLifetime = 0
    MaxLifetime = 0
End
Behavior = SlowDeathBehavior ModuleTag_HatchProcess
    DestructionDelay = 100
    Weapon = INITIAL SelfDestruct
End
End

;-----
-----
ChildObject ExplodingPillar IsengardDeployedExplosiveMine; added by Meneldil

    Draw = W3DScriptedModelDraw ModuleTag_01
        OkToChangeModelColor = Yes
        DefaultModelConditionState
            Model = GPMomument2; refer to
data\ini\object\civilian\civilianprop.ini
            ParticleSysBone = NONE StatueHeroFX3; refer to
data\ini\fxparticlesystem.ini
        End
    End

    SelectPortrait = StarBurst2; refer to
data\ini\mappedimages\aptimages\myimages.ini
    CommandPoints = 0
    ThreatLevel = 5
    DisplayName = OBJECT:ExplodingPillar
    Description = OBJECT:ExplodingPillarDescription
    CommandSet = SelfDestructCommandSet

    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime = 15000
        MaxLifetime = 15000
    End

    Behavior = PassiveAreaEffectBehavior ModuleTag_SplashOfHealingWater_Ahh
        EffectRadius = 600 ; Meneldil changed original 200
        PingDelay = 2000
        HealPercentPerSecond = 12%; Meneldil changed original 3%
        AllowFilter = ANY +INFANTRY +CAVALRY +HERO +RohanEntFir
+RohanEntBirch -MACHINE -IMMOBILE; Meneldil added Heroes and Ents
    End

    Behavior = OCLSpecialPower ModuleTag_SelfDestruct
        SpecialPowerTemplate = SuperweaponSelfDestruct
        OCL = OCL_SelfDestruct
        CreateLocation = CREATE_AT_LOCATION
        StartsPaused = No
    End

    Behavior = SlowDeathBehavior ModuleTag_ExplosiveDeath
        DeathTypes = NONE +BURNED +EXPLODED
        Weapon = INITIAL IsengardExplosiveMineExplosionWeapon
        OCL = FINAL OCL_StructureRubblePileSinkAway
        FX = INITIAL FX_LeafPileFire
    End

```



```
Behavior = SlowDeathBehavior ModuleTag_FizzleDeath
  DeathTypes = ALL -BURNED -EXPLODED
  Sound = INITIAL RainOfFireStart
  Weapon = FINAL GandalfWordOfPower
End
```

End

### data\ini\object\goodfaction\goodfactionbuildings.ini

*Under the Gondor Outpost Object, I changed the Command Set as follows:*

```
CommandSet = GenericOutpostCommandSet; Meneldil changed original
GenericKeepCommandSet
```

*Under the Gondor Outpost Object, I changed the number of battalions or units that can be garrisoned to 2.*

```
Behavior = HordeGarrisonContain ModuleTag_hordeGarrison
  ObjectStatusOfContained = UNSELECTABLE CAN_ATTACK ENCLOSED
  ContainMax = 2; Meneldil changed original 1
  MaxHordeCapacity = 2; Meneldil changed original 1
```

*The following was added to the bottom of the file.*

```
-----
ChildObject GondorWell_Summoned GondorWell; added by Meneldil for Gondor Workshop
Porter
```

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
  MinLifetime = 180000
  MaxLifetime = 180000
  DeathType = FADED
End
```

```
Behavior = PassiveAreaEffectBehavior ModuleTag_SplashOfHealingWater_Ahh
  EffectRadius = 200
  PingDelay = 2000; msec
  HealPercentPerSecond = 9%
  AllowFilter = ANY +INFANTRY +CAVALRY -MACHINE -MONSTER -IMMOBILE
+HERO +RohanEntFir +RohanEntBirch
End
```

```
Behavior = SlowDeathBehavior ModuleTag_SlowDeathWithoutRubble
  DeathTypes = ALL
  OCL = INITIAL OCL_FireBlue
  DestructionDelay = 1000
  Sound = INITIAL AragornAthelesEffect
  FX = INITIAL FX_DevastationBlue
End
```

End

```
-----
;Temporary Gondor Sentry Tower Foundation added by Meneldil for Gondor Workshop
Porter
ChildObject GondorBaseDefenceFoundation_Summoned GondorBaseDefenceFoundation
  Behavior = DeletionUpdate ModuleTag_Timer; use this instead of lifetime update
  MinLifetime = 60000; 60 seconds to use it or lose it
  MaxLifetime = 60000
End
```

End

```
-----
```

```

;Temporary Gondor Building Foundation added by Meneldil for Gondor Workshop Porter
ChildObject GondorBuildingFoundation_Summoned GondorBuildingFoundation
  Behavior = DeletionUpdate ModuleTag_Timer; use this instead of lifetime update
    MinLifetime = 60000; 60 seconds to use it or lose it
    MaxLifetime = 60000
  End
End

```

data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini

```

;-----
ChildObject GondorSwordGuardTrebuchet_Summoned GondorFighterTrebuchetComboHorde;
added by Meneldil for Workshop Porter

  SelectPortrait = UPGondor_Soldier

  Behavior = HordeContain ModuleTag_HordeContain
    ObjectStatusOfContained =
      InitialPayload = GondorFighter_Summoned 5
      InitialPayload = Trebuchet_Summoned 1
      Slots = 6
      PassengerFilter = ANY +INFANTRY +MACHINE
      ShowPips = No
      ThisFormationIsTheMainFormation = Yes

    ; Positions for 6
    RankInfo = RankNumber:1 UnitType:Trebuchet_Summoned          Position:X:-10
Y:0
      RankInfo = RankNumber:2 UnitType:GondorFighter_Summoned    Position:X:20 Y:0
Position:X:20 Y:20 Position:X:20 Y:-20 Position:X:0 Y:30 Position:X:0 Y:-30

    SplitHorde = SplitResult:Trebuchet_Summoned
UnitType:Trebuchet_Summoned
    SplitHorde = SplitResult:GondorFighter_Summoned
UnitType:GondorFighter_Summoned

    RanksThatStopAdvance = 1
    RanksToReleaseWhenAttacking = 1 2
    RanksToJustFreeWhenAttacking = 1 2
    MeleeAttackLeashDistance = 25
  End

  LocomotorSet
    Locomotor      = CatapultLocomotor
    Condition      = SET_NORMAL
    Speed          = 32; Meneldil changed original 16
  End

  Behavior = StatusBitsUpgrade ModuleTag_ProductionLegality3
;    TriggeredBy = Upgrade_GondorFireStones Upgrade_TechnologyGondorFireStones
;    RequiresAllTriggers = Yes
  End

  Behavior = GrantUpgradeCreate ModuleTag_Firestones; added by Meneldil so that
the trebuchet combos come with the firestone upgrade
    UpgradeToGrant = Upgrade_GondorFireStones
  End
End

```

```

;-----
-----
ChildObject GondorSpearGuardTrebuchet_Summoned GondorTowerTrebuchetComboHorde;
added by Meneldil for Workshop Porter

    SelectPortrait = UPGondor_TowerGuard

    Behavior = HordeContain ModuleTag_HordeContain
        ObjectStatusOfContained =
            InitialPayload = GondorTowerShieldGuard_Summoned 5
            InitialPayload = Trebuchet_Summoned 1
            Slots = 6
            PassengerFilter = ANY +INFANTRY +MACHINE
            ShowPips = No
            ThisFormationIsTheMainFormation = Yes

        ; Positions for 6
        RankInfo = RankNumber:1 UnitType:Trebuchet_Summoned          Position:X:-10
Y:0
        RankInfo = RankNumber:2 UnitType:GondorTowerShieldGuard_Summoned
Position:X:20 Y:0 Position:X:20 Y:20 Position:X:20 Y:-20 Position:X:0 Y:30
Position:X:0 Y:-30

        SplitHorde = SplitResult:Trebuchet_Summoned
UnitType:Trebuchet_Summoned
        SplitHorde = SplitResult:GondorTowerShieldGuard_Summoned
UnitType:GondorTowerShieldGuard_Summoned

        RanksThatStopAdvance = 1
        RanksToReleaseWhenAttacking = 1 2
        RanksToJustFreeWhenAttacking = 1 2
        MeleeAttackLeashDistance = 25
    End

    LocomotorSet
        Locomotor      = CatapultLocomotor
        Condition       = SET_COMBO
        Speed           = 32; Meneldil changed original 16
    End

    Behavior = StatusBitsUpgrade ModuleTag_ProductionLegality3
;    TriggeredBy = Upgrade_GondorFireStones Upgrade_TechnologyGondorFireStones
;    RequiresAllTriggers = Yes
    End

    Behavior = GrantUpgradeCreate ModuleTag_Firestones; added by Meneldil so that
the trebuchet combos come with the firestone upgrade
        UpgradeToGrant = Upgrade_GondorFireStones
    End

End

```

data\ini\object\goodfaction\units\gondor\gondorinfantry.ini

```

;-----
-----
; added by Meneldil as OCL if Defender of Gondor statue is destroyed
ChildObject GondorCaptain_Summoned GondorCaptain

    ThreatLevel      = 9
    ThingClass       = HORDE_UNIT
    IsTrainable      = No

```

```
CommandPoints      = 0
SelectPortrait     = HPNumenorean
Scale              = 1.5
DisplayName         = OBJECT:GondorDefender
```

```
KindOf = PRELOAD SELECTABLE CAN_CAST_REFLECTIONS INFANTRY
PATH_THROUGH_EACH_OTHER SCORE GRAB_AND_DROP IGNORES_SELECT_ALL
```

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    MinLifetime = 60000
    MaxLifetime = 60000
End
```

```
WeaponSet
    Conditions = None
    Weapon = PRIMARY DefenderSword
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
End
```

```
ArmorSet
    Conditions = None
    Armor = InvulnerableArmor
    DamageFX = NormalDamageFX
End
```

```
LocomotorSet
    Locomotor = HumanLocomotor
    Condition = SET_NORMAL
    Speed = 88
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05
    DeathTypes = ALL
    SinkDelay = 0
    SinkRate = 0
    DestructionDelay = 0
    Sound = INITIAL ManCheerSingles
    FX = INITIAL FX_GoldChestPickup
End
```

End

### data\ini\object\goodfaction\units\gondor\porter.ini

-----  
-----

ChildObject WorkshopPorter\_Summoned GondorPorterInterface; added by Meneldil for Gondor Workshop

```
VoiceCreated      = WorkshopPorterVoiceCreated
VoiceFullyCreated = WorkshopPorterVoiceCreated
VoiceSelect       = WorkshopPorterVoiceSelect
VoiceMove         = WorkshopPorterVoiceMove
VoiceMoveToCamp  = WorkshopPorterVoiceMove
VoiceFear         = WorkshopPorterHelpMe
VoiceAmbushed     = WorkshopPorterHelpMe

SelectPortrait    = UPGondor_Porter
DisplayName        = OBJECT:GondorWorkshopPorter
IsTrainable       = No
CommandPoints     = 5
CommandSet        = WorkshopPorterCommandSet1
```

```

BuildCost      = GONDOR_PORTER_BUILD_COST; refer to weapon.ini file
BuildTime      = GONDOR_PORTER_BUILD_TIME; refer to weapon.ini file
MaxSimultaneousOfType = 1; only one porter at a time
BountyValue    = GONDOR_PORTER_BOUNTY_VALUE_NEW; refer to weapon.ini file
VisionRange    = GONDOR_PEASANT_VISION_RANGE

```

```

LocomotorSet
  Locomotor = PorterLocomotor
  Condition = SET_NORMAL
  Speed     = 32
End

```

```

KindOf = HERO PRELOAD SELECTABLE CAN_CAST_REFLECTIONS INFANTRY
PATH_THROUGH_EACH_OTHER SCORE THROWN_OBJECT PORTER IGNORES_SELECT_ALL
;Meneldil added Hero above so that the worker's icon appears on the screen so
he can be more easily found

```

```

Behavior = CommandSetUpgrade ModuleTag_CommandSetUpgrade1
  TriggeredBy = Upgrade_CommandSet1
  RemovesUpgrades = Upgrade_CommandSet2
  CommandSet = WorkshopPorterCommandSet1
End

```

```

Behavior = CommandSetUpgrade ModuleTag_CommandSetUpgrade2
  TriggeredBy = Upgrade_CommandSet2
  RemovesUpgrades = Upgrade_CommandSet1
  CommandSet = WorkshopPorterCommandSet2
End

```

```

Behavior = ProductionUpdate ProductionUpdateModuleTag
  GiveNoXP = Yes
End

```

```

Body = ActiveBody ModuleTag_02
  MaxHealth          = 500
  MaxHealthDamaged  = 500
End

```

```

Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
  MinLifetime      = 300000
  MaxLifetime      = 300000
  DeathType        = FADED
End

```

```

;Relocated Gondor Healing Well Behavior from goodfactionbuildings.ini. Copied
here & modified by Meneldil

```

```

Behavior = PassiveAreaEffectBehavior ModuleTag_SplashOfHealingWater_Ahh
  EffectRadius      = 300
  PingDelay         = 2000
  HealPercentPerSecond = 5%; changed from original 3%
  AllowFilter       = ANY -INFANTRY -CAVALRY -HERO +MACHINE
+IMMOBILE +STRUCTURE; modified so Porter will "repair" structures
End

```

```

Behavior = SlowDeathBehavior SlowDeathBehaviorModuleTag_1
  DeathTypes = NONE +FADED
  FX = FINAL FX_DevastationBlue
  Sound = INITIAL ImpactRainOfFire
  OCL = INITIAL OCL_FireBlue
End

```

```

Behavior = SlowDeathBehavior SlowDeathBehaviorModuleTag_2
    DeathTypes = ALL -FADED
    SinkDelay = 3000
    SinkRate = 1.40      ; in Dist/Sec
    DestructionDelay = 13000
    FX = INITIAL FX_CatapultDieExplosion
    Sound = INITIAL PorterGenericVoiceDie
End

Behavior = OCLSpecialPower ModuleTag_SwordGuardTrebuchet
    SpecialPowerTemplate = SuperweaponSpawnSwordGuardTrebuchet
    OCL                  = SUPERWEAPON_SpawnSwordGuardTrebuchet
    TriggerFX            = FX_GondorSummon1
    CreateLocation       = USE_OWNER_OBJECT
End

Behavior = OCLSpecialPower ModuleTag_SpearGuardTrebuchet
    SpecialPowerTemplate = SuperweaponSpawnSpearGuardTrebuchet
    OCL                  = SUPERWEAPON_SpawnSpearGuardTrebuchet
    TriggerFX            = FX_GondorSummon1
    CreateLocation       = USE_OWNER_OBJECT
End

Behavior = OCLSpecialPower ModuleTag_GondorWell
    SpecialPowerTemplate = SuperweaponSpawnGondorWell
    OCL                  = SUPERWEAPON_SpawnGondorWell
    TriggerFX            = FX_DevastationBlue
    CreateLocation       = USE_OWNER_OBJECT
End

Behavior = OCLSpecialPower ModuleTag_GondorDefender
    SpecialPowerTemplate = SuperweaponSpawnGondorDefender
    OCL                  = SUPERWEAPON_SpawnGondorDefender
    TriggerFX            = FX_SplatDust
    CreateLocation       = USE_OWNER_OBJECT
End

Behavior = OCLSpecialPower ModuleTag_GondorRuinedTower
    SpecialPowerTemplate = SuperweaponSpawnGondorRuinedTower
    OCL                  = SUPERWEAPON_SpawnGondorRuinedTower
    TriggerFX            = FX_StructureMediumCollapse
    CreateLocation       = USE_OWNER_OBJECT
End

Behavior = OCLSpecialPower ModuleTag_ExperienceObject
    SpecialPowerTemplate = SuperweaponSpawnExperienceObject
    OCL                  = SUPERWEAPON_SpawnExperienceObject
    TriggerFX            = FX_GoldChestPickup
    CreateLocation       = USE_OWNER_OBJECT
End

Behavior = OCLSpecialPower ModuleTag_ExplosiveDevice
    SpecialPowerTemplate = SuperweaponSpawnExplosiveDevice
    OCL                  = SUPERWEAPON_SpawnExplosiveDevice
    TriggerFX            = FX_DevastationBlue
    CreateLocation       = USE_OWNER_OBJECT
End

Behavior = OCLSpecialPower ModuleTag_GondorSentryTowerFoundation
    SpecialPowerTemplate = SuperweaponSpawnGondorSentryTowerFoundation

```

```

    OCL                = SUPERWEAPON_SpawnGondorSentryTowerFoundation
    TriggerFX          = FX_StructureSmallCollapse
    CreateLocation     = USE_OWNER_OBJECT
End

Behavior = OCLSpecialPower ModuleTag_GondorBuildingFoundation
    SpecialPowerTemplate = SuperweaponSpawnGondorBuildingFoundation
    OCL                  = SUPERWEAPON_SpawnGondorBuildingFoundation
    TriggerFX            = FX_StructureMediumCollapse
    CreateLocation       = USE_OWNER_OBJECT
End

Behavior = OCLSpecialPower ModuleTag_GondorOutpostFlag
    SpecialPowerTemplate = SuperweaponSpawnGondorOutpostFlag
    OCL                  = SUPERWEAPON_SpawnGondorOutpostFlag
    TriggerFX            = FX_GandalfBlast
    CreateLocation       = USE_OWNER_OBJECT
End

End

```

### data\ini\object\netral\ruinedtower.ini

*The following are changes made to the base code (all ruined towers are affected):*

```

SelectPortrait = BPGKeep; Meneldil changed original BPGBattleTower

; ***DESIGN parameters ***
Scale = 1.25; added by Meneldil
DisplayName      = OBJECT:RuinedTower
Description      = OBJECT:RuinedTowerDescription; added by Meneldil
Side             = Gondor
EditorSorting    = STRUCTURE
ThreatLevel      = 1.0

BuildCost        = 66 ;GONDOR_BATTLETOWER_BUILDCOST
BuildTime        = 15.0          ; in seconds
VisionRange      = VISION_BASE_DEFENSE
ShroudClearingRange = SHROUD_CLEAR_BASE_DEFENSE
CommandSet       = RuinedTowerCommandSet; Meneldil changed original
NeutralBattleTowerCommandSet

    Behavior                = StructureCollapseUpdate
ModuleTag_StructureCollapseUpdate
    MinCollapseDelay        = 000
    MaxCollapseDelay        = 000
    CollapseDamping         = .5
    MaxShudder              = 0.6
    MinBurstDelay           = 250
    MaxBurstDelay           = 800
    BigBurstFrequency       = 4
    FXList                  = INITIAL    FX_GandalfLightningCharge
FX_ExplosiveMine FX_LeafPileFire; added by Meneldil
    FXList                  = FINAL      FX_StructureMediumCollapse
FX_BuildingConstructDustCastlesCentre; modified by Meneldil
    OCL                     = INITIAL    OCL_Gen01_Chunk1 OCL_Gen02_Chunk1
OCL_Gen03_Chunk1 OCL_Gen04_Chunk1; added by Meneldil
    OCL                     = FINAL      OCL_SpawnLairTreasure
OCL_SpawnLairTreasure_Medium; added by Meneldil
    End

    Behavior = HordeGarrisonContain ModuleTag_hordeGarrison

```

```

ObjectStatusOfContained = UNSELECTABLE CAN_ATTACK ENCLOSED
ContainMax              = 4; Meneldil changed original 1
MaxHordeCapacity        = 4; Meneldil changed original 1
DamagePercentToUnits   = 0%
;PassengerFilter        = ANY +INFANTRY +BANNER +MordorHaradrim -
CAVALRY -SUMMONED -COMBO_HORDE (original)
PassengerFilter         = ANY +INFANTRY +BANNER +MordorHaradrim
+COMBO_HORDE -CAVALRY; added by Meneldil
AllowEnemiesInside     = Yes; Meneldil changed original No
AllowNeutralInside     = Yes ; Cause this structure is normally neutral.
AllowAlliesInside      = Yes; added by Meneldil
NumberOfExitPaths      = 1 ; Defaults to 1. Set 0 to not use
ExitStart/ExitEnd, set higher than 1 to use ExitStart01-nn/ExitEnd01-nn
PassengerBonePrefix    = PassengerBone:ARROW_KindOf:INFANTRY
EntryPosition          = X:0.0 Y:0.0 Z:0.0
EntryOffset            = X:0.0 Y:-45.0 Z:0.0
ExitOffset             = X:0.0 Y:-80.0 Z:0.0
EnterSound             = RuinedTowerEnterSound
KillPassengersOnDeath  = No
ShowPips               = No
ExitDelay              = 250
End

```

The following child object was added for Gondor:

```

;-----
-----
ChildObject GondorRuinedTower_Summoned RuinedTower; added by Meneldil for Gondor
Workshop Porter

VisionRange           = 500
ShroudClearingRange  = 400

Behavior              = StructureCollapseUpdate
ModuleTag_StructureCollapseUpdate
MinCollapseDelay      = 0
MaxCollapseDelay      = 0
CollapseDamping       = 0.5
MaxShudder            = 0.6
MinBurstDelay         = 250
MaxBurstDelay         = 800
BigBurstFrequency     = 4
FXList                = INITIAL    FX_StructureMediumCollapse
FX_ElvenWoodSpellFX  FX_MinWallATTransitionRubble
OCL                   = INITIAL    OCL_Gen01_Chunk1 OCL_Gen01_Chunk2
OCL_Gen01_Chunk3 OCL_Gen01_Chunk4
OCL                   = FINAL      OCL_ElvenWoodSeed
End

Behavior = CreateObjectDie ModuleTag_Revenge
CreationList          = OCL_SpawnLairTreasure
End

End

```

### data\ini\objectcreationlist.ini

```

;-----
-----
; Spawn a Gondor trebuchet escorted by swordsmen; added by Meneldil for Workshop
Porter
ObjectCreationList SUPERWEAPON_SpawnSwordGuardTrebuchet

```



```

; refer to data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini
  CreateObject
    ObjectNames = GondorSwordGuardTrebuchet_Summoned
    IgnoreCommandPointLimit = Yes
    Count = 1
    FadeIn = Yes
    FadeTime = 5000
  End
End

```

```

; -----
; Spawn a Gondor trebuchet escorted by spearmen; added by Meneldil for Workshop
Porter
ObjectCreationList SUPERWEAPON_SpawnSpearGuardTrebuchet
; refer to data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini
  CreateObject
    ObjectNames = GondorSpearGuardTrebuchet_Summoned
    IgnoreCommandPointLimit = Yes
    Count = 1
    FadeIn = Yes
    FadeTime = 5000
  End
End

```

```

; -----
; Spawn a temporary Gondor well; added by Meneldil for Workshop Porter
ObjectCreationList SUPERWEAPON_SpawnGondorWell
  CreateObject
    ObjectNames = GondorWell_Summoned; refer to
data\ini\object\goodfaction\goodfactionbuildings.ini
    Count = 1
    FadeIn = Yes
    FadeTime = 3000
  End
End

```

```

; -----
; Spawn a temporary Gondor statue; added by Meneldil for Workshop Porter
ObjectCreationList SUPERWEAPON_SpawnGondorDefender
  CreateObject
    ObjectNames = DefenderOfGondor; refer to
data\ini\object\civilian\civilianprop.ini
    Count = 1
    FadeIn = Yes
    FadeTime = 3000
  End
End

```

```

; -----
; Spawn a Gondor Ruined Tower; added by Meneldil for Workshop Porter
ObjectCreationList SUPERWEAPON_SpawnGondorRuinedTower
  CreateObject
    ObjectNames = GondorRuinedTower_Summoned; refer to
data\ini\object\netural\ruinedtower.ini
    Count = 1
    FadeIn = Yes
    FadeTime = 5000
  End

```

```

End
CreateObject
    ObjectNames = BuildingDamageBits01; these are small debris chunks
    Count = 50
    Disposition = SEND_IT_UP
    DispositionIntensity = 40
    SpreadFormation = Yes
    MinDistanceAFormation = 32.0
    MinDistanceBFormation = 48.0
    MaxDistanceFormation = 160.0
End
CreateObject
    ObjectNames = BuildingDamageBits02; these are larger debris chunks
    Count = 30
    Disposition = SEND_IT_UP
    DispositionIntensity = 25
    SpreadFormation = Yes
    MinDistanceAFormation = 25.0
    MinDistanceBFormation = 30.0
    MaxDistanceFormation = 60.0
End
CreateObject
    ObjectNames = BuildingDamageBits03; these are even larger debris chunks
    Count = 20
    Disposition = SEND_IT_UP
    DispositionIntensity = 20
    SpreadFormation = Yes
    MinDistanceAFormation = 15.0
    MinDistanceBFormation = 25.0
    MaxDistanceFormation = 50.0
End
End

; -----
; Spawn an Experience Object; added by Meneldil for Workshop Porter
ObjectCreationList SUPERWEAPON_SpawnExperienceObject
    CreateObject
        ObjectNames = ExpObj01; refer to data\ini\object\civilian\civilianprop.ini
        Count = 1
        FadeIn = Yes
        FadeTime = 2000
    End
End

; -----
;Initiate self destruct; added by Meneldil to manually detonate objects
ObjectCreationList OCL_SelfDestruct
    CreateObject
        ObjectNames = SelfDestruct; refer to
data\ini\object\evilfaction\evilfactionunits.ini
        Count = 1
    End
End

; -----
; Spawn an Explosive Device; added by Meneldil for Workshop Porter
ObjectCreationList SUPERWEAPON_SpawnExplosiveDevice
    CreateObject

```

```

        ObjectNames = ExplodingPillar; refer to
data\ini\object\evilfaction\evilfactionunits.ini
        Count = 1
        FadeIn = Yes
        FadeTime = 3000
    End
End

```

```

; -----
; Spawn a Gondor Captain; added by Meneldil to bring Defender of Gondor statue to
; life if destroyed
ObjectCreationList OCL_GondorCaptain
    CreateObject
        ObjectNames = GondorCaptain_Summoned; refer to
data\ini\object\goodfaction\units\gondor\gondorinfantry.ini
        Count = 1
        FadeIn = Yes
        FadeTime = 1000
    End
End

```

```

; -----
; Spawn a temporary Gondor sentry tower foundation. Added by Meneldil for Workshop
; Porter
ObjectCreationList SUPERWEAPON_SpawnGondorSentryTowerFoundation
    CreateObject
        ObjectNames = GondorBaseDefenceFoundation_Summoned
        Count = 1
        FadeIn = Yes
        FadeTime = 5000
    End
    CreateObject
        ObjectNames = BuildingDamageBits01; these are the small debris chunks
        Count = 50
        Disposition = SEND_IT_UP
        DispositionIntensity = 10
        SpreadFormation = Yes
        MinDistanceAFormation = 10.0
        MinDistanceBFormation = 10.0
        MaxDistanceFormation = 20.0
    End
    CreateObject
        ObjectNames = BuildingDamageBits02; these are the larger debris chunks
        Count = 30
        Disposition = SEND_IT_UP
        DispositionIntensity = 20
        SpreadFormation = Yes
        MinDistanceAFormation = 25.0
        MinDistanceBFormation = 30.0
        MaxDistanceFormation = 60.0
    End
End

```

```

; -----
; Spawn a temporary Gondor building foundation; added by Meneldil for Workshop
; Porter
ObjectCreationList SUPERWEAPON_SpawnGondorBuildingFoundation
    CreateObject

```

```

    ObjectNames = GondorBuildingFoundation_Summoned
    Count = 1
    FadeIn = Yes
    FadeTime = 5000
End
CreateObject
    ObjectNames = StructureRubblePileSinkAway; BuildingDamageBits04; these are
the large debris chunks
    Count = 1
    Disposition = SEND_IT_UP
    DispositionIntensity = 10
    SpreadFormation = Yes
    MinDistanceAFormation = 10.0
    MinDistanceBFormation = 10.0
    MaxDistanceFormation = 10.0
End
CreateObject
    ObjectNames = BuildingDamageBits01; these are the small debris chunks
    Count = 50
    Disposition = SEND_IT_UP
    DispositionIntensity = 15
    SpreadFormation = Yes
    MinDistanceAFormation = 15.0
    MinDistanceBFormation = 15.0
    MaxDistanceFormation = 20.0
End
CreateObject
    ObjectNames = BuildingDamageBits02; these are the larger debris chunks
    Count = 30
    Disposition = SEND_IT_UP
    DispositionIntensity = 20
    SpreadFormation = Yes
    MinDistanceAFormation = 25.0
    MinDistanceBFormation = 30.0
    MaxDistanceFormation = 60.0
End
End
; -----
; Spawn a Gondor outpost foundation; added by Meneldil for Workshop Porter
ObjectCreationList SUPERWEAPON_SpawnGondorOutpostFlag
    CreateObject
        ObjectNames = ExpansionFlag; refer to civilianbuildings.ini
        Count = 1
        FadeIn = Yes
        FadeTime = 5000
    End
    CreateObject
        ObjectNames = BuildingDamageBits01; these are the small debris chunks
        Count = 50
        Disposition = SEND_IT_UP
        DispositionIntensity = 40
        SpreadFormation = Yes
        MinDistanceAFormation = 32.0
        MinDistanceBFormation = 48.0
        MaxDistanceFormation = 160.0
    End
    CreateObject
        ObjectNames = BuildingDamageBits02; these are the larger debris chunks
        Count = 30

```

```

Disposition = SEND_IT_UP
DispositionIntensity = 20
SpreadFormation = Yes
MinDistanceAFormation = 25.0
MinDistanceBFormation = 30.0
MaxDistanceFormation = 60.0
End
CreateObject
ObjectNames = BuildingDamageBits03; these are even larger debris chunks
Count = 20
Disposition = SEND_IT_UP
DispositionIntensity = 20
SpreadFormation = Yes
MinDistanceAFormation = 15.0
MinDistanceBFormation = 25.0
MaxDistanceFormation = 50.0
End
End

```

### data\ini\specialpower.ini

```

; -----
SpecialPower SuperweaponSpawnSwordGuardTrebuchet; added by Meneldil for Workshop
Porter
Enum                = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime          = 140000
PublicTimer         = No
InitiateAtLocationSound = TrebuchetVoiceSalute
RadiusCursorRadius = 50
End

```

```

; -----
SpecialPower SuperweaponSpawnSpearGuardTrebuchet; added by Meneldil for Workshop
Porter
Enum                = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime          = 140000
PublicTimer         = No
InitiateAtLocationSound = TrebuchetVoiceJoinDefend
RadiusCursorRadius = 50
End

```

```

; -----
SpecialPower SuperweaponSpawnGondorWell; added by Meneldil for Workshop Porter
Enum                = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime          = 120000
PublicTimer         = No
InitiateAtLocationSound = AragornAthelesEffect
RadiusCursorRadius = 35
End

```

```

; -----
SpecialPower SuperweaponSpawnGondorDefender; added by Meneldil for Workshop Porter
Enum                = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime          = 120000
PublicTimer         = No
InitiateAtLocationSound = ManGroupLargeCheer
RadiusCursorRadius = 20
End

```

```

; -----
SpecialPower SuperweaponSpawnGondorRuinedTower; added by Meneldil for Workshop
Porter

```

```

Enum          = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime    = 120000
PublicTimer   = No
InitiateAtLocationSound = EarthRumbleStereo
RadiusCursorRadius = 35
End

```

```

; -----
SpecialPower SuperweaponSpawnExperienceObject; added by Meneldil for Workshop
Porter

```

```

Enum          = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime    = 120000
PublicTimer   = No
InitiateAtLocationSound = GondorSoldierCelebratingLarge
RadiusCursorRadius = 15
End

```

```

; -----
SpecialPower SuperweaponSelfDestruct; added by Meneldil

```

```

Enum          = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime    = 1000
PublicTimer   = No
InitiateAtLocationSound = SpellFuelTheFires
End

```

```

; -----
SpecialPower SuperweaponSpawnExplosiveDevice; added by Meneldil for Workshop Porter

```

```

Enum          = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime    = 140000
PublicTimer   = No
InitiateAtLocationSound = BalrogLandSwordHit
RadiusCursorRadius = 20
End

```

```

; -----
SpecialPower SuperweaponSpawnGondorSentryTowerFoundation; added by Meneldil for
Workshop Porter

```

```

Enum          = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime    = 60000
PublicTimer   = No
; InitiateAtLocationSound = BuildingLightDamageStone (interferes with FX)
RadiusCursorRadius = 20
End

```

```

; -----
SpecialPower SuperweaponSpawnGondorBuildingFoundation; added by Meneldil for
Workshop Porter

```

```

Enum          = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime    = 120000
PublicTimer   = No
; InitiateAtLocationSound = BuildingHeavyDamageStone (interferes with FX)
RadiusCursorRadius = 30
End

```

```

; -----
SpecialPower SuperweaponSpawnGondorOutpostFlag; added by Meneldil for Workshop
Porter

```

```

Enum          = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime    = 180000
PublicTimer   = No
InitiateAtLocationSound = ImpactBallistaProjectile

```

```
RadiusCursorRadius          = 160
End
```

### data\ini\voice.ini

```
----- Workshop Porter -----
; added by Meneldil

AudioEvent WorkshopPorterVoiceCreated
    Sounds      = guporge_voideld guporge_voisald guporge_voiselc guporge_voiseld
guporge_voisele
    Priority     = high
    Volume      = UNIT_RESPONSE_VOLUME
    MinVolume   = UNIT_RESPONSE_MINVOLUME
    Type        = world player voice
    SubmixSlider = voice
End
```

```
AudioEvent WorkshopPorterVoiceSelect
    Sounds      = guporge_voideld guporge_voideli guporge_voiselc guporge_voiseld
guporge_voisele
    Priority     = high
    Volume      = UNIT_RESPONSE_VOLUME
    MinVolume   = UNIT_RESPONSE_MINVOLUME
    Type        = world player voice
    SubmixSlider = voice
End
```

```
AudioEvent WorkshopPorterVoiceMove
    Sounds      = guporge_voidela guporge_voidelb guporge_voidele guporge_voidelf
guporge_voidelg guporge_voidelh

    Sounds      = GUPorGe_voimova GUPorGe_voimovb GUPorGe_voimovc GUPorGe_voimovd
GUPorGe_voimove GUPorGe_voimovf
    Priority     = high
    Volume      = UNIT_RESPONSE_VOLUME
    MinVolume   = UNIT_RESPONSE_MINVOLUME
    Type        = world player voice
    SubmixSlider = voice
End
```

```
AudioEvent WorkshopPorterHelpMe
    Sounds      = guporge_voihelb guporge_voihelc guporge_voiheld guporge_voihelp
    Priority     = high
    Volume      = UNIT_RESPONSE_VOLUME
    MinVolume   = UNIT_RESPONSE_MINVOLUME
    Type        = world player voice
    SubmixSlider = voice
End
```

### data\ini\weapon.ini

Place this at the top of the file with the other new variables:

```
----- GONDOR WORKSHOP PORTER -----
#define GONDOR_PORTER_BUILD_COST          5000 ; refer to porter.ini file
#define GONDOR_PORTER_BUILD_TIME         60 ; refer to porter.ini file
#define GONDOR_PORTER_BOUNTY_VALUE_NEW   900 ; refer to porter.ini file
-----
```

Add this at the bottom of the file:

```
-----
Weapon DefenderSword; added by Meneldil for Defender of Gondor
    LeechRangeWeapon      = Yes
```

```

AttackRange          = 25
MeleeWeapon          = Yes
DelayBetweenShots    = ELROND_DELAYBETWEENSHOTS ; time between shots, msec
PreAttackDelay       = ELROND_PREATTACKDELAY ; sword swing delay time before
contact with target.
PreAttackType        = PER_SHOT ; Do the delay each time we attack a new target
FireFX               = FX_GondorSwordHit
FiringDuration       = ELROND_FIRINGDURATION ; Duration of the sword swing

```

DamageNugget

```

Damage              = ELROND_SWORD_DAMAGE; added by Meneldil (refer to top of file)
Radius              = 0.0
DelayTime           = 0
DamageType          = HERO
DamageFXType        = SWORD_SLASH
DeathType           = NORMAL

```

End

MetaImpactNugget

```

HeroResist          = 0.5
ShockWaveAmount     = 25
ShockWaveRadius     = 8
ShockWaveArc        = 120
ShockWaveTaperOff   = 1

```

End

DamageNugget

```

Damage              = GANDALF_LIGHTNING_DAMAGE
DamageType          = MAGIC
DamageFXType        = SWORD_SLASH
DeathType           = NORMAL
DamageScalar        = 300% NONE +MordorBalrog
DamageScalar        = 50000% NONE +RohanOathbreaker

```

End

End

-----

Weapon SelfDestruct; added by Meneldil to manually destroy incendiary objects

```

RadiusDamageAffects = ENEMIES SELF SUICIDE ALLIES
AttackRange         = 50

```

DamageNugget

```

Damage              = BALROG_SUMMONING_DAMAGE
Radius              = 50
DelayTime           = 500
DamageType          = FLAME
DamageFXType        = FLAME
DeathType           = BURNED

```

End

End

**data\lotr.str**

OBJECT:GondorWorkshopPorter

"Workshop Porter"

END

CONTROLBAR:GondorWorkshopPorter

"&Workshop Porter"

END



CONTROLBAR:ToolTipGondorWorkshopPorter

"Produces specialty weapons, defenses, and structures. \n  
Nearby structures and machines are automatically repaired. \n  
The worker lasts for about 5 minutes and then goes on disability. \n  
Only one worker is available at a time. \n Left click to activate."  
END

CONTROLBAR:SpawnSwordGuardTrebuchet

"&Trebuchet with Sword Guard"  
END

CONTROLBAR:ToolTipSpawnSwordGuardTrebuchet

"Create a firestone equipped trebuchet guarded by a squad of Gondor swordsmen \n  
Left click to activate"  
END

CONTROLBAR:SpawnSpearGuardTrebuchet

"&Trebuchet with Spear Guard"  
END

CONTROLBAR:ToolTipSpawnSpearGuardTrebuchet

"Create a firestone equipped trebuchet guarded by a squad of Gondor spearmen \n  
Left click to activate"  
END

CONTROLBAR:SpawnGondorWell

"Healing Well"  
END

CONTROLBAR:ToolTipSpawnGondorWell

"Create a healing fountain \n (3x faster healing than normal well) \n Lasts 3  
minutes \n Left click to activate"  
END

CONTROLBAR:SpawnGondorDefender

"&Defender of Gondor"  
END

CONTROLBAR:ToolTipSpawnGondorDefender

"Ensnarers and weakens nearby enemies \n -95% Speed, -50% Armor and Damage \n Statue  
lasts 5 minutes \n Left click to activate"  
END

OBJECT:GondorDefender

"Defender of Gondor"  
END

OBJECT:GondorDefenderDescription

"Traps and weakens nearby enemies. Statue comes to life if destroyed."  
END

CONTROLBAR:SpawnRuinedTower

"&Tower Ruins"  
END

CONTROLBAR:ToolTipSpawnRuinedTower

"Create a tower from which you can launch an attack or seek refuge \n Left click to  
activate"  
END

OBJECT:RuinedTowerDescription  
"Garrison up to 4 units or battalions"  
END

CONTROLBAR:SpawnExperienceObject  
"&Rank Advancement"  
END

CONTROLBAR:ToolTipSpawnExperienceObject  
"Create a totem that will allow a unit or battalion to level up a rank \n Left  
click to activate"  
END

OBJECT:ExpBonus  
"Rank Totem for"  
END

CONTROLBAR:SpawnExplosiveDevice  
"&Explosive Pillar"  
END

CONTROLBAR:ToolTipSpawnExplosiveDevice  
"To create a conventional explosion, use the self destruct command before the timer  
expires. Alternatively,  
use some kind of fire equipped weapon to detonate the pillar.  
The explosion will damage or destroy anything nearby. Otherwise, when the timer  
expires,  
the pillar will detonate with an energy wave that will destroy nearby enemy troops.  
\n Left click to activate."  
END

OBJECT:ExplodingPillar  
"Pillar of Destruction"  
END

OBJECT:ExplodingPillarDescription  
"If destroyed before the timer expires, a gunpowder charge will damage or destroy  
any nearby troops or structures. \n  
Otherwise, an energy wave will destroy nearby enemies. While present, any adjacent  
ally troops will be healed."  
END

CONTROLBAR:SelfDestruct  
"Initiate Self &Destruct"  
END

CONTROLBAR:ToolTipSelfDestruct  
"Left click or press D to activate, then right-click nearby to detonate the  
gunpowder."  
END

CONTROLBAR:SpawnGondorSentryTowerFoundation  
"&Sentry Tower Foundation"  
END

CONTROLBAR:ToolTipSpawnGondorSentryTowerFoundation  
"Create a temporary sentry tower foundation. \n If tower construction is not  
started within 60 seconds, the foundation will disappear. \n  
Left click to activate."  
END

```
CONTROLBAR:SpawnGondorBuildingFoundation
"Building &Foundation"
END
```

```
CONTROLBAR:ToolTipSpawnGondorBuildingFoundation
"Create a temporary building foundation. \n If construction is not started within
60 seconds, the foundation will disappear. \n
Left click to activate"
END
```

```
CONTROLBAR:SpawnOutpostFlag
"Outpost Foun&dation"
END
```

```
CONTROLBAR:ToolTipSpawnOutpostFlag
"Create a permanent outpost foundation \n Left click to activate"
END
```

```
CONTROLBAR:ConstructGondorWorkshop
"Build Gondor &Workshop"
END
```

*Note: Changed existing hot key from "P" to "W."*

### Gondor Porter Key Summary:

1. I created new references to the porter voices to make it more relevant to what it was being used for.
2. The porter hero image shows him having zero level. I changed the experience level code so that he appears as level 1. You can pick a different level number if you wish.
3. In order to provide the fire stone upgrade to the trebuchets, it was necessary to copy the existing upgrade code from the parent to the child object and then comment it out (you can delete those parts if you like; I kept it for reference). Otherwise, the child object would read the upgrade code in the parent.
4. The Defender of Gondor statue is interesting. First, I used a statue image that is not typically seen. Instead of providing a leadership benefit to Gondor, it negatively affects enemies. As shown in the attribute modifier, it slows down and weakens enemy forces. So that you can tell when the enemy is affected, the Body Glow FX was used. The statue is temporary, but if it is destroyed before the timer runs out, a temporary Gondor Captain is summoned. I did this because the Captain unit is not used in the game and because it looks very similar to the statue.
5. Notice that you can not only alter what happens to an object after it is destroyed, but do it based on how it dies, such as for the Defender of Gondor. Look through the slow death behaviors for additional details. Note that you should use existing module tag names when possible.
6. I made the Ruined Tower 25% bigger because it seemed to make the arrow shooting graphics look a little better and because I felt it needed to look bigger if it was going to hold 4 battalions. Also, it will accept temporary archers; they will continue to shoot even after their timer expires. You can adjust the passenger filter to prevent this if you like. Notice that I changed the primary code so that all ruined towers are affected.
7. The special effect additions were very minor. All I did was tweak the colors.
8. The rank increase totem simply makes use of an existing item found in Moria for the good campaign. No modification was needed.
9. The explosive pillar made use of the existing Isengard mine, except I swapped out the normal model for the pillar. I also added a blue aura to it with a strong healing capability. The pillar has multiple capabilities. Not only does it heal your nearby troops, but it can either be exploded like a mine (don't have your troops nearby!), or detonated as a Word of Power spell. The self destruct capability forces the pillar to explode as a mine.
10. The building foundations were also simple to do. I made them temporary (except for the outpost flag) in order to force the user to recreate them if the building is destroyed.
11. The outpost citadels can now garrison 2 battalions or units instead of just 1.

Hopefully, you will find some things here that you can add or reapply to your own mod.

## Allowing Gondor Camp Citadels, Castle Citadels, and Keeps to be Garrisoned

The original game allows an Outpost Citadel to be garrisoned (by one unit or battalion), but nothing else. Here's an approach to allow the camp & castle citadels as well as the stand alone keeps to be garrisoned if you wish.

### data\ini\commandset.ini

```
CommandSet GenericKeepCommandSet
    1      = Command_GenericReviveSlot1      ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
    2      = Command_GenericReviveSlot2      ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
    3      = Command_GenericReviveSlot3      ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
    4      = Command_GenericReviveSlot4      ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
    5      = Command_GenericReviveSlot5      ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
    6      = Command_GenericReviveSlot6      ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
    7      = Command_GenericReviveSlot7      ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
    8      = Command_GenericReviveSlot8      ;Revives any hero. Use Slot1-Slot8
and keep them UNIQUE within the same commandset!
    9      = Command_StartCitadelFoDSelfRepair
   10     = Command_ExitGarrison
   11     = Command_ExitGarrison; added by Meneldil
   12     = Command_ExitGarrison; added by Meneldil
   13     = Command_ExitGarrison; added by Meneldil
End
```

```
CommandSet GondorCastleBaseKeepCommandSet
    1      = Command_GenericReviveSlot1
    2      = Command_GenericReviveSlot2
    3      = Command_GenericReviveSlot3
    4      = Command_GenericReviveSlot4
    5      = Command_GenericReviveSlot5
    6      = Command_GenericReviveSlot6
    7      = Command_GenericReviveSlot7; added by Meneldil
    8      = Command_GenericReviveSlot8; added by Meneldil
    9      = Command_StartCitadelSelfRepair
   10     = Command_ExitGarrison; relocated by Meneldil
   11     = Command_ExitGarrison; added by Meneldil
   12     = Command_ExitGarrison; added by Meneldil
   13     = Command_ExitGarrison; added by Meneldil
   14     = Command_ExitGarrison; added by Meneldil
   15     = Command_ExitGarrison; added by Meneldil
;7      = Command_EvacuateGarrison; Meneldil note: using this may cause a game
crash
End
```

Note: I experienced game crashes when I tried to make use of the “EvacuateGarrison” command. I tried to use it because it causes all garrisoned units to evacuate.

### data\ini\object\goodfaction\goodfactionbuildings.ini

Search for “Object GondorCampKeep” (secondary GondorCitadel) and insert the following:

```
-----
-
; Meneldil provided to allow garrisoning of Camp Citadels if desired
    Behavior = HordeGarrisonContain ModuleTag_hordeGarrison
```

```

ObjectStatusOfContained = UNSELECTABLE CAN_ATTACK ENCLOSED
ContainMax              = 4
MaxHordeCapacity       = 4
DamagePercentToUnits   = 0%
PassengerFilter        = ANY +INFANTRY +HORDE +COMBO_HORDE -CAVALRY
AllowEnemiesInside     = Yes
AllowNeutralInside     = Yes
NumberOfExitPaths      = 1
PassengerBonePrefix    = PassengerBone:ARROW_ KindOf:INFANTRY
EntryOffset            = X:45.0 Y:0.0 Z:0.0
ExitOffset             = X:45.0 Y:0.0 Z:0.0
EnterSound             = GarrisonEnter
ExitSound              = GarrisonExit
KillPassengersOnDeath  = No
ShowPips               = No
ExitDelay              = 250
End

```

```

;-----
-

```

Search for "Object GondorCastleBaseKeep" (primary GondorCitadel) and then under "Can no longer garrison castle keeps" modify the code as follows:

```

;-----Can no longer garrison castle keeps
; Meneldil enabled ability to garrison the Gondor castle citadel
;
  Behavior = HordeGarrisonContain ModuleTag_hordeGarrison
    ObjectStatusOfContained = UNSELECTABLE CAN_ATTACK ENCLOSED; Meneldil
added "Enclosed"
    ContainMax              = 6; Meneldil changed original 4
    MaxHordeCapacity       = 6; Meneldil changed original 4
    DamagePercentToUnits   = 0%
    PassengerFilter        = ANY +INFANTRY +HORDE +COMBO_HORDE -CAVALRY;
Meneldil added combo horde
    AllowEnemiesInside     = Yes
    AllowNeutralInside     = Yes
    AllowAlliesInside      = Yes; added by Meneldil
    NumberOfExitPaths      = 1 ; Defaults to 1. Set 0 to not use
ExitStart/ExitEnd, set higher than 1 to use ExitStart01-nn/ExitEnd01-nn
    PassengerBonePrefix    = PassengerBone:ARROWBONE KindOf:INFANTRY
    EntryOffset            = X:0.0 Y:-45.0 Z:0.0
    ExitOffset             = X:0.0 Y:-45.0 Z:0.0

    ;PassengersTestCollisionHeight = 80
    ;Slots                      = 1
    EnterSound             = GarrisonEnter
    ExitSound              = GarrisonExit
    ExitDelay              = 250
    KillPassengersOnDeath  = No; Meneldil added
    ShowPips               = No; Meneldil added
    ;GoAggressiveOnExit      = Yes ; AI Will tell people to set their mood
to Aggressive on exiting
    ;ForceOrientationContainer = No ; otherwise contained units can't
orient themselves towards their targets...
End

```

Search for "Object GondorKeep" and then modify its Command Set as follows:  
CommandSet = RuinedTowerCommandSet; Meneldil replaced original  
BattleTowerCommandSet

Just before the geometry code block, search for and modify the disabled garrison code block as follows:

```
-----  
-  
; Meneldil modified the original code to allow garrisoning of Gondor keeps if  
desired  
    Behavior = HordeGarrisonContain ModuleTag_hordeGarrison  
        ObjectStatusOfContained = UNSELECTABLE CAN_ATTACK ENCLOSED  
        ContainMax                = 4  
        MaxHordeCapacity          = 4  
        DamagePercentToUnits     = 0%  
        PassengerFilter           = ANY +INFANTRY +HORDE +COMBO_HORDE -CAVALRY  
        AllowEnemiesInside       = Yes  
        AllowNeutralInside       = Yes  
        NumberOfExitPaths        = 1 ; Defaults to 1. Set 0 to not use  
ExitStart/ExitEnd, set higher than 1 to use ExitStart01-nn/ExitEnd01-nn  
    PassengerBonePrefix          = PassengerBone:ARROW_ KindOf:INFANTRY  
    EntryOffset                  = X:45.0 Y:0.0 Z:0.0  
    ExitOffset                   = X:45.0 Y:0.0 Z:0.0  
    EnterSound                   = GarrisonEnter  
    ExitSound                    = GarrisonExit  
    KillPassengersOnDeath       = No  
    ShowPips                     = No  
    ExitDelay                    = 250  
  
    End  
-----  
-
```

I actually left the original commented out code alone and added the above code.

You'll notice that Outpost Citadels can now garrison 2, Camp Citadels and Keeps can garrison 4, and Castle Citadels can garrison 6.

## Altering an Existing Spell Book Power: Elven Allies

The game provides "Last Alliance" units as well as Isildur, but does not use them. The objective of this modification is to alter the existing Elven Allies Evenstar Power so that temporary Last Alliance units as well as Isildur are summoned instead of the original elves. The name of the spell book power will remain the same so that the original computer AI will still use it.

### data\ini\attributemodifier.ini

ModifierList IsildurPassiveLeadership

```
Category = LEADERSHIP
Modifier = EXPERIENCE 300%
Modifier = ARMOR 20% ; Additive. Sum of these are subtracted from
all entries in Armor.ini
Modifier = DAMAGE_MULT 200% ; Multiplicative. Damage multiplied by this,
will compound in multiple bonuses
Modifier = RESIST_FEAR 100% ; Additive (added by Meneldil)
Modifier = RANGE 15% ; Additive (added by Meneldil)
Modifier = VISION 15% ; Additive (added by Meneldil)
Modifier = RESIST_KNOCKBACK 100% ; Additive (added by Meneldil)
Duration = 2500 ; Matches RefreshRate of giving module
FX = FX_GenericLeadershipLv11
FX2 = FX_GenericLeadershipLv12
FX3 = FX_GenericLeadershipLv13
MultiLevelFX = Yes
```

End

*Note: This is existing code that was modified*

### data\ini\commandbutton.ini

CommandButton Command\_SpellBookElvenAllies

```
Command = SPELL_BOOK
SpecialPower = SpellBookElvenAllies
ButtonImage = HPNumenorean; Meneldil changed original
SBGood_ElvenAllies
Options = NEED_TARGET_POS ; Huh, you can't have this flag and a
radius cursor: CONTEXTMODE_COMMAND
;TextLabel = CONTROLBAR:SummonElvenAllies
ButtonBorderType = ACTION ; Identifier for the User as to what kind of
button this is
;DescriptLabel = CONTROLBAR:TooltipSummonElvenAllies
RadiusCursorType = ELVEN_ALLIES
CursorName = AttackObj
InvalidCursorName = GenericInvalid
TextLabel = CONTROLBAR:SummonLastAlliance; added by Meneldil
DescriptLabel = CONTROLBAR:TooltipSummonLastAlliance; added by Meneldil
```

End

CommandButton Command\_PurchaseSpellelvenAllies

```
Command = PURCHASE_SCIENCE
ButtonBorderType = UPGRADE ; Identifier for the User as to what kind of
button this is
ButtonImage = HPIsildur; Meneldil changed SBGood_ElvenAllies ; DJR
6/29/4 using same image as spellbook for now
Science
;TextLabel = CONTROLBAR:SummonElvenAllies
;DescriptLabel = CONTROLBAR:TooltipSummonElvenAllies
RadiusCursorType = ELVEN_ALLIES
TextLabel = CONTROLBAR:SummonLastAlliance; added by Meneldil
DescriptLabel = CONTROLBAR:TooltipSummonLastAlliance; added by Meneldil
```

End

### data\ini\experiencelevels.ini

```
ExperienceLevel  IsildurLevel1
  TargetNames      =      GondorIsildur Isildur_Summoned; summoned
version added by Meneldil
  RequiredExperience =      1
  ExperienceAward   =      0
  Rank              =      10
  SelectionDecal
    Texture         =      decal_hero_good
    Style           =      SHADOW_ALPHA_DECAL
    OpacityMin      =      50%
    OpacityMax      =      100%
    MinRadius       =      40
    MaxRadius       =      200
    MaxSelectedUnits =      40
  End
End
```

### data\ini\fxlist.ini

```
;-----
FXList FX_LASummonAOD; added by Meneldil for Last Alliance
  ParticleSystem
    Name = OathBreakerSmoke4
  End
  ParticleSystem
    Name = OathBreakerFlare
  End
  ParticleSystem
    Name = oathBreakerLightShaft
  End
  ParticleSystem
    Name = AODsummonLightShafts
  End
End
```

### data\ini\object\goodfaction\units\elven\elveninfantry.ini

```
;-----
ChildObject LAElvenWarrior_Summoned LAElvenWarrior; added by Meneldil for Last
Alliance summons

  IsTrainable      = No
  DisplayName       = OBJECT:LAElvenWarrior
  CommandPoints    = 0
  CommandSet       = SingleElvenWarriorCommandSet

  Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
    MinLifetime = 60000
    MaxLifetime = 90000
    DeathType   = FADED
  End

  Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_RohanFireArrows
  End

  Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_RohanForgedBlades
  End

  Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_RohanHeavyArmor
```



End

```
Behavior = SlowDeathBehavior ModuleTag_05
  DeathTypes = ALL -FADED
  SinkDelay = 3000
  SinkRate = 0.40
  DestructionDelay = 17000
  Sound = FINAL ManCheerSingles
  FX = FINAL FX_LASummonAOD
  OCL = FINAL SUPERWEAPON_SpawnOathbreaker2
```

End

```
Behavior = SlowDeathBehavior ModuleTag_FadeDeath
  DeathTypes = NONE +FADED
  FX = INITIAL FX_UnSummonElvenAllies
```

End

End

### data\ini\object\goodfaction\units\elven\isildur.ini

Under “Design Parameters” add a bounty value for Isildur. The command set is included for reference.

```
CommandSet          = GondorIsildurCommandSet
BountyValue         = ELVEN_ISILDUR_BOUNTY_VALUE_NEW; added by
Meneldil
```

```
;;-----
ChildObject Isildur_Summoned GondorIsildur; added by Meneldil for Last Alliance
summons
```

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
  MinLifetime      = 60000
  MaxLifetime      = 90000
  DeathType        = FADED
```

End

```
ArmorSet
  Conditions       = None
  Armor            = HeroArmor
  DamageFX         = NormalDamageFX
```

End

```
Behavior = AttributeModifierAuraUpdate ModuleTag_IsildurLeadership
  StartsActive     = Yes
  BonusName        = IsildurPassiveLeadership
  RefreshDelay     = 2500
  Range            = 300
  ObjectFilter     = ANY +INFANTRY
```

End

```
Behavior = SlowDeathBehavior ModuleTag_05
  DeathTypes = NONE +FADED
  Sound = INITIAL ManCheerSingles
  FX = INITIAL FX_DevastationBlue
  OCL = FINAL OCL_FirePatriot
```

End

```
Behavior = SlowDeathBehavior ModuleTag_067
  DeathTypes = ALL -FADED
  SinkDelay = 3000
```

```

        SinkRate = 0.40
        DestructionDelay = 17000
        Sound = INITIAL MGMinas_GondorSoldier015
        FX = FINAL FX_SummonAOD
        OCL = FINAL SUPERWEAPON_SpawnOathbreaker1
    End

```

End

*Note: I added this at the bottom of the file.*

**data\ini\object\goodfaction\units\gondor\gondorinfantry.ini**

-----  
 ;-----

ChildObject LAGondorFighter\_Summoned LAGondorFighter; added by Meneldil for Last Alliance

```

    IsTrainable = No
    CommandPoints = 0
    DisplayName = OBJECT:LAGondorFighter
    CommandSet = GenericCommandSet
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime          = 60000
        MaxLifetime           = 90000
        DeathType             = FADED
    End

```

```

    Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
        UpgradeToGrant = Upgrade_GondorForgedBlades
    End

```

```

    Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
        UpgradeToGrant = Upgrade_GondorHeavyArmor
    End

```

```

    Behavior = SlowDeathBehavior ModuleTag_05
        DeathTypes = ALL -FADED
        SinkDelay = 3000
        SinkRate = 0.40
        DestructionDelay = 17000
        Sound = FINAL ManTauntCalloutsLoop2
        FX = FINAL FX_LASummonAOD
        OCL = FINAL SUPERWEAPON_SpawnOathbreaker1
    End

```

```

    Behavior = SlowDeathBehavior ModuleTag_FadeDeath
        DeathTypes = NONE +FADED
        FX          = INITIAL FX_UnSummonElvenAllies
    End

```

End

-----  
 ;-----

ChildObject LAGondorArcher\_Summoned LAGondorArcher; added by Meneldil for Last Alliance

```

    IsTrainable = No
    CommandPoints = 0
    DisplayName = OBJECT:LAGondorArcher
    CommandSet = GenericCommandSet
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate

```

```
    MinLifetime      = 60000
    MaxLifetime      = 90000
    DeathType        = FADED
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_GondorFireArrows
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_GondorHeavyArmor
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05
    DeathTypes = ALL -FADED
    SinkDelay = 3000
    SinkRate = 0.40
    DestructionDelay = 17000
    Sound = FINAL ManTauntCalloutsLoop3
    FX = FINAL FX_LASummonAOD
    OCL = FINAL SUPERWEAPON_SpawnOathbreaker2
End
```

```
Behavior = SlowDeathBehavior ModuleTag_FadeDeath
    DeathTypes = NONE +FADED
    FX = INITIAL FX_UnSummonElvenAllies
End
```

End

-----  
-----

ChildObject LAGondorBanner\_Summoned LAGondorBanner; added by Meneldil for Last Alliance

```
    IsTrainable = No
    CommandPoints = 0
    DisplayName = OBJECT:LAGondorBanner
    CommandSet = GenericCommandSet
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime      = 60000
        MaxLifetime      = 90000
        DeathType        = FADED
    End
```

```
Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
    UpgradeToGrant = Upgrade_GondorForgedBlades
End
```

```
Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_GondorHeavyArmor
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05
    DeathTypes = ALL -FADED
    SinkDelay = 3000
    SinkRate = 0.40
    DestructionDelay = 17000
    Sound = FINAL ManCheerSingles
    FX = FINAL FX_LASummonAOD
    OCL = FINAL SUPERWEAPON_SpawnOathbreaker3
End
```

```
Behavior = SlowDeathBehavior ModuleTag_FadeDeath
    DeathTypes = NONE +FADED
    FX = INITIAL FX_UnSummonElvenAllies
End
```

End

### data\ini\netral\netralunits.ini

```
-----
;
; added by Meneldil for Last Alliance
ChildObject LAOathbreaker1 RohanOathbreaker1
```

```
    DisplayName = OBJECT:LAOathbreaker
```

```
    LocomotorSet
```

```
        Locomotor = ArmyOfTheDeadLocomotor
        Condition = SET_NORMAL
        Speed      = 50
```

```
    End
```

```
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
```

```
        MinLifetime      = 10000
        MaxLifetime      = 20000
```

```
    End
```

End

```
-----
;
; added by Meneldil for Last Alliance
ChildObject LAOathbreaker2 RohanOathbreaker2
```

```
    DisplayName = OBJECT:LAOathbreaker
```

```
    LocomotorSet
```

```
        Locomotor = ArmyOfTheDeadLocomotor
        Condition = SET_NORMAL
        Speed      = 50
```

```
    End
```

```
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
```

```
        MinLifetime      = 10000
        MaxLifetime      = 20000
```

```
    End
```

End

```
-----
;
; added by Meneldil for Last Alliance
ChildObject LAOathbreaker3 RohanOathbreaker3
```

```
    DisplayName = OBJECT:LAOathbreaker
```

```
    LocomotorSet
```

```
        Locomotor = ArmyOfTheDeadLocomotor
        Condition = SET_NORMAL
        Speed      = 50
```

```
    End
```

```
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
```

```
        MinLifetime      = 10000
```

```
MaxLifetime      = 20000
End
```

```
End
```

### data\ini\objectcreationlist.ini

```
; -----
-----
; Create a bunch of Elves out of thin air.
; Modified by Meneldil to summon Last Alliance units
ObjectCreationList OCL_SpawnElvenWarriors; this is the original
  CreateObject
    ObjectNames = RohanElvenWarriorHorde_Summoned
    Count = 0; Meneldil changed original 3
    FadeIn = Yes
    FadeTime = 8000
    IgnoreCommandPointLimit = Yes
    Disposition = SPAWN_AROUND
    DispositionAngle = 120 ;SpawnAround uses this as the arc between guys
    DispositionIntensity = 200 ; and this for distance from center
  End
  CreateObject
    ObjectNames = LAElvenWarrior_Summoned
    Count = 5
    FadeIn = Yes
    FadeTime = 8000
    IgnoreCommandPointLimit = Yes
    Disposition = SPAWN_AROUND
    DispositionAngle = 360 ;SpawnAround uses this as the arc between guys
    DispositionIntensity = 150 ; and this for distance from center
  End
  CreateObject
    ObjectNames = LAGondorArcher_Summoned
    Count = 5
    FadeIn = Yes
    FadeTime = 8000
    IgnoreCommandPointLimit = Yes
    Disposition = SPAWN_AROUND
    DispositionAngle = 360 ;SpawnAround uses this as the arc between guys
    DispositionIntensity = 100 ; and this for distance from center
  End
  CreateObject
    ObjectNames = LAGondorBanner_Summoned
    Count = 5
    FadeIn = Yes
    FadeTime = 8000
    IgnoreCommandPointLimit = Yes
    Disposition = SPAWN_AROUND
    DispositionAngle = 360 ;SpawnAround uses this as the arc between guys
    DispositionIntensity = 250 ; and this for distance from center
  End
  CreateObject
    ObjectNames = LAGondorFighter_Summoned
    Count = 5
    FadeIn = Yes
    FadeTime = 8000
    IgnoreCommandPointLimit = Yes
    Disposition = SPAWN_AROUND
    DispositionAngle = 360 ;SpawnAround uses this as the arc between guys
    DispositionIntensity = 200 ; and this for distance from center
  End
End
```

```

    CreateObject
        ObjectNames = Isildur_Summoned
        Count = 1
        FadeIn = Yes
        FadeTime = 5000
        IgnoreCommandPointLimit = Yes
    End
End

```

*Note: This is a modification of existing code.*

```

; -----
; Spawn Individual Oathbreaker 1; added by Meneldil for Last Alliance
ObjectCreationList SUPERWEAPON_SpawnOathbreaker1
    CreateObject
        ObjectNames = LAOathbreaker1
        Count = 1
        FadeIn = Yes
        FadeTime = 1000
    End
End

; -----
; Spawn Individual Oathbreaker 2; added by Meneldil for Last Alliance
ObjectCreationList SUPERWEAPON_SpawnOathbreaker2
    CreateObject
        ObjectNames = LAOathbreaker2
        Count = 1
        FadeIn = Yes
        FadeTime = 1000
    End
End

; -----
; Spawn Individual Oathbreaker 3; added by Meneldil for Last Alliance
ObjectCreationList SUPERWEAPON_SpawnOathbreaker3
    CreateObject
        ObjectNames = LAOathbreaker3
        Count = 1
        FadeIn = Yes
        FadeTime = 1000
    End
End

```

*Note: The oathbreaker code above is all new and was added to the bottom of the file.*

### data\ini\voice.ini

```

;----- Isildur -----
; Meneldil note: Only the "Die" voice clips are provided by the game
; Meneldil commented out original (but non-existent) sound clips and replaced them
with existing
; mgithil and mgminas sound clips

AudioEvent IsildurVoiceAttackCharge
; Sounds          = GUIsild_voiatca GUIsild_voiatcb GUIsild_voiatcc
; Sounds          = GUIsild_voiatta GUIsild_voiattb GUIsild_voiattc GUIsild_voiattd
GUIsild_voiatte

```

```

Sounds      = mgithil_gons001 mgminas_gons030 mgminas_gons039 mgminas_gons040
mgminas_gons042 mgminas_gons046 mgminas_gons081 mgminas_gons082
Volume      = UNIT_RESPONSE_VOLUME
MinVolume   = UNIT_RESPONSE_MINVOLUME
Type        = world player voice
SubmixSlider = voice
End

```

```

AudioEvent IsildurVoiceAttack
; Sounds    = GUIsild_voiatta GUIsild_voiattb GUIsild_voiattc GUIsild_voiattd
GUIsild_voiatte
Sounds      = mgithil_gons001 mgminas_gons030 mgminas_gons039 mgminas_gons040
mgminas_gons042 mgminas_gons046 mgminas_gons081 mgminas_gons082
Volume      = UNIT_RESPONSE_VOLUME
MinVolume   = UNIT_RESPONSE_MINVOLUME
Type        = world player voice
SubmixSlider = voice
End

```

```

AudioEvent IsildurVoiceDie
Sounds      = GUIsild_voidiea GUIsild_voidieb GUIsild_voidiec GUIsild_voidied
GUIsild_voidiee
Volume      = UNIT_RESPONSE_VOLUME
MinRange    = 500
MaxRange    = 1000
Type        = world shrouded everyone voice
SubmixSlider = voice
End

```

```

AudioEvent IsildurVoiceDisengage
; Sounds    = GUIsild_voidisa GUIsild_voidisb GUIsild_voidisc
Sounds      = mgithil_gona004 mgithil_gona006 mgminas_gons037 mgminas_gons099
Volume      = UNIT_RESPONSE_VOLUME
MinVolume   = UNIT_RESPONSE_MINVOLUME
Type        = world player voice
SubmixSlider = voice
End

```

```

AudioEvent IsildurVoiceHelpMe
; Sounds    = GUIsild_voihela GUIsild_voihelb GUIsild_voihelc
Sounds      = mgminas_gons002 mgminas_gons031 mgminas_gons059
Volume      = UNIT_RESPONSE_VOLUME
MinVolume   = HELPME_MINVOLUME
Type        = world player voice
Priority     = critical
SubmixSlider = voice
End

```

```

AudioEvent IsildurVoiceJoinAnybody
Sounds      = GUIsild_voijana GUIsild_voijanb GUIsild_voijanc
Volume      = UNIT_RESPONSE_VOLUME
MinVolume   = UNIT_RESPONSE_MINVOLUME
Type        = world player voice
SubmixSlider = voice
End

```

```

AudioEvent IsildurVoiceMove
; Sounds    = GUIsild_voimova GUIsild_voimovb GUIsild_voimovc GUIsild_voimovd
GUIsild_voimove GUIsild_voimovf GUIsild_voimovg
Sounds      = mgminas_gons028 mgithil_gona005 mgminas_gons024 mgminas_gons025
Volume      = UNIT_RESPONSE_VOLUME

```

```
MinVolume = UNIT_RESPONSE_MINVOLUME
PlayPercent = VOICE_MOVE_PLAY_PERCENT
Type      = world player voice
SubmixSlider = voice
End
```

```
AudioEvent IsildurVoiceMoveGroup
  Sounds      = GUIsild_voimova GUIsild_voimovb GUIsild_voimovc GUIsild_voimovd
  GUIsild_voimove GUIsild_voimovf GUIsild_voimovg
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume = UNIT_RESPONSE_MINVOLUME
  Type      = world player voice
  SubmixSlider = voice
End
```

```
AudioEvent IsildurVoiceRespawn
  Sounds      = GUIsild_voiresa
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume = UNIT_RESPONSE_MINVOLUME
  Type      = world player voice
  SubmixSlider = voice
End
```

```
AudioEvent IsildurVoiceSalute
  Sounds      = GUIsild_voisala ;GUIsild_voisalb
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume = UNIT_RESPONSE_MINVOLUME
  Limit = 1
  Type      = world player voice
  SubmixSlider = voice
End
```

```
AudioEvent IsildurVoiceSelectBattle
  Sounds      = GUIsild_voiseba GUIsild_voisebb GUIsild_voisebc GUIsild_voisebd
  GUIsild_voisebe GUIsild_voisebf
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume = UNIT_RESPONSE_MINVOLUME
  Type      = world player voice
  SubmixSlider = voice
End
```

```
AudioEvent IsildurVoiceSelect
; Sounds      = GUIsild_voisela GUIsild_voiselb GUIsild_voiselc GUIsild_voiseld
GUIsild_voisele GUIsild_voiself GUIsild_voiselg
  Sounds      = mgminas_gons012 mgminas_gons020 mgminas_gons022 mgminas_gons032
mgminas_gons068
  Volume      = UNIT_RESPONSE_VOLUME
  MinVolume = UNIT_RESPONSE_MINVOLUME
  Type      = world player voice
  SubmixSlider = voice
End
```

### data\weapon.ini

```
-----
Weapon GondorIsildurNarsil
  LeechRangeWeapon = Yes
  AttackRange      = 12.0
  MeleeWeapon      = Yes
  DelayBetweenShots = ARAGORN_DELAYBETWEENSHOTS; time between shots, msec
  PreAttackDelay   = 2333; 400 is sword swing delay time before contact with
target.
```



PreAttackType = PER\_SHOT; Do the delay each time we attack a new target  
FireFX = FX\_GondorSwordHit  
FiringDuration = 1333; Duration of the sword swing

DamageNugget; A basic Nugget that just does damage  
Damage = 500; Meneldil changed original 10000  
Radius = 10  
DelayTime = 0  
DamageType = HERO  
DeathType = NORMAL

End

End

*Note: Just the sword's damage amount was changed.*

### data\lotr.str

CONTROLBAR:SummonLastAlliance  
"Last Alliance"  
END

CONTROLBAR:ToolTipSummonLastAlliance  
"Summons the spirits of men and elves from the last battle with Sauron. \n Left  
click then right click on target"  
END

*Note: The Last Alliance entries are new.*

CONTROLBAR:NarsilAttack  
"Narsil"  
END

CONTROLBAR:ToolTipNarsilAttack  
"Wield the blade used to defeat Sauron during the Last Alliance of Elves and Men \n  
Left click to activate"  
END

*Note: The Narsil entries already existed. The text was changed from the original.*

OBJECT:LAElvenWarrior  
"Last Alliance Elven Warrior"  
END

OBJECT:LAGondorFighter  
"Last Alliance Swordsman"  
END

OBJECT:LAGondorArcher  
"Last Alliance Archer"  
END

OBJECT:LAGondorBanner  
"Last Alliance Banner Carrier"  
END

OBJECT:LAOathBreaker  
"Spirits of Last Alliance Fighters"  
END

*Note: The "LA" entries are new.*

## Changing Spell Book Points

What if you want to change the number of points needed for Elven Allies (now Last Alliance) or Rohan Allies? After all, they are more powerful now, so another power point may be in order. Simply go to the data\ini\science.ini file and make these changes:

### Science SCIENCE\_ElvenAllies

```
PrerequisiteSciences = SCIENCE_GOOD SCIENCE_ElvenWood OR SCIENCE_ROHAN
SCIENCE_Draft OR SCIENCE_ROHAN SCIENCE_Heal OR SCIENCE_GONDOR SCIENCE_Heal OR
SCIENCE_GONDOR SCIENCE_ElvenWood
SciencePurchasePointCost = 8
SciencePurchasePointCostMP = 4; Meneldil changed from 3 to reflect Last Alliance
change (also see player template)
IsGrantable = Yes
; DisplayName =
; Description =
End
```

### Science SCIENCE\_RohanAllies

```
PrerequisiteSciences = SCIENCE_GOOD SCIENCE_Draft OR SCIENCE_GOOD
SCIENCE_ElvenWood OR SCIENCE_GONDOR SCIENCE_ElvenWood
SciencePurchasePointCost = 8
SciencePurchasePointCostMP = 4; Meneldil changed from 3 to reflect armor/weapon
upgrades (also see player template)
IsGrantable = Yes
; DisplayName =
; Description =
End
```

Notice that the “MP” designation is for Skirmish Mode (Multi-Player) only. The other point cost value is for Campaign Mode only.

If you change Spell Book power points, you also have to go to the data\ini\playertemplate.ini file and change the total number of available points. Otherwise, you may not have enough points for all of the spell book powers.

### PlayerTemplate FactionGondor

```
Side = Gondor
PlayableSide = Yes
Evil = No
StartMoney = 0
;MaxLevelMP = 33 ; 32 ; 1 extra for CB (commented out by Meneldil)
MaxLevelMP = 35; Meneldil increased original 33 to allow for point
increases for Elven & Rohan allies
MaxLevelSP = 78 ;80
```

Notice that “MaxLevelMP” is for Multiplayer (Skirmish) Mode and that “MaxLevelSP” is for Single Player (Campaign) Mode.

## **What if you prefer to have the Last Alliance spell only available to Gondor while Rohan maintains the Elven Allies spell?**

1. Go to the commandbutton.ini file and restore “Command\_SpellBookElvenAllies” and “Command\_PurchaseSpellElvenAllies” to their original form.
2. Go to the objectcreationlist.ini file and change the “RohanElvenWarriorHorde\_Summoned” count back to three. Change the “LA” and Isildur counts to zero. Alternatively, just return it to its original form.
3. Run the game and verify that the original “Elven Allies” spell works properly.

Now make the following additions and/or modifications.

### data\ini\commandbutton.ini

```
CommandButton Command_SpellBookLastAlliance; added by Meneldil for Gondor skirmish
    Command           = SPELL_BOOK
    SpecialPower      = SpellBookLastAlliance
    ButtonImage       = HPNumenorean
    Options           = NEED_TARGET_POS
    ButtonBorderType  = ACTION
    RadiusCursorType  = ELVEN_ALLIES
    CursorName        = AttackObj
    InvalidCursorName = GenericInvalid
    TextLabel         = CONTROLBAR:SummonLastAlliance
    DescriptLabel     = CONTROLBAR:TooltipSummonLastAlliance
End
```

```
CommandButton Command_PurchaseSpellLastAlliance; added by Meneldil for Gondor
skirmish
    Command           = PURCHASE_SCIENCE
    ButtonBorderType  = UPGRADE
    ButtonImage       = HPIsildur
    Science           = SCIENCE_LastAlliance
    RadiusCursorType  = ELVEN_ALLIES
    TextLabel         = CONTROLBAR:SummonLastAlliance
    DescriptLabel     = CONTROLBAR:TooltipSummonLastAlliance
End
```

### data\ini\commandset.ini

```
CommandSet GondorSpellBookCommandSet
    1 = Command_SpellBookHeal
    2 = Command_SpellBookElvenWood
    3 = Command_SpellBookGandalftheWhite
    ;4 = Command_SpellBookElvenAllies; disabled by Meneldil
    4 = Command_SpellBookLastAlliance; added by Meneldil
    5 = Command_SpellBookRohanAllies
    6 = Command_SpellBookCloudBreak_MP
    7 = Command_SpellBookEagleAllies
    8 = Command_SpellBookArmyoftheDead
    9 = Command_SpellBookMapView; added by Meneldil
End
```

```
CommandSet GondorSpellStoreCommandSet
    1 = Command_PurchaseSpellHeal
    2 = Command_PurchaseSpellElvenWood
    3 = Command_PurchaseSpellGandalftheWhite
    ;4 = Command_PurchaseSpellelvenAllies; disabled by Meneldil
    4 = Command_PurchaseSpellLastAlliance; added by Meneldil
    5 = Command_PurchaseSpellRohanAllies
    6 = Command_PurchaseSpellCloudBreak_MP
    7 = Command_PurchaseSpellEagleAllies
    8 = Command_PurchaseSpellArmyoftheDead
End
```

### data\ini\object\system\system.ini (under "GoodSpellBook")

```
Behavior = OCLSpecialPower ModuleTag_SummonElves
    SpecialPowerTemplate = SpellBookElvenAllies
    OCL                  = OCL_SpawnElvenWarriorsEgg
    TriggerFX            = FX_ElvenAlliesSummon
    CreateLocation       = CREATE_AT_LOCATION
    UpgradeName          = Upgrade_ElvenAllies
    AvailableAtStart     = No
End
```

Note: Above block shown here for reference. New code is shown below.

```
Behavior = OCLSpecialPower ModuleTag_SummonLastAlliance; Meneldil added for  
Gondor skirmish  
    SpecialPowerTemplate = SpellBookLastAlliance  
    OCL                   = OCL_SpawnLastAlliance  
    TriggerFX             = FX_ElvenAlliesSummon  
    CreateLocation        = CREATE_AT_LOCATION  
    AvailableAtStart      = No  
End
```

### data\ini\objectcreationlist.ini

```
; -----  
-----  
; Create Last Alliance forces; added by Meneldil  
ObjectCreationList OCL_SpawnLastAlliance  
    CreateObject  
        ObjectNames = LAElvenWarrior_Summoned  
        Count = 5  
        FadeIn = Yes  
        FadeTime = 8000  
        IgnoreCommandPointLimit = Yes  
        Disposition = SPAWN_AROUND  
        DispositionAngle = 360 ;SpawnAround uses this as the arc between guys  
        DispositionIntensity = 150 ; and this for distance from center  
    End  
    CreateObject  
        ObjectNames = LAGondorArcher_Summoned  
        Count = 5  
        FadeIn = Yes  
        FadeTime = 8000  
        IgnoreCommandPointLimit = Yes  
        Disposition = SPAWN_AROUND  
        DispositionAngle = 360 ;SpawnAround uses this as the arc between guys  
        DispositionIntensity = 100 ; and this for distance from center  
    End  
    CreateObject  
        ObjectNames = LAGondorBanner_Summoned  
        Count = 5  
        FadeIn = Yes  
        FadeTime = 8000  
        IgnoreCommandPointLimit = Yes  
        Disposition = SPAWN_AROUND  
        DispositionAngle = 360 ;SpawnAround uses this as the arc between guys  
        DispositionIntensity = 250 ; and this for distance from center  
    End  
    CreateObject  
        ObjectNames = LAGondorFighter_Summoned  
        Count = 5  
        FadeIn = Yes  
        FadeTime = 8000  
        IgnoreCommandPointLimit = Yes  
        Disposition = SPAWN_AROUND  
        DispositionAngle = 360 ;SpawnAround uses this as the arc between guys  
        DispositionIntensity = 200 ; and this for distance from center  
    End  
    CreateObject  
        ObjectNames = Isildur_Summoned  
        Count = 1  
        FadeIn = Yes  
        FadeTime = 5000
```

```
IgnoreCommandPointLimit = Yes
```

```
End
```

```
End
```

### data\ini\science.ini

```
Science SCIENCE_ElvenAllies
```

```
PrerequisiteSciences = SCIENCE_GOOD SCIENCE_ElvenWood OR SCIENCE_ROHAN  
SCIENCE_Draft OR SCIENCE_ROHAN SCIENCE_Heal OR SCIENCE_GONDOR SCIENCE_Heal OR  
SCIENCE_GONDOR SCIENCE_ElvenWood
```

```
SciencePurchasePointCost = 8
```

```
SciencePurchasePointCostMP = 4; Meneldil changed from 3 to reflect armor/weapon  
upgrades (also see player template)
```

```
IsGrantable = Yes
```

```
; DisplayName =
```

```
; Description =
```

```
End
```

Note: Above code block is added for reference

```
Science SCIENCE_LastAlliance; added by Meneldil for Gondor faction in lieu of Elven  
Allies
```

```
PrerequisiteSciences = SCIENCE_GOOD SCIENCE_ElvenWood OR SCIENCE_GONDOR  
SCIENCE_Heal OR SCIENCE_GONDOR SCIENCE_ElvenWood
```

```
SciencePurchasePointCost = 8
```

```
SciencePurchasePointCostMP = 4; Meneldil changed from 3 to reflect Last Alliance  
change (also see player template)
```

```
IsGrantable = Yes
```

```
End
```

Note: The next code blocks are modified (not new).

```
Science SCIENCE_CloudBreak_MP
```

```
; PrerequisiteSciences = SCIENCE_ROHAN SCIENCE_Anduril OR SCIENCE_ROHAN  
SCIENCE_ElvenAllies OR SCIENCE_GONDOR SCIENCE_GandalftheWhite OR SCIENCE_GONDOR  
SCIENCE_ElvenAllies; Meneldil disabled for Last Alliance
```

```
PrerequisiteSciences = SCIENCE_ROHAN SCIENCE_Anduril OR SCIENCE_ROHAN  
SCIENCE_ElvenAllies OR SCIENCE_GONDOR SCIENCE_GandalftheWhite OR SCIENCE_GONDOR  
SCIENCE_LastAlliance; Meneldil added
```

```
SciencePurchasePointCost = 0
```

```
SciencePurchasePointCostMP = 7 ; 6
```

```
IsGrantable = Yes
```

```
; DisplayName =
```

```
; Description =
```

```
End
```

```
Science SCIENCE_EagleAllies
```

```
; PrerequisiteSciences = SCIENCE_GOOD SCIENCE_CloudBreak_SP OR SCIENCE_GONDOR  
SCIENCE_ElvenAllies OR SCIENCE_GONDOR SCIENCE_RohanAllies; Meneldil disabled for  
Last Alliance
```

```
PrerequisiteSciences = SCIENCE_GOOD SCIENCE_CloudBreak_SP OR SCIENCE_GONDOR  
SCIENCE_LastAlliance OR SCIENCE_GONDOR SCIENCE_RohanAllies; Meneldil added for Last  
Alliance
```

```
SciencePurchasePointCost = 10
```

```
SciencePurchasePointCostMP = 6
```

```
IsGrantable = Yes
```

```
; DisplayName =
```

```
; Description =
```

```
End
```

## data\ini\specialpower.ini

```
-----  
SpecialPower SpellBookLastAlliance; added by Meneldil for Gondor faction  
    Enum = SPECIAL_SPELL_BOOK_ELVEN_ALLIES  
    RequiredScience = SCIENCE_LastAlliance  
    ReloadTime = 300000 ; in milliseconds  
    InitiateAtLocationSound = SpellElvenSummon  
    RadiusCursorRadius = 100.0  
End
```

### Summary

1. When playing skirmish, Gondor will have “Last Alliance” and Rohan will have “Elven Allies” spells.
2. Unless a change is made to the game’s AI, the computer will not use the new “Last Alliance” spell when playing against Gondor. It will still use the “Elven Allies” spell. Further below, I show how to adjust the game’s AI so that the new “Last Alliance” spell is used when playing against Gondor.
3. Sequence is critical when stating science prerequisites. Verify that the spells activate properly. One easy way to do this is to go to the rank.ini file and under “Rank 1” change “SciencePurchasePointsGranted” from 1 to a large number, such as 35. Save and start a new game. You’ll see that you can enable all of your spells. Note that this only works for skirmish mode. Below is a copy of the top part of the rank.ini file that shows where to make this change.

```
////////////////////////////////////  
;FILE: Rank.ini (SYSTEM) //////////////////////////////////////  
////////////////////////////////////
```

```
; This file is a cypypaste storm because it is less risky than rewriting all  
; of the code that thinks it works the old Generals way.
```

```
; -- Department of Apologies
```

#### Rank 1

```
    SkillPointsNeededDefault = 0 ; If there is no side specific  
    override (Replace Default with Side name, or with 'Campaign' for SP) just use this.  
    SkillPointsNeededCampaign = 0  
    SciencePurchasePointsGranted = 1; Meneldil note: Increase to add points when  
testing in skirmish mode  
End
```

## Adding Unique Projectiles & Tracer Colors for Horde and Structure Bows

Objective: Add unique color streaks and projectiles to Gondor fire arrows and structures.

Sometimes it can be difficult to see arrows or other projectiles. Modifying the projectile and/or adding unique tracer colors to the projectile can make your mod more interesting since all fire arrows and projectiles look pretty much the same. In this section, we'll modify the fire arrow color streaks for the Gondor faction.

You can find arrow streak color coding in the goodfactionsubobjects.ini (we'll get to the evilfactionsubobjects.ini later).

Search for "Object GondorArcherFireArrow" and you'll find the following code block.

### data\ini\object\goodfaction\goodfactionsubobjects.ini

```
-----  
; This arrow has an origin at the tail feathers and is on fire.  
-----  
Object GondorArcherFireArrow  
; *** ART Parameters ***  
Draw = W3DScriptedModelDraw ModuleTag_Draw  
  DefaultModelState  
  Model = NONE  
End  
End  
  
Draw = W3DStreakDraw ModuleTag_Draw2  
  Length = 15  
  Width = 3  
  NumSegments = 1 ; number of segments in the streak,  
increase for smoother line  
  Color = R:255 G:255 B:255  
  Texture = EXArrowStreakFire.tga  
End  
  
Draw = W3DStreakDraw ModuleTag_Draw3  
  Length = 50  
  Width = 1  
  NumSegments = 3 ; number of segments in the streak,  
increase for smoother line  
  Color = R:128 G:64 B:64  
  Texture = EXLightStreaks2.tga  
End
```

The first section gives you the option to use a W3D object for your projectile if you wish. For example, ballista use a model for their projectiles. For fire arrows, no model is used. Instead, a texture is used. Recall that the Textures.big file in your game program folder contains these pictures. Using your DDS Converter program, you can see that the two textures used for the fire arrows are as follows:

**EXArrowStreakFire.tga** looks like this:



**EXLightStreaks2.tga** looks like this:



You can alter the dimensions via the **Length** and **Width** variables. You can alter how many images there are via the **NumSegments** variable. By changing the color variable, you can add your own streak color. Finally, you can change one or both of the above textures to you give your projectile a much different appearance.

Notice that the color for the fire arrowhead is white (**R:255 G:255 B:255**). This means that the above texture is not altered. You can pick a different color, but it will combine with the existing orange color in the texture but not eliminate it. Also keep in mind that if you make the color too dark, it will not show up on your screen since black is not shown i.e., invisible. The fire arrow streak color is an orange color (**R:128 G:64 B:64**). Since this texture is white, you can readily change its color and give your fire arrow a unique color. With this in mind, here are some examples of what you can do with your arrow streaks for Gondor.

```

;-----
; This arrow has an origin at the tail feathers and is on fire.
;-----
Object GondorArcherFireArrow
; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_Draw
    DefaultModelState
        Model = NONE
    End
End

Draw = W3DStreakDraw ModuleTag_Draw2
    Length      = 15
    Width       = 3
    NumSegments = 1; number of segments in the streak, increase for smoother line
    Color       = R:250 G:150 B:50; Meneldil changed original R:255 G:255 B:255
    Texture     = EXArrowStreakFire.tga
End

Draw = W3DStreakDraw ModuleTag_Draw3
    Length      = 60; Meneldil changed original 50
    Width       = 1.5; Meneldil changed original 1
    NumSegments = 3; number of segments in the streak, increase for smoother line
    Color       = R:0 G:175 B:250; Meneldil changed original R:128 G:64 B:64
    Texture     = EXLightStreaks2.tga
End

```

Notice what has been changed. The flaming arrowhead did not change, but a reinforcing orange color was used to make it stand out a bit more. Doing this is optional. The real change is in the last code block. Notice that the streak length & width has been increased a bit in order to make it stand out more. Also, the streak color is blue. As a result, when Gondor archers get their fire arrow upgrade, they'll start shooting arrows with a trailing blue streak. What if you want Rangers and the Elves and Last Alliance Elven & Numenorian Archers to have their own color streaks? Just create them. Heroes don't have their own unique arrow streaks (except for their special power arrows); they are just regular arrows in appearance. You can modify those, too.

You can use the "ChildObject" command to create a number of different arrow streak colors, as shown below.

```

;*****
;***Start of Meneldil additions for Gondor***
;*****
;-----
ChildObject RangerFireArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist

Draw = W3DStreakDraw ModuleTag_Draw2
    Length      = 15
    Width       = 3

```



```

    NumSegments = 1; number of segments in the streak, increase for smoother line
    Color        = R:250 G:150 B:50; orange
    Texture      = EXArrowStreakFire.tga
End

Draw = W3DStreakDraw ModuleTag_Draw3
    Length      = 70
    Width       = 3
    NumSegments = 5; number of segments in the streak, increase for smoother line
    Color       = R:0 G:0 B:150; dark blue (R:0 G:165 B:75; dark green)
    Texture     = EXLightStreaks2.tga
End

End

```

```

;-----
ChildObject GondorElvenFireArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist

```

```

    Draw = W3DStreakDraw ModuleTag_Draw2
        Length      = 15
        Width       = 3
        NumSegments = 1; number of segments in the streak, increase for smoother line
        Color       = R:250 G:200 B:0; gold
        Texture     = EXArrowStreakFire.tga
    End

    Draw = W3DStreakDraw ModuleTag_Draw3
        Length      = 60
        Width       = 2
        NumSegments = 3; number of segments in the streak, increase for smoother
line
        Color       = R:135 G:15 B:255; purple
        Texture     = EXLightStreaks2.tga
    End

End

```

```

;-----
ChildObject LAElvenFireArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist

```

```

    Draw = W3DStreakDraw ModuleTag_Draw2
        Length      = 15
        Width       = 4
        NumSegments = 1; number of segments in the streak, increase for smoother line
        Color       = R:255 G:255 B:255; R:145 G:20 B:205; light purple
        Texture     = EXArrowStreak.tga
    End

    Draw = W3DStreakDraw ModuleTag_Draw3
        Length      = 60
        Width       = 2
        NumSegments = 3; number of segments in the streak, increase for smoother
line
        Color       = R:80 G:10 B:110; dark purple
        Texture     = EXLightStreaks2.tga
    End

End

```

```

;-----
ChildObject LAGondorFireArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist

Draw = W3DStreakDraw ModuleTag_Draw2
  Length      = 15
  Width       = 4
  NumSegments = 1; number of segments in the streak, increase for smoother line
  Color       = R:255 G:255 B:255; normal white arrow
  Texture     = EXArrowStreak.tga
End

Draw = W3DStreakDraw ModuleTag_Draw3
  Length      = 60
  Width       = 2
  NumSegments = 3; number of segments in the streak, increase for smoother line
  Color       = R:15 G:15 B:150; dark blue
  Texture     = EXLightStreaks2.tga
End

End

;-----
ChildObject FaramirFireArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist

Draw = W3DStreakDraw ModuleTag_Draw2
  Length      = 0.5
  Width       = 1.5
  NumSegments = 1; number of segments in the streak, increase for smoother line
  Color       = R:0 G:165 B:75; green-blue
  Texture     = EXLaser.tga
End

Draw = W3DStreakDraw ModuleTag_Draw3
  Length      = 70
  Width       = 1.5
  NumSegments = 3; number of segments in the streak, increase for smoother
line
  Color       = R:255 G:205 B:0; gold
  Texture     = EXLightStreaks2.tga
End

End

;-----
ChildObject ElrondFireArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist

Draw = W3DStreakDraw ModuleTag_Draw2
  Length      = 15
  Width       = 3
  NumSegments = 1; number of segments in the streak, increase for smoother line
  Color       = R:220 G:175 B:0; dark gold
  Texture     = EXArrowStreakFire.tga
End

Draw = W3DStreakDraw ModuleTag_Draw3
  Length      = 70
  Width       = 2.5

```

```

    NumSegments    = 3; number of segments in the streak, increase for smoother
line
    Color          = R:80 G:10 B:110; dark purple
    Texture        = EXLightStreaks2.tga
End

End

```

Because we've created new fire arrows, we'll have to reference them in the weapon.ini file.

### data\ini\weapon.ini

```

Weapon GondorRangerBow
    AttackRange          = GONDOR_RANGER_RANGE

    *** existing code ***

    ProjectileNugget          ; Default arrow
        ProjectileTemplateName = GoodFactionArrow
        WarheadTemplateName   = GondorRangerBowWarhead
        ForbiddenUpgradeNames = Upgrade_GondorFireArrows
    End
    ProjectileNugget          ; Fire arrow available from fire arrow
upgrade
        ProjectileTemplateName = RangerFireArrow; Meneldil changed from
original GoodFactionFireArrow
        WarheadTemplateName   = GondorRangerBowFireWarhead
        RequiredUpgradeNames  = Upgrade_GondorFireArrows
    End
End

```

Notice that the only thing we change for the Gondor Rangers is their projectile template name, as shown in the yellow highlighted section above. The template name is what you've created in the goodfactionsubobjects.ini file.

Similarly, these changes are made as well for Faramir and Elrond (highlighted in yellow below):

```

;-----
Weapon FaramirBow
    AttackRange          = FARAMIR_BOW_RANGE

    *** existing code ***

    ProjectileNugget          ; Default arrow
        ProjectileTemplateName = FaramirFireArrow; Meneldil changed original
GoodFactionArrow
        WarheadTemplateName   = FaramirBowWarhead
    End
End

;-----
Weapon ElrondBow          ; BALANCE Elven Archer Weapon
    AttackRange          = ELROND_BOW_RANGE; (originally 320) Added by Meneldil
(see top of file)
    WeaponSpeed          = 321          ; dist/sec
    MinWeaponSpeed       = 241
    MaxWeaponSpeed       = 481          ; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
    FireFX               = FX_RohanArcherBowWeapon
    ScaleWeaponSpeed     = Yes          ; Used for lob weapons, scales speed
proportional to range

```

```

HitPercentage = 100 ;When this weapon is used it will hit
exactly 100% of the time.
ScatterRadius = ELROND_SCATTERRADIUS; Meneldil changed from original
16 (Legolas is 5)
DelayBetweenShots = 0 ; time between shots, msec
PreAttackDelay = 833; 1467 is the prep time for archer.
PreAttackRandomAmount = 0 ; amount of additional preattack variance for
archer type attacks only
PreAttackType = PER_POSITION ; Do the delay each time we attack a new
target
FiringDuration = 0 ; Duration of the archer firing shot is 500ms.

ClipSize = 1
AutoReloadsClip = Yes
AutoReloadWhenIdle = 1
ClipReloadTime = Min:1800 Max:1800
ContinuousFireOne = 0
ContinuousFireCoast = 1800

IsAimingWeapon = Yes
AntiAirborneVehicle = Yes
AntiAirborneMonster = Yes

ProjectileNugget ; Default arrow
ProjectileTemplateName = ElrondFireArrow; Meneldil changed original
GoodFactionArrow
WarheadTemplateName = ElrondBowWarhead; Meneldil changed from original
ElvenArcherBowWarhead
ForbiddenUpgradeNames = Upgrade_GondorFireArrows; Meneldil changed original
Upgrade_RohanFireArrows
End

; Meneldil commented out (decided not to provide fire arrow upgrade)
; ProjectileNugget ; Fire arrow available through fire upgrade
; ProjectileTemplateName = GoodFactionFireArrow
; WarheadTemplateName = GondorArcherBowWarhead
; RequiredUpgradeNames = Upgrade_GondorFireArrows; Meneldil changed original
Upgrade_RohanFireArrows
; End

End

```

We need to add unique weapons for the Gondor Elves and Last Alliance units. All I did was copy and modify the "RohanElvenBow" code section.

```

;-----
Weapon GondorElvenBow ; added by Meneldil for Gondor Elves
AttackRange = ROHAN_ELVEN_RANGE
WeaponSpeed = 321 ; dist/sec
MinWeaponSpeed = 241
MaxWeaponSpeed = 481 ; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
FireFX = FX_RohanArcherBowWeapon
ScaleWeaponSpeed = Yes ; Used for lob weapons, scales speed proportional
to range
HitPercentage = 100 ;When this weapon is used it will hit exactly
50% of the time.
ScatterRadius = 16.0 ;When this weapon misses it can randomly miss
by as much as this distance.

AcceptableAimDelta = 20 ; prevent twitchy reaiming in horde on horde
DelayBetweenShots = 0

```

```

PreAttackDelay      = ROHAN_ELVENWARRIOR_BOW_PREATTACKDELAY
PreAttackType       = PER_POSITION
FiringDuration      = 0

OverrideVoiceAttackSound      = ElvenWarriorVoiceAttackBow
ClipSize                       = 1
AutoReloadsClip               = Yes
AutoReloadWhenIdle            = 1
ClipReloadTime                 = Min:ROHAN_ELVENWARRIOR_BOW_RELOADTIME_MIN
Max:ROHAN_ELVENWARRIOR_BOW_RELOADTIME_MAX
ContinuousFireOne             = 0
ContinuousFireCoast           = ROHAN_ELVENWARRIOR_BOW_RELOADTIME_MAX

AntiAirborneVehicle           = Yes
AntiAirborneMonster           = Yes
HitPassengerPercentage        = 20%
CanBeDodged                   = Yes ; Will check for a DodgePercent on the target
to have a second chance at failing HitPercent

ProjectileNugget              ; Default arrow
  ProjectileTemplateName       = GoodFactionArrow
  WarheadTemplateName          = RohanElvenBowWarhead
  ForbiddenUpgradeNames        = Upgrade_RohanFireArrows
End
ProjectileNugget              ; Fire arrow available from fire arrow
upgrade
  ProjectileTemplateName       = GondorElvenFireArrow; Meneldil changed
original GoodFactionFireArrow
  WarheadTemplateName          = RohanElvenBowFireWarhead
  RequiredUpgradeNames         = Upgrade_RohanFireArrows
End
End

;-----
Weapon LAElvenBow           ; added by Meneldil for Last Alliance Elves
  AttackRange                 = ROHAN_ELVEN_RANGE
  WeaponSpeed                  = 321           ; dist/sec
  MinWeaponSpeed               = 241
  MaxWeaponSpeed               = 481         ; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
  FireFX                       = FX_RohanArcherBowWeapon
  ScaleWeaponSpeed             = Yes ; Used for lob weapons, scales speed proportional
to range
  HitPercentage                 = 100        ;When this weapon is used it will hit exactly
50% of the time.
  ScatterRadius                 = 16.0       ;When this weapon misses it can randomly miss
by as much as this distance.

  AcceptableAimDelta           = 20         ; prevent twitchy reaiming in horde on horde
  DelayBetweenShots            = 0
  PreAttackDelay               = ROHAN_ELVENWARRIOR_BOW_PREATTACKDELAY
  PreAttackType                 = PER_POSITION
  FiringDuration               = 0

OverrideVoiceAttackSound      = ElvenWarriorVoiceAttackBow
ClipSize                       = 1
AutoReloadsClip               = Yes
AutoReloadWhenIdle            = 1
ClipReloadTime                 = Min:ROHAN_ELVENWARRIOR_BOW_RELOADTIME_MIN
Max:ROHAN_ELVENWARRIOR_BOW_RELOADTIME_MAX
ContinuousFireOne             = 0

```

```

ContinuousFireCoast      = ROHAN_ELVENWARRIOR_BOW_RELOADTIME_MAX

AntiAirborneVehicle      = Yes
AntiAirborneMonster      = Yes
HitPassengerPercentage   = 20%
CanBeDodged              = Yes ; Will check for a DodgePercent on the target
to have a second chance at failing HitPercent

ProjectileNugget          ; Default arrow
  ProjectileTemplateName  = GoodFactionArrow
  WarheadTemplateName     = RohanElvenBowWarhead
  ForbiddenUpgradeNames   = Upgrade_RohanFireArrows
End
ProjectileNugget          ; Fire arrow available from fire arrow
upgrade
  ProjectileTemplateName  = LAElvenFireArrow; Meneldil changed original
GoodFactionFireArrow
  WarheadTemplateName     = RohanElvenBowFireWarhead
  RequiredUpgradeNames    = Upgrade_RohanFireArrows
End
End

;-----
Weapon LAGondorBow
  AttackRange             = GONDOR_ARCHER_RANGE
  LeechRangeWeapon        = Yes
  WeaponSpeed             = 321           ; dist/sec
  MinWeaponSpeed          = 241
  MaxWeaponSpeed          = 481           ; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
  FireFX                  = FX_RohanArcherBowWeapon
  ScaleWeaponSpeed        = Yes ; Used for lob weapons, scales speed proportional
to range
  HitPercentage           = 100           ;When this weapon is used it will hit exactly
50% of the time.
  ScatterRadius           = 16.0         ;When this weapon misses it can randomly miss
by as much as this distance.

  AcceptableAimDelta      = 20           ; prevent twitchy reaiming in horde on horde
  DelayBetweenShots       = 0
  PreAttackDelay          = GONDOR_ARCHER_BOW_PREATTACKDELAY
  PreAttackRandomAmount   = 200
  PreAttackType           = PER_POSITION
  FiringDuration          = 0

  ClipSize                = 1
  AutoReloadsClip         = Yes
  AutoReloadWhenIdle      = 1
  ClipReloadTime          = Min:GONDOR_ARCHER_BOW_RELOADTIME_MIN
Max:GONDOR_ARCHER_BOW_RELOADTIME_MAX
  ContinuousFireOne       = 0
  ContinuousFireCoast     = GONDOR_ARCHER_BOW_RELOADTIME_MAX

  AntiAirborneVehicle     = Yes
  AntiAirborneMonster     = Yes
  HitPassengerPercentage  = 20%
  CanBeDodged             = Yes ; Will check for a DodgePercent on the
target to have a second chance at failing HitPercent

  ProjectileNugget        ; Default arrow
    ProjectileTemplateName = GondorArcherArrow

```

```

        WarheadTemplateName      = GondorArcherBowWarhead
        ForbiddenUpgradeNames    = Upgrade_GondorFireArrows
    End
    ProjectileNugget ; Fire arrow available through fire upgrade
        ProjectileTemplateName  = LAGondorFireArrow; Meneldil changed original
GondorArcherFireArrow
        WarheadTemplateName      = GondorArcherBowFireWarhead
        RequiredUpgradeNames    = Upgrade_GondorFireArrows
    End
End

```

Because we've added unique weapons for the Gondor Elves and Last Alliance Archer Units, we have to go back to their respective files and add the appropriate weapon sets, as shown below.

### data\ini\object\goodfaction\units\elven\elveninfantry.ini

```

;-----
ChildObject GondorElvenWarrior RohanElvenWarrior; added by Meneldil
    CommandSet      = ElvenScoutCommandSet
    CommandPoints   = 5
    BuildCost       = 350
    BuildTime       = 20

    Body = ActiveBody ModuleTag_02
        CheerRadius      = EMOTION_CHEER_RADIUS; is 350
        MaxHealth        = 290; ROHAN_ELVENWARRIOR_HEALTH is 160 for level 1
        MaxHealthDamaged = 290; ROHAN_ELVENWARRIOR_HEALTH_DAMAGED is 160 for
level 1
    End

    Behavior = AIUpdateInterface ModuleTag_03
        AutoAcquireEnemiesWhenIdle = Yes ATTACK_BUILDINGS STEALTHED
        MoodAttackCheckRate        = 500
        CanAttackWhileContained     = Yes
        AILuaEventsList             = RohanElvenWarriorFunctions
        AttackPriority               = AttackPriority_Archer; added by
Meneldil
    End

    WeaponSet
        Conditions = None
        Weapon = PRIMARY GondorElvenBow
        AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
    End

;Provide full weapon and armor upgrades
    Behavior = GrantUpgradeCreate ModuleTag_FireArrows
        UpgradeToGrant = Upgrade_RohanFireArrows
    End

    Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
        UpgradeToGrant = Upgrade_RohanForgedBlades
    End

    Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
        UpgradeToGrant = Upgrade_RohanHeavyArmor
    End

    Behavior = AutoHealBehavior ModuleTag_Healing
        StartsActive      = Yes
        HealingAmount     = 2
        HealingDelay      = 1000

```

```

        StartHealingDelay      = 20000
        HealOnlyIfNotInCombat = Yes
    End

    Behavior = StealthUpdate StealthUpdateModuleTag
        StealthDelay              = 0
        FriendlyOpacityMin        = 20%
        FriendlyOpacityMax        = 60%
        PulseFrequency            = 750
        InnateStealth             = No
        OrderIdleEnemiesToAttackMeUponReveal = Yes
        DetectedByAnyoneRange     = 20
        RevealWeaponSets          = CLOSE_RANGE CONTESTING_BUILDING
        BecomeStealthedFX         = FX_ElvenCloakOn
        ExitStealthFX             = FX_ElvenCloakOn
    End

    Behavior = SpecialPowerModule ModuleTag_ElfCloakStarter
        SpecialPowerTemplate      = SpecialAbilityElfCloak
        UpdateModuleStartsAttack  = Yes
    End

    Behavior = ToggleHiddenSpecialAbilityUpdate ModuleTag_ElfCloakUpdate
        SpecialPowerTemplate      = SpecialAbilityElfCloak
        AwardXPForTriggering      = 0
    End
End

```

End

```

;-----
ChildObject LAElvenWarrior_Summoned LAElvenWarrior; added by Meneldil for Last
Alliance summons

```

```

    IsTrainable      = No
    DisplayName      = OBJECT:LAElvenWarrior
    CommandPoints    = 0
    CommandSet       = SingleElvenWarriorCommandSet

```

```

    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime = 60000
        MaxLifetime = 90000
        DeathType   = FADED
    End

```

**WeaponSet**

```

    Conditions = None
    Weapon = PRIMARY LAElvenBow; refer to weapon.ini file
End

```

```

    Behavior = GrantUpgradeCreate ModuleTag_FireArrows
        UpgradeToGrant = Upgrade_RohanFireArrows
    End

```

```

    Behavior = GrantUpgradeCreate ModuleTag_ForgedBlades
        UpgradeToGrant = Upgrade_RohanForgedBlades
    End

```

```

    Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
        UpgradeToGrant = Upgrade_RohanHeavyArmor
    End

```

```

    Behavior = SlowDeathBehavior ModuleTag_05

```



```

    DeathTypes = ALL -FADED
    SinkDelay = 3000
    SinkRate = 0.40
    DestructionDelay = 17000
    Sound = FINAL ManCheerSingles
    FX = FINAL FX_SummonAOD
    OCL = FINAL SUPERWEAPON_SpawnOathbreaker2
End

```

```

Behavior = SlowDeathBehavior ModuleTag_FadeDeath
    DeathTypes = NONE +FADED
    FX = INITIAL FX_UnSummonElvenAllies
End

```

End

data\ini\object\goodfaction\units\gondor\gondorinfantry.ini

-----  
 ;-----

ChildObject LAGondorArcher\_Summoned LAGondorArcher; added by Meneldil for Last Alliance

```

    IsTrainable = No
    CommandPoints = 0
    DisplayName = OBJECT:LAGondorArcher
    CommandSet = GenericCommandSet
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime          = 60000
        MaxLifetime          = 90000
        DeathType            = FADED
End

```

**WeaponSet**

```

    Conditions = CLOSE_RANGE CONTESTING_BUILDING
    Weapon = PRIMARY LAGondorBow; refer to weapon.ini file
End

```

```

Behavior = GrantUpgradeCreate ModuleTag_FireArrows
    UpgradeToGrant = Upgrade_GondorFireArrows
End

```

```

Behavior = GrantUpgradeCreate ModuleTag_HeavyArmor
    UpgradeToGrant = Upgrade_GondorHeavyArmor
End

```

```

Behavior = SlowDeathBehavior ModuleTag_05
    DeathTypes = ALL -FADED
    SinkDelay = 3000
    SinkRate = 0.40
    DestructionDelay = 17000
    Sound = FINAL ManTauntCalloutsLoop3
    FX = FINAL FX_SummonAOD
    OCL = FINAL SUPERWEAPON_SpawnOathbreaker2
End

```

```

Behavior = SlowDeathBehavior ModuleTag_FadeDeath
    DeathTypes = NONE +FADED
    FX = INITIAL FX_UnSummonElvenAllies
End

```

End

## Summary

1. We added unique arrow streak colors to Gondor Archers, Rangers, Elves, Last Alliance Archer Units (Elven and Numenorian), Faramir, and Elrond. Feel free to adjust colors as you desire.
2. Since the Last Alliance Archer Units do not have visible arrow tip colors even after they get the fire arrow upgrade, I changed the texture to the non-fire arrow image.
3. Faramir's default arrowhead texture was also changed.
4. New weapons were given to the Gondor Elves and Last Alliance Archer Units so that they could also have unique streak colors.
5. Notice that the weapon names in the unit or hero INI file and the weapon.ini files must match. The projectile code is referenced in the goodfactionsubjects.ini file.

Now we'll turn our attent to structure projectiles. There are 6 Gondor structures that come with the ability to shoot projectiles at enemies. The table below summarizes where these structures are located, their code names, and their default weapons.

Structure	Comment	Object Code Location	Object Code Name	Original Weapon
Battle Tower	Tower attached to walls	gondorbuildings.ini	GondorCastleUpgrade	CastleWallUpgradeBow
Keep	Stand alone tower	goodfactionbuildings.ini	GondorKeep	BattleTowerBow
Citadel	Central castle tower	goodfactionbuildings.ini	GondorCastleBaseKeep	KeepBow
Sentry Tower	Small tower used in camps	goodfactionbuildings.ini	GondorSentryTower	GondorStructureBow
Barracks	Becomes armed at level 3	goodfactionbuildings.ini	GondorBarracks	GondorStructureBow
Archery Range	Becomes armed at level 3	goodfactionbuildings.ini	GondorArcherRange	GondorStructureBow

We are going to change the projectiles and colors of these structures.

## Battle Tower

These are the towers that are attached to castle walls. They are located in the gondorbuildings.ini file instead of the goodfactionbuildings.ini file that the other structures are located in. Go to the gondorbuildings.ini file and search for the "Object GondorCastleUpgrade" code entry. Then search for the "WeaponSet" code. My alteration is shown below.

```
WeaponSet
    Conditions      = None
End
WeaponSet
    Conditions      = PLAYER_UPGRADE
    Weapon          = PRIMARY GondorCastleWallUpgradeBow; Meneldil
changed original CastleWallUpgradeBow
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
End

;*****
; Added by Meneldil to allow Gondor Battle Towers to auto-repair
    Behavior = GettingBuiltBehavior ModuleTag_GettingBuilt
        SelfBuildingLoop      = BuildingConstructionLoop
        SelfRepairFromDamageLoop = BuildingConstructionLoop
        SpawnTimer             = 60
        RebuildTimeSeconds     = 120
    End
;*****
```

Tip: The asterix bracketed code block allows the battle towers to repair themselves automatically. The original games does not provide an option for repairing battle towers.

Notice that I created a new weapon called “GondorCastleWallUpgradeBow” in order to differentiate from the Rohan version that we’ll create later.

Because we’ve added a new weapon, we have to add it to the weapon.ini file.

```
-----  
;Meneldil note: This is for Gondor Battle Towers (attached to castle wall);  
reference gondorbuildings.ini  
Weapon GondorCastleWallUpgradeBow; added by Meneldil (modified  
CastleWallUpgradeBow)  
    AttackRange                = KEEP_ARCHER_RANGE  
    WeaponSpeed                = 321          ; dist/sec  
    MinWeaponSpeed            = 241  
    MaxWeaponSpeed            = 481          ; dist/sec Upper limit on scaling, when  
attacking past nominal "max" range  
    FireFX                    = FX_RohanArcherBowWeapon  
    ScaleWeaponSpeed          = Yes          ; Used for lob weapons, scales speed  
proportional to range  
    HitPercentage              = 100         ;When this weapon is used it will hit  
exactly 50% of the time.  
    ScatterRadius              = 16.0       ;When this weapon misses it can randomly  
miss by as much as this distance.  
    DelayBetweenShots          = Min:KEEP_BOW_DELAYBETWEENSHOTS_MIN  
Max:KEEP_BOW_DELAYBETWEENSHOTS_MAX  
    PreAttackDelay             = KEEP_BOW_PREATTACKDELAY ; 1467 is the prep time for  
archer.  
    PreAttackType              = PER_SHOT   ; Do the delay each time we attack a new  
target  
    FiringDuration             = KEEP_BOW_DELAYBETWEENSHOTS_MAX ; Duration of the  
archer firing shot is 500ms.  
    IsAimingWeapon            = Yes  
    AntiAirborneVehicle        = Yes  
    AntiAirborneMonster        = Yes  
    HitPassengerPercentage     = 20%  
    AcceptableAimDelta         = 360.0; We want to be able to shoot all round, as we  
can't move.  
  
    CanBeDodged = Yes ; Will check for a DodgePercent on the target to have a second  
chance at failing HitPercent  
  
    ProjectileNugget           ; Default arrow  
    ProjectileTemplateName     = GondorBattleTowerArrow; Meneldil changed original  
GoodFactionArrow  
    WarheadTemplateName        = CastleWallUpgradeBowWarhead  
    ForbiddenUpgradeNames      = Upgrade_BattleTowersToUseFireArrows  
End  
  
    ProjectileNugget           ; Upgraded arrow  
    ProjectileTemplateName     = UpgradedGondorBattleTowerArrow; Meneldil changed  
original UpgradedGoodFactionArrow  
    WarheadTemplateName        = GondorCastleWallUpgradeBowWarhead  
    RequiredUpgradeNames       = Upgrade_BattleTowersToUseFireArrows  
End  
  
End
```

Notice that in the above code, we’ve added two new projectiles: One for before the “Battle Tower and Keep Archers” upgrade is selected at the Gondor Stoneworker and one for afterwards. In addition, a new warhead template has been added for the upgraded tower.

Tip: Did you know that once the the “Battle Tower and Keep Archers” has been selected, all towers are upgraded and you never have to repurchase it again? However, the “Numenorian Stonework” and “Reinforced Gate” upgrades have to be repeated for each castle? Also, once the upgrades have been completed, you can destroy the Stoneworker building and put something else in its place without losing any of the upgrades you’ve purchased.

We’ll now add new projectiles to the goodfactionsubjects.ini file.

```
-----  
ChildObject GondorBattleTowerArrow GondorArcherFireArrow; added by Meneldil  
; The weapon.ini file has also been adjusted because this didn't originally exist  
; This is for towers that are part of the castle wall (prior to tower upgrade)  
  
    Draw = W3DStreakDraw ModuleTag_Draw2  
        Length      = 10  
        Width       = 10  
        NumSegments = 1; number of segments in the streak, increase for smoother  
line  
        Color       = R:255 G:255 B:255; no change to texture color  
        Texture     = SFE_BlueStar.tga  
    End  
  
    Draw = W3DStreakDraw ModuleTag_Draw3  
        Length      = 60  
        Width       = 2  
        NumSegments = 5; number of segments in the streak, increase for smoother  
line  
        Color       = R:50 G:100 B:100; slate blue  
        Texture     = EXLnzFlar4.tga  
    End  
  
End  
  
-----  
ChildObject UpgradedGondorBattleTowerArrow GondorArcherFireArrow; added by Meneldil  
; The weapon.ini file has also been adjusted because this didn't originally exist  
; This is for towers that are part of the castle wall (after tower upgrade)  
  
    Draw = W3DStreakDraw ModuleTag_Draw2  
        Length      = 20  
        Width       = 20  
        NumSegments = 1; number of segments in the streak, increase for smoother line  
        Color       = R:255 G:255 B:255; no change to texture color  
        Texture     = EXStarBurstBW.tga  
    End  
  
    Draw = W3DStreakDraw ModuleTag_Draw3  
        Length      = 100  
        Width       = 5  
        NumSegments = 5; number of segments in the streak, increase for smoother line  
        Color       = R:250 G:200 B:0; gold  
        Texture     = EXLightStreaks2.tga  
    End  
  
End
```

From the above code, you can see that there will be two very different looking projectiles for before and after tower upgrades. Notice that you may have to experiment with the dimensions, depending on the texture you select.

I could have used an existing warhead template for the upgraded tower (e.g., `CastleWallUpgradeBowWarheadUpgrade`). That's fine and if you do use an existing warhead, you're done with this tower. However, what if you want to modify the damage attributes? Look at the code below.

```

;-----
Weapon GondorCastleWallUpgradeBowWarhead; added by Meneldil
  ProjectileCollidesWith = ENEMIES NEUTRAL STRUCTURES WALLS
  RadiusDamageAffects = ENEMIES NEUTRALS NOT_SIMILAR ;ALLIES
  HitStoredTarget = Yes ; Always hits initial target.
  DamageNugget          ; A basic Nugget that just does damage
    Damage              = WALL_TOWER_BOW_DAMAGE_UPGRADE
    Radius              = 0.0 ; HitStoredTarget means we hurt the person we launched at.
And nobody else.      So a miss hurts nobody.
  DelayTime            = 0
  DamageType           = PIERCE
  DamageFXType         = GOOD_ARROW_PIERCE
  DeathType            = NORMAL
End

  DamageNugget          ; A basic Nugget that just does damage (added by Meneldil)
    Damage              = 5
    DamageType           = MAGIC
    DamageFXType         = BALROG_WHIP
    DeathType            = NORMAL
    DamageScalar         = 0% ANY
    DamageScalar         = 200% NONE +MordorBalrog
    DamageScalar         = 10000% NONE +RohanOathbreaker
End

  DamageNugget; Make it tougher for the Ents (added by Meneldil)
    Damage              = 5
    Radius              = 0
    DelayTime           = 0
    DamageType           = CHOP
    DamageFXType         = FLAME
    DeathType            = NORMAL
    DamageScalar         = 0% ANY
    DamageScalar         = 300% NONE +RohanEntFir +RohanEntBirch +RohanTreeBerd
End

End

```

You'll see that I added two new damage nuggets that will hurt the Balrog, oathbreakers, and Ents. Notice also that these capabilities will only become active after the tower upgrade is purchased.

If you like, you can also modify the non-upgraded weapon template (but it shouldn't be as powerful as the upgraded tower weapon warhead). Here's an example.

```

;-----
Weapon CastleWallUpgradeBowWarhead
  ProjectileCollidesWith = ENEMIES NEUTRAL STRUCTURES WALLS
  RadiusDamageAffects = ENEMIES NEUTRALS NOT_SIMILAR ;ALLIES
  HitStoredTarget = Yes ; Always hits initial target.
  DamageNugget          ; A basic Nugget that just does damage
    Damage              = WALL_TOWER_BOW_DAMAGE
    Radius              = 0.0 ; HitStoredTarget means we hurt the person we launched at.
And nobody else.      So a miss hurts nobody.
  DelayTime            = 0
  DamageType           = PIERCE
  DamageFXType         = GOOD_ARROW_PIERCE

```

```
DeathType      = NORMAL
End
```

```
DamageNugget; Make it tougher for the Ents (added by Meneldil)
Damage         = 5
Radius         = 0
DelayTime      = 0
DamageType     = CHOP
DamageFXType   = FLAME
DeathType      = NORMAL
DamageScalar   = 0% ANY
DamageScalar   = 300% NONE +RohanEntFir +RohanEntBirch +RohanTreeBerd
End
```

End

## Keep

These are the stand alone towers that look similar to the towers that are attached to castle walls. They are located in the goodfactionbuildings.ini file. Go to this file and search for the "Object GondorKeep" code entry. Then search for the "WeaponSet" code. My alteration is shown below.

```
WeaponSet; Meneldil changed original battle tower bow (refer to weapon.ini)
Weapon          = PRIMARY GondorKeepBow; Meneldil changed original
BattleTowerBow ; KeepBow
Conditions      = None
AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
End
```

Again, I've created a new weapon, so off to the weapon.ini file we go.

```
;-----
;Both Gondor and Isengard use "BattleTowerBow" for their stand alone keeps
;Meneldil reapplied to make unique weapons for each faction so that unique
projectiles could be used.
;Refer to goodfactionbuildings.ini
Weapon GondorKeepBow; added by Meneldil
AttackRange     = KEEP_ARCHER_RANGE
WeaponSpeed     = 321           ; dist/sec
MinWeaponSpeed  = 241
MaxWeaponSpeed  = 481           ; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
FireFX          = FX_RohanArcherBowWeapon
ScaleWeaponSpeed = Yes           ; Used for lob weapons, scales speed
proportional to range
HitPercentage    = 100           ;When this weapon is used it will hit
exactly 50% of the time.
ScatterRadius    = 16.0         ;When this weapon misses it can randomly
miss by as much as this distance.
DelayBetweenShots = Min:KEEP_BOW_DELAYBETWEENSHOTS_MIN
Max:KEEP_BOW_DELAYBETWEENSHOTS_MAX
PreAttackDelay   = KEEP_BOW_PREATTACKDELAY ; 1467 is the prep time for
archer.
PreAttackType    = PER_SHOT     ; Do the delay each time we attack a new
target
FiringDuration   = KEEP_BOW_DELAYBETWEENSHOTS_MAX ; Duration of the
archer firing shot is 500ms.
IsAimingWeapon   = Yes
AntiAirborneVehicle = Yes
```

```
AntiAirborneMonster      = Yes
HitPassengerPercentage   = 20%
AcceptableAimDelta       = 360.0; We want to be able to shoot all round, as we
can't move.
```

CanBeDodged = Yes ; Will check for a DodgePercent on the target to have a second chance at failing HitPercent

```
ProjectileNugget         ; Default arrow
  ProjectileTemplateName = GondorKeepArrow; Meneldil changed original
GoodFactionArrow
  WarheadTemplateName   = BattleTowerBowWarhead
  ForbiddenUpgradeNames = Upgrade_BattleTowersToUseFireArrows
End

ProjectileNugget         ; Upgraded arrow
  ProjectileTemplateName = UpgradedGondorKeepArrow; Meneldil changed original
UpgradedGoodFactionArrow
  WarheadTemplateName   = BattleTowerBowUpgradedWarhead
  RequiredUpgradeNames  = Upgrade_BattleTowersToUseFireArrows
End

End
```

We'll now add the new projectiles to the goodfactionsubobjects.ini file.

```
;-----
ChildObject GondorKeepArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist
; This is for stand alone keeps (not part of castle wall)

  Draw = W3DStreakDraw ModuleTag_Draw2
    Length      = 15
    Width       = 15
    NumSegments = 1; number of segments in the streak, increase for smoother
line
    Color       = R:250 G:200 B:0; gold
    Texture     = EXLnzFlar7.tga
  End

  Draw = W3DStreakDraw ModuleTag_Draw3
    Length      = 60
    Width       = 1.5; Meneldil changed original 1
    NumSegments = 5; number of segments in the streak, increase for smoother
line
    Color       = R:250 G:250 B:100; pale yellow
    Texture     = EXStarBurstBW.tga
  End

End

;-----
ChildObject UpgradedGondorKeepArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist
; This is for stand alone keeps (not part of castle wall)

  Draw = W3DStreakDraw ModuleTag_Draw2
    Length      = 20
    Width       = 20
    NumSegments = 1; number of segments in the streak, increase for smoother
line
```

```

Color      = R:250 G:200 B:0; gold
Texture    = EXStarBurstBW.tga
End

```

```

Draw = W3DStreakDraw ModuleTag_Draw3
Length      = 80
Width       = 3
NumSegments = 5; number of segments in the streak, increase for smoother
line
Color      = R:100 G:205 B:255; R:0 G:0 B:250; blue
Texture    = EXLightStreaks2.tga
End

```

End

Again, you can adjust the existing upgraded keep warhead if you like in the weapon.ini file. Here's an example.

```

;-----
Weapon BattleTowerBowUpgradedWarhead; Meneldil note: Used for upgraded Gondor Keeps
ProjectileCollidesWith = ENEMIES NEUTRAL STRUCTURES WALLS
RadiusDamageAffects = ENEMIES NEUTRALS NOT_SIMILAR ;ALLIES
HitStoredTarget = Yes ; Always hits initial target.
DamageNugget
Damage      = 40 ; Upgraded Keep Bows now have 65 (from 80), BattleTower Bow
has 40% weaker damage
Radius      = 0.0 ; HitStoredTarget means we hurt the person we launched at.
And nobody else. So a miss hurts nobody.
DelayTime   = 0
DamageType  = PIERCE
DamageFXType = GOOD_ARROW_PIERCE
DeathType   = NORMAL
End

DamageNugget; Make it tougher for the Ents (Meneldil added)
Damage      = 5
Radius      = 0
DelayTime   = 0
DamageType  = FLAME
DamageFXType = FLAME
DeathType   = BURNED
DamageScalar = 0% ANY +MINE; Don't want to set off any mines
DamageScalar = 300% NONE +RohanEntFir +RohanEntBirch +RohanTreeBerd
End

```

End

## Citadel

These are the central castle towers. Their codes are also located in the goodfactionbuildings.ini file. Go to this file and search for the "Object GondorCastleBaseKeep" code entry. Then search for the "WeaponSet" code. My alteration is shown below.

```

WeaponSet; Meneldil changed original keep bow (refer to weapon.ini)
Conditions      = None
Weapon          = PRIMARY GondorCitadelBow; Meneldil changed original
KeepBow
AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
End

```



We'll add new weapon and warhead code to the weapon.ini file for the Gondor Citadel.

```
-----  
;Meneldil note: This is for Gondor castle citadels  
Weapon GondorCitadelBow ; added by Meneldil  
  AttackRange = KEEP_ARCHER_RANGE  
  WeaponSpeed = 321 ; dist/sec  
  MinWeaponSpeed = 241  
  MaxWeaponSpeed = 481 ; dist/sec Upper limit on scaling, when  
attacking past nominal "max" range  
  FireFX = FX_RohanArcherBowWeapon  
  ScaleWeaponSpeed = Yes ; Used for lob weapons, scales speed  
proportional to range  
  HitPercentage = 100 ;When this weapon is used it will hit  
exactly 50% of the time.  
  ScatterRadius = 16.0 ;When this weapon misses it can randomly  
miss by as much as this distance.  
  DelayBetweenShots = Min:KEEP_BOW_DELAYBETWEENSHOTS_MIN  
Max:KEEP_BOW_DELAYBETWEENSHOTS_MAX  
  PreAttackDelay = KEEP_BOW_PREATTACKDELAY ; 1467 is the prep time for  
archer.  
  PreAttackType = PER_SHOT ; Do the delay each time we attack a new  
target  
  FiringDuration = KEEP_BOW_DELAYBETWEENSHOTS_MAX ; Duration of the  
archer firing shot is 500ms.  
  IsAimingWeapon = Yes  
  AntiAirborneVehicle = Yes  
  AntiAirborneMonster = Yes  
  HitPassengerPercentage = 20%  
  AcceptableAimDelta = 360.0 ; We want to be able to shoot all round, as we  
canit move.  
  
  CanBeDodged = Yes ; Will check for a DodgePercent on the target to have a second  
chance at failing HitPercent  
  
  ProjectileNugget ; Default arrow  
  ProjectileTemplateName = GondorCitadelArrow; Meneldil changed original  
GoodFactionArrow  
  WarheadTemplateName = GondorCitadelBowWarhead  
  ForbiddenUpgradeNames = Upgrade_BattleTowersToUseFireArrows  
End  
  
  ProjectileNugget ; Upgraded arrow  
  ProjectileTemplateName = UpgradedGondorCitadelArrow; Meneldil changed original  
UpgradedGoodFactionArrow  
  WarheadTemplateName = GondorCitadelBowUpgradedWarhead  
  RequiredUpgradeNames = Upgrade_BattleTowersToUseFireArrows  
End  
  
End  
  
-----  
Weapon GondorCitadelBowWarhead; added by Meneldil  
  ProjectileCollidesWith = ENEMIES NEUTRAL STRUCTURES WALLS  
  RadiusDamageAffects = ENEMIES NEUTRALS NOT_SIMILAR ;ALLIES  
  HitStoredTarget = Yes ; Always hits initial target.  
  DamageNugget ; A basic Nugget that just does damage  
  Damage = KEEP_BOW_DAMAGE  
  Radius = 0.0 ; HitStoredTarget means we hurt the person we launched at.  
And nobody else. So a miss hurts nobody.  
  DelayTime = 0
```

```

DamageType      = PIERCE
DamageFXType    = GOOD_ARROW_PIERCE
DeathType       = NORMAL
End

DamageNugget    ; A basic Nugget that just does damage
Damage          = 10
DamageType      = MAGIC
DamageFXType    = BALROG_WHIP
DeathType       = NORMAL
DamageScalar    = 0% ANY
DamageScalar    = 1000% NONE +MordorBalrog; only provide damage to Balrog
End

```

End

```

;-----
Weapon GondorCitadelBowUpgradedWarhead; added by Meneldil
ProjectileCollidesWith = ENEMIES NEUTRAL STRUCTURES WALLS
RadiusDamageAffects = ENEMIES NEUTRALS NOT_SIMILAR ;ALLIES
HitStoredTarget = Yes ; Always hits initial target.
DamageNugget
Damage          = KEEP_BOW_UPGRADED_DAMAGE
DamageScalar    = 200% NONE +MordorFellBeast +MordorWitchKingOnFellBeast
+GondorGwaihir
Radius          = 0.0 ; HitStoredTarget means we hurt the person we launched at.
And nobody else. So a miss hurts nobody.
DelayTime       = 0
DamageType      = PIERCE
DamageFXType    = GOOD_ARROW_PIERCE
DeathType       = NORMAL
End

```

```

DamageNugget    ; A basic Nugget that just does damage
Damage          = GANDALF_LIGHTNING_DAMAGE
DamageType      = MAGIC
DamageFXType    = ELECTRIC
DeathType       = NORMAL
DamageScalar    = 0% ANY
DamageScalar    = 125% NONE +MordorBalrog +MordorCatapult +IsengardBallista
+GondorTrebuchet
DamageScalar    = 200% NONE +RohanTreeBerd +RohanEntFir +RohanEntBirch
+MordorFellBeast +MordorWitchKingOnFellBeast +GondorGwaihir
DamageScalar    = 50000% NONE +RohanOathbreaker
End

```

End

Notice how the warheads do damage to certain enemies. Also, notice how you can change the “DamageFXType” to affect how the weapon appears when it hits. If you like, you can eliminate showing arrows sticking out of your enemies by commenting out the “DamageFXType = GOOD\_ARROW\_PIERCE” line.

Finally, here are the projectile codes from the goodfactionsubobjects.ini file.

```

;-----
ChildObject GondorCitadelArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist
; This is for castle citadels prior to upgrade

Draw = W3DStreakDraw ModuleTag_Draw2

```

```

    Length      = 0.5
    Width       = 2.5
    NumSegments = 1; number of segments in the streak, increase for smoother
line
    Color       = R:100 G:205 B:255; sky blue
    Texture     = EXLaser.tga
End

```

```

Draw = W3DStreakDraw ModuleTag_Draw3
    Length      = 90
    Width       = 3
    NumSegments = 5
    Color       = R:0 G:50 B:200; blue
    Texture     = EXLightStreaks2.tga
End

```

End

```

;-----
ChildObject UpgradedGondorCitadelArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist
; This is for castle citadels

```

```

Draw = W3DStreakDraw ModuleTag_Draw2
    Length      = 30
    Width       = 30
    NumSegments = 1; number of segments in the streak, increase for smoother
line
    Color       = R:255 G:255 B:255; no change to texture color
    Texture     = EXStarBurstBW.tga
End

```

```

Draw = W3DStreakDraw ModuleTag_Draw3
    Length      = 0
    Width       = 0
    NumSegments = 0
    Color       = R:255 G:255 B:255; no change to texture color
    Texture     = EXLightStreaks2.tga
End

```

End

Notice that for the upgraded Citadel, there is no projectile streak at all. Only a single starburst will be seen for each shot.

## Sentry Tower

These are the small towers located in camps. Their codes are also located in the goodfactionbuildings.ini file. Go to this file and search for the “Object GondorSentryTower” code entry. Then search for the “WeaponSet” code. This is what you should see.

```

WeaponSet
    Weapon          = PRIMARY GondorStructureBow
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
End

```

You can change this if you like. However, I’m going to leave it this way and modify just the projectile and warhead coding.

Here’s the code change in the weapon.ini file.

;Meneldil Note: Structure Bows are for Sentry Towers and Buildings, but not  
Citadels or Keeps

```
-----  
Weapon GondorStructureBow          ; BALANCE Archer Weapon  
  AttackRange                      = GONDOR_STRUCTURE_ARCHER_RANGE  
  WeaponSpeed                      = 321          ; dist/sec  
  MinWeaponSpeed                   = 241  
  MaxWeaponSpeed                   = 481          ; dist/sec Upper limit on scaling, when  
attacking past nominal "max" range  
  FireFX                           = FX_RohanArcherBowWeapon  
  ScaleWeaponSpeed                 = Yes          ; Used for lob weapons, scales speed  
proportional to range  
  HitPercentage                    = 100          ;When this weapon is used it will hit  
exactly 50% of the time.  
  ScatterRadius                    = 16.0         ;When this weapon misses it can randomly  
miss by as much as this distance.  
  DelayBetweenShots                = Min:GONDOR_STRUCTURE_ARCHER_BOW_DELAYBETWEENSHOTS_MIN  
Max:GONDOR_STRUCTURE_ARCHER_BOW_DELAYBETWEENSHOTS_MAX  
  PreAttackDelay                  = GONDOR_STRUCTURE_ARCHER_BOW_PREATTACKDELAY ; 1467  
is the prep time for archer.  
  PreAttackType                   = PER_SHOT     ; Do the delay each time we attack a new  
target  
  FiringDuration                  = GONDOR_STRUCTURE_ARCHER_BOW_DELAYBETWEENSHOTS_MAX  
; Duration of the archer firing shot is 500ms.  
  IsAimingWeapon                  = Yes  
  AntiAirborneVehicle              = Yes  
  AntiAirborneMonster              = Yes  
  HitPassengerPercentage           = 20%  
  AcceptableAimDelta               = 360.0 ; We want to be able to shoot all round, as we  
canit move.
```

CanBeDodged = Yes ; Will check for a DodgePercent on the target to have a second  
chance at failing HitPercent

```
  ProjectileNugget                 ; Default arrow  
  ProjectileTemplateName           = GondorStructureArrow; Meneldil changed from original  
GoodFactionArrow  
  WarheadTemplateName              = StructureBowWarhead  
End  
End
```

```
-----  
Weapon StructureBowWarhead; Meneldil note: used by both Gondor and Rohan  
  ProjectileCollidesWith           = ENEMIES NEUTRAL STRUCTURES WALLS  
  RadiusDamageAffects              = ENEMIES NEUTRALS NOT_SIMILAR ;ALLIES  
  HitStoredTarget                  = Yes ; Always hits initial target.  
  DamageNugget                    ; A basic Nugget that just does damage  
  Damage                          = STRUCTURE_BOW_DAMAGE  
  Radius                          = 0.0 ; HitStoredTarget means we hurt the person we launched at.  
And nobody else. So a miss hurts nobody.  
  DelayTime                        = 0  
  DamageType                       = PIERCE  
  DamageFXType                     = GOOD_ARROW_PIERCE  
  DeathType                        = NORMAL  
  DamageScalar                     = 0% NONE +EntMoot  
End  
  
  DamageNugget                    ; Added by Meneldil  
  Damage                          = 5  
  DamageType                       = MAGIC
```

```
DamageFXType = FLAME; ELECTRIC
DeathType    = NORMAL
DamageScalar = 400% NONE +MordorBalrog
DamageScalar = 40000% NONE +RohanOathbreaker
End
```

End

And here's the projectile code in the goodfactionsubobjects.ini file.

```
-----
ChildObject GondorStructureArrow GondorArcherFireArrow; added by Meneldil
; The weapon.ini file has also been adjusted because this didn't originally exist
; This is for buildings and sentry towers (not citadels or keeps)

Draw = W3DStreakDraw ModuleTag_Draw2
  Length      = 20
  Width       = 20
  NumSegments = 1; number of segments in the streak, increase for smoother line
  Color       = R:255 G:255 B:255; no change to texture color
  Texture     = EXStarBurstBW.tga
End

Draw = W3DStreakDraw ModuleTag_Draw3
  Length      = 75
  Width       = 4
  NumSegments = 5; number of segments in the streak, increase for smoother line
  Color       = R:0 G:50 B:250; blue
  Texture     = EXLightStreaks2.tga
End

End
```

Since the barracks "Object GondorBarracks" and archery range "Object GondorArcherRange" use the same weapon code as the sentry tower, they will automatically make use of these code changes when they reach level 3 veterancy.

## Adding Weapons to Level 3 Gondor Farms and Forges

You may have noticed that Gondor Farms and Forges do not acquire weapons when they reach level 3 veterancy. However, they have the capability to do so if you wish. Here is an example of coding you can use to add this capability to your mod.

### data\ini\object\goodfaction\goodfactionbuildings.ini

Under “ChildObject GondorFarm FarmInterface” change the following:

```
WeaponSet
    Weapon          = PRIMARY GondorFarmBow; Meneldil changed original
GondorStructureBow
    Conditions      = PLAYER_UPGRADE
    AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
End
```

Somewhere in this childobject (e.g., after the “KindOf” line), add the following:

```
; Meneldil added remaining 3 blocks to enable & test weapon at level 3

Behavior = AIUpdateInterface ModuleTag_SoWeCanUseWeapon
    AutoAcquireEnemiesWhenIdle = Yes
    MoodAttackCheckRate       = 250
End

Behavior = WeaponSetUpgrade ModuleTag_ThirdLevelBuildingArrows
    TriggeredBy      = Upgrade_StructureLevel3
    ConflictsWith    = Upgrade_EasyAIMultiPlayer
End

Behavior = ExperienceLevelCreate CreateExperienceLevel
    LevelToGrant = 1; normally should be set to 1 (set to 3 to test)
End
```

If you like, modify the economy plot farm as follows. The only reason for this change is to force the farm to start at level 3 so that you can test it.

```
;-----
ChildObject GondorFarmMultiplayer GondorFarm

    PlacementViewAngle = 45

    KindOf          = PRELOAD STRUCTURE SELECTABLE IMMOBILE SCORE
NEED_BASE_FOUNDATION MP_COUNT_FOR_VICTORY CASTLE_KEEP MADE_OF_STONE
ATTACK_NEEDS_LINE_OF_SIGHT CAN_ATTACK
    RefundValue = 100 ; Half the
cost of an economy plot.
    BuildCost = GONDOR_FLAG_ECONOMY_UNPACK_COST ; Bit of a hack, but
stops build canceling from getting the wrong price.

    Behavior = ExperienceLevelCreate CreateExperienceLevel
        LevelToGrant = 2; normally should be set to 2 (set to 3 to test)
    End

End
```

Under “Object GondorForge” change/add the following:

```

;*****
*****
; Meneldil enabled to allow level 3 forge to use weapon
  WeaponSet
    Weapon          = PRIMARY ForgeBow; Meneldil changed original
GondorStructureBow
  Conditions        = PLAYER_UPGRADE
  AutoChooseSources = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
  End

; Meneldil inserted for testing weapon at level 3
  Behavior = ExperienceLevelCreate CreateExperienceLevel
    LevelToGrant = 1; normally should be set to 1 (set to 3 to test)
  End

; Meneldil enabled to allow level 3 forge to use weapon
  Behavior = WeaponSetUpgrade ModuleTag_Weapon
    TriggeredBy      = Upgrade_StructureLevel3
  End
;*****
*****

```

data\ini\object\goodfaction\goodfactionsubobjects.ini

```

;-----
Object ForgeFireballProjectile; Meneldil modification of SarumanFireballProjectile

; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_Draw
  DefaultModelConditionState
    Model = FIRELOCATOR
    ParticleSysBone ROOTTRANSFORM SarumonFireballFire FollowBone:yes
    ParticleSysBone ROOTTRANSFORM SarumonFireballSmoke FollowBone:yes
  End
End

;Meneldil added this block (refer to GondorTrebuchetRockProjectileFlaming above)
;*****
***
Draw = W3DScriptedModelDraw ModuleTag_Draw2
  DefaultModelConditionState
    Model          = MUCatapult_FP01
    ParticleSysBone = None FlamingRockTrail
    ParticleSysBone = None FlamingRockTrailLenzflare
    ParticleSysBone = None FlamingRockTrailSmoke
    ParticleSysBone = None CatapultRockSmoke
  End
  AnimationState   = NONE
  Animation        = MUCatapult_FP01
    AnimationName   = MUCatapult_FP01.MUCatapult_FP01
    AnimationMode    = LOOP
  End
End
End

  Scale = 0.6; projectile needs to be smaller coming out of forge
;*****
***

; *** AUDIO Parameters ***

; ***DESIGN parameters ***

```

```

EditorSorting      = SYSTEM
ArmorSet
  Armor = NoArmor
End
VisionRange = 0.0

; *** ENGINEERING Parameters ***
KindOf = PROJECTILE
Body = ActiveBody ModuleTag_02
  MaxHealth      = 10.0
End

Behavior = DestroyDie ModuleTag_03
;nothing
End

Behavior = BezierProjectileBehavior ModuleTag_04

  FirstHeight = 9 ; Height of Bezier control points above highest intervening
terrain
  SecondHeight = 9
  FirstPercentIndent = 20% ; Percentage of shot distance control points are
placed
  SecondPercentIndent = 100%
  FlightPathAdjustDistPerSecond = 50 ; Can allow a max speed this can attempt to
follow a target. Units are their velocity we can tag. (45 is default human speed)
  DetonateCallsKill = Yes
  CurveFlattenMinDist = 50.0
End

Behavior = PhysicsBehavior ModuleTag_05
  KillWhenRestingOnGround = Yes
  GravityMult = 0.0
End

Behavior = FXListDie ModuleTag_07
  DeathTypes = ALL
  DeathFX = FX_SarumanFireBallExplode
End

Geometry = Sphere
GeometryIsSmall = Yes
GeometryMajorRadius = 0.8
End

```

This new projectile code allows fireballs to shoot out from the top of the forge. This is a combination of Saruman's fireball and the trebuchet firestone projectile codes. I placed all of this together.

### data\ini\weapon.ini

```

;-----
Weapon GondorFarmBow; Meneldil changed original GondorStructureBow ; BALANCE
Archer Weapon
  AttackRange      = GONDOR_STRUCTURE_ARCHER_RANGE
  WeaponSpeed      = 321 ; dist/sec
  MinWeaponSpeed   = 241
  MaxWeaponSpeed   = 481 ; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
  FireFX           = FX_RohanArcherBowWeapon
  ScaleWeaponSpeed = Yes ; Used for lob weapons, scales speed
proportional to range

```



```

HitPercentage          = 100          ;When this weapon is used it will hit
exactly 50% of the time.
ScatterRadius          = 16.0          ;When this weapon misses it can randomly
miss by as much as this distance.
DelayBetweenShots      = Min:GONDOR_STRUCTURE_ARCHER_BOW_DELAYBETWEENSHOTS_MIN
Max:GONDOR_STRUCTURE_ARCHER_BOW_DELAYBETWEENSHOTS_MAX
PreAttackDelay         = GONDOR_STRUCTURE_ARCHER_BOW_PREATTACKDELAY      ; 1467
is the prep time for archer.
PreAttackType          = PER_SHOT      ; Do the delay each time we attack a new
target
FiringDuration         = GONDOR_STRUCTURE_ARCHER_BOW_DELAYBETWEENSHOTS_MAX
; Duration of the archer firing shot is 500ms.
IsAimingWeapon         = Yes
AntiAirborneVehicle    = Yes
AntiAirborneMonster    = Yes
HitPassengerPercentage = 20%
AcceptableAimDelta     = 360.0 ; We want to be able to shoot all round, as we
canit move.

```

CanBeDodged = Yes ; Will check for a DodgePercent on the target to have a second chance at failing HitPercent

```

ProjectileNugget       ; Default arrow
ProjectileTemplateName = LegolasBowArrowStormProjectile; Meneldil changed from
original GoodFactionArrow
WarheadTemplateName   = BattleTowerBowWarhead; Meneldil changed original
StructureBowWarhead
End
End

```

Note that I used an existing projectile (Legolas' Arrow Storm projectile).

```

;-----
Weapon ForgeBow; Meneldil changed original GondorStructureBow
AttackRange           = 480; Meneldil changed original
GONDOR_STRUCTURE_ARCHER_RANGE (360)
WeaponSpeed           = 321          ; dist/sec
MinWeaponSpeed        = 241
MaxWeaponSpeed        = 481          ; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
FireFX                = FX_SarumanFireball; Meneldil changed original
FX_RohanArcherBowWeapon
ScaleWeaponSpeed       = Yes          ; Used for lob weapons, scales speed
proportional to range
HitPercentage          = 100          ;When this weapon is used it will hit
exactly 50% of the time.
ScatterRadius          = 16.0          ;When this weapon misses it can randomly
miss by as much as this distance.
;DelayBetweenShots     =
Min:GONDOR_STRUCTURE_ARCHER_BOW_DELAYBETWEENSHOTS_MIN
Max:GONDOR_STRUCTURE_ARCHER_BOW_DELAYBETWEENSHOTS_MAX
DelayBetweenShots      = Min:500 Max:1000; Meneldil changed original 20 50 and
commented out the above line
PreAttackDelay         = GONDOR_STRUCTURE_ARCHER_BOW_PREATTACKDELAY      ; 1467
is the prep time for archer.
PreAttackType          = PER_SHOT      ; Do the delay each time we attack a new
target
FiringDuration         = 100; Meneldil changed original
GONDOR_STRUCTURE_ARCHER_BOW_DELAYBETWEENSHOTS_MAX      ; Duration of the archer
firing shot is 500ms.
IsAimingWeapon         = Yes

```

```

AntiAirborneVehicle      = Yes
AntiAirborneMonster     = Yes
HitPassengerPercentage   = 20%
AcceptableAimDelta       = 360.0 ; We want to be able to shoot all round, as we
can't move.

```

CanBeDodged = Yes ; Will check for a DodgePercent on the target to have a second chance at failing HitPercent

```

ProjectileNugget          ; Default arrow
  ProjectileTemplateName  = ForgeFireballProjectile; Meneldil changed from
original GoodFactionArrow
  WarheadTemplateName    = ForgeBowWarhead; Meneldil changed original
StructureBowWarhead
End
End

```

```

;-----
Weapon ForgeBowWarhead; added by Meneldil for Gondor Forge
  ProjectileCollidesWith = ENEMIES NEUTRAL STRUCTURES WALLS
  RadiusDamageAffects   = ENEMIES NEUTRALS NOT_SIMILAR ;ALLIES
  HitStoredTarget       = Yes ; Always hits initial target.

```

```

DamageNugget
  Damage      = 200
  Radius      = 0
  DelayTime   = 0
  DamageType  = FLAME
  DamageFXType = FLAME
  DeathType   = BURNED
  DamageScalar = 150% NONE +MordorFellBeast +MordorWitchKingOnFellBeast
+GondorGwaihir
  DamageScalar = 300% NONE +RohanEntFir +RohanEntBirch +RohanTreeBerd
  DamageScalar = 50000% NONE +MINE
End

```

```

MetaImpactNugget; A Nugget that throws things back with force
  HeroResist      = 0.75
  ShockWaveAmount = 50
  ShockWaveRadius = 5
  ShockWaveArc    = 120
  ShockWaveTaperOff = 1
End

```

End

Note that the forge has a very powerful attack when it reaches level 3. However, it also takes a relatively long time to reach level 3. If you wish to change the time it takes for the blacksmith to reach level 3, adjust the following code block, located in the experiencelevels.ini file.

```

ExperienceLevel  GondorForgeLevel3
  TargetNames    = GondorForge
  RequiredExperience = 6000; Meneldil changed GONDOR_FORGE_LVL3_EXP_NEEDED;
original value is 8000
  ExperienceAward = GONDOR_FORGE_LVL3_EXP_AWARD
  Rank           = 3
  AttributeModifiers = GondorForgeLevel3Production
GondorForgeHitPointModLv13
  Upgrades       = Upgrade_StructureLevel3
  LevelUpFx      = FX:GondorForgeUpgrade
End

```

## Listing of Damage, DamageFX, and Death Types Found in the Weapon.ini File

<u>Damage Types:</u>	<u>DamageFX Types:</u>	<u>Death Types:</u>
CHOP	BALROG_SWORD	BURNED
CRUSH	BALROG_WHIP	CRUSHED
FLAME	BIG_ROCK	EXPLODED
FLY_INTO	CLUBBING	EXTRA_2
FORCE	ELECTRIC	NORMAL
HERO	EVIL_ARROW_PIERCE	
HERO_RANGED	FLAME	
MAGIC	GIMLI_LEAP	
PIERCE	GOOD_ARROW_PIERCE	
SIEGE	MAGIC	
SLASH	REFLECTED	
SPECIALIST	SMALL_ROCK	
STRUCTURAL	STRUCTURAL	
URUK	SWORD_SLASH	
	WITCH_KING_MORGUL_BLADE	

This is a reference of the different damage types, damage special effects, and death types used in the weapons.ini file. Experiment with them to see what might work best in your mod.

## Providing Gondor a Dual Economy Plot Choice

Now that we've made these changes to the forge, you may want to also build them on economy plots. Note that Gondor is the only faction that doesn't originally have a dual economy plot choice. To do this is very simple. Go to the commandset.ini file and make the following change:

```
CommandSet EconomyFlagCommandSet
  1 = Command_UnpackEconomyPlot
  2 = Command_ConstructGondorBlackSmith; Meneldil added
End
```

You can of course add the capability to construct other buildings if you like. Note that this is buggy. An opposing faction may build one of their structures on top of yours. If you know how to overcome this, please let me know. Also note the game's original AI will only construct farms.

## Modifying an Existing Structure: Gondor Keep Part 2

Objective: Replace the standard Gondor Keep in Elrond's Elven Foundation Command Set with a modified keep that appears nowhere else and has its own projectile special effects. Further, if it is destroyed, a small army of the dead will be generated.

Previously, we created a child object of the Gondor Keep that could be built at the Elven Foundation generated by Elrond. That version made use of existing projectiles. Here's an updated version of the "Tower of Death" that makes use of new projectiles and weapons as well as some other special effects.

### data\ini\commandbutton.ini

```
CommandButton Command_ConstructGondorDeathTower; added by Meneldil for Elrond's
Elven Foundation
  Command      = FOUNDATION_CONSTRUCT
  Object       = DeathTower
  ButtonBorderType = BUILD
  ButtonImage  = BGBattleTower
  TextLabel    = CONTROLBAR:ConstructGondorDeathTower
  DescriptLabel = CONTROLBAR:ToolTipConstructGondorDeathTower
  Radial       = Yes
End
```

### data\ini\commandset.ini

```
CommandSet ElrondFoundationCommandSet; added by Meneldil for Elrond (reference
above ElvenFoundationCommandSet)
  1 = Command_ConstructElrondElvenBarracks; this is a modified version of the
Elven Barracks
; 2 = Command_ConstructElvenFarm; this is a high output Gondor farm
; 2 = Command_ConstructGondorFarm; added by Meneldil
  2 = Command_ConstructMultiplayerGondorFarm; added by Meneldil
  3 = Command_ConstructGondorBlackSmith; added by Meneldil
  4 = Command_ConstructGondorBarracks; added by Meneldil
  5 = Command_ConstructGondorArcherRange; added by Meneldil
  6 = Command_ConstructGondorStatue; added by Meneldil
  7 = Command_ConstructGondorWell; added by Meneldil
; 8 = Command_ConstructGondorKeep; added by Meneldil
  8 = Command_ConstructGondorDeathTower; added by Meneldil
  9 = Command_ConstructGondorStable; added by Meneldil
 10 = Command_ConstructGondorWorkshop; added by Meneldil
 11 = Command_ConstructGondorMarketPlace; added by Meneldil
End
```

## data\ini\fxlist.ini

```
;-----  
FXList FX_DeathTowerFire; Added by Meneldil for Death Tower created from Elrond's  
Elven Foundation  
  Sound  
    Name = EomerSpearFly  
  End  
  ParticleSystem  
    Name = BlueShockWave  
  End  
  ParticleSystem  
    Name = DevastationLightBlue  
    Offset = X:0.0 Y:0.0 Z:90  
  End  
  ParticleSystem  
    Name = DevastationRingBlue  
  End  
End  
  
;-----  
FXList FX_DeathTowerHit; Added by Meneldil for Death Tower created from Elrond's  
Elven Foundation  
  Sound  
    Name = FireStartWoosh  
  End  
  ParticleSystem  
    Name = DeathTowerHit  
  End  
  ParticleSystem  
    Name = GandalfLightningHitDistortion  
  End  
  ParticleSystem  
    Name = GandalfCrystalPixies  
  End  
  ParticleSystem  
    Name = DoughnutCloud  
  End  
End  
  
; -----  
FXList FX_DeathTowerDestruction Meneldil modified FX_ParticleTestFX for Gondor  
Death Tower collapse  
  ParticleSystem  
    Name = GandalfBlastInitialWave  
    Offset = X:0.0 Y:0.0 Z:40.0  
  End  
  ParticleSystem  
    Name = GandalfBlastInitialCenter  
    Offset = X:0.0 Y:0.0 Z:40.0  
  End  
  ParticleSystem  
    Name = GandalfBlastInitialVortex  
    Offset = X:0.0 Y:0.0 Z:40.0  
  End  
  ParticleSystem  
    Name = GandalfBlastFinalLight  
    Offset = X:0.0 Y:0.0 Z:40.0  
  End  
  ParticleSystem  
    Name = GandalfBlastFinalShockWave  
    Offset = X:0.0 Y:0.0 Z:40.0
```

```

End
ParticleSystem
    Name = oathBreakerLightShaft
End
ParticleSystem
    Name = AODsummonLightShafts
End
ParticleSystem
    Name = OathBreakerSkull
End
ParticleSystem
    Name = balrogFireRingSparksTest
End
Sound
    Name = ArmyDeadEnterStereo
End
End

```

```

;-----
FXList FX_Transition; Added by Meneldil for Death Tower created from Elrond's Elven
Foundation
    ParticleSystem
        Name = Draft
    End
End

```

### data\ini\fxparticlesystem.ini

```

FXParticleSystem BlueShockWave; Meneldil modified explosionShockWave
System
    Priority = ALWAYS_RENDER
    ParticleName = EXShockWav.tga
    Lifetime = 10 10
    SystemLifetime = 3
    SortLevel = 1
    Size = 1 2
    StartSizeRate = 1 4
    BurstDelay = 0 3
    BurstCount = 1 5
    IsGroundAligned = Yes
End
Color = DefaultColor
    Color1 = R:49 G:129 B:193 0; R:140 G:50 B:11 0
    Color2 = R:0 G:0 B:0 8
End
Alpha = DefaultAlpha
End
Update = DefaultUpdate
    SizeRate = 15 18
    SizeRateDamping = 1 1
    AngleZ = -1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0 8.07921e+33
End
EmissionVelocity = OrthoEmissionVelocity
End
EmissionVolume = PointEmissionVolume
End
Draw = DefaultDraw
End
End

```

```

FXParticleSystem DeathTowerHit; added by Meneldil for Gondor Death Tower
System
    Priority = ALWAYS_RENDER
;    Potential particle names are exleadershipreceive.tga, exldrshplvl3a.tga,
exfrodostingglow.tga, exfireembr.tga, & exbarbstreaks.tga
    ParticleName = exleadershipreceive.tga
    Lifetime = 20 20
    SystemLifetime = 10; 5
    Size = 26 26
    BurstCount = 1 1
End
Color = DefaultColor
;    Color1 = R:49 G:129 B:193 0; matches FaramirArrowTrail color
    Color1 = R:160 G:40 B:40 0; red color to compliment central red projectile
color used with upgraded tower
    Color3 = R:0 G:0 B:0 30
End
Alpha = DefaultAlpha
    Alpha1 = 1 1 0
End
Update = DefaultUpdate
    SizeRate = 1 1
    SizeRateDamping = 1 1
    AngleZ = -3 3
    AngularRateZ = -0.1 0.1
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    Gravity = 0.01
    VelocityDamping = 0.8 0.9
End
EmissionVelocity = CylindricalEmissionVelocity
    Radial = 1 1
End
EmissionVolume = PointEmissionVolume
End
Draw = DefaultDraw
End
End

```

```

FXParticleSystem OathBreakerSkull
System
    Priority = ALWAYS_RENDER
    ParticleName = exskull.tga; Meneldil replaced original EXevilKing.tga because
it doesn't exist
    Lifetime = 120 120; 100 100
    SystemLifetime = 1; 5
    SortLevel = 1
    Size = 3 3; 3 5
    BurstCount = 1 1
    InitialDelay = 100 100
End
Color = DefaultColor
    Color1 = R:0 G:0 B:0 10
    Color2 = R:100 G:138 B:100 30; R:16 G:22 B:16 25
    Color3 = R:57 G:67 B:39 90; R:0 G:0 B:0 75
End
Alpha = DefaultAlpha
    Alpha2 = 1 1 20
    Alpha3 = 1 1 80

```

```

Alpha4 = 0 0 100
End
Update = DefaultUpdate
    SizeRate = 2 2; 1.5 2.5
    SizeRateDamping = 0.9 0.95
    AngularDamping = 1 1
End
Physics = DefaultPhysics
    VelocityDamping = 0.3 0.4
    DriftVelocity = X:0 Y:0 Z:1; X:0 Y:0 Z:0.5
End
EmissionVelocity = SphericalEmissionVelocity
End
EmissionVolume = LineEmissionVolume
    StartPoint = X:0 Y:0 Z:8
    EndPoint = X:0 Y:0 Z:8
End
Draw = DefaultDraw
End
End

```

data\ini\object\goodfaction\goodfactionbuildings.ini

```

;-----
ChildObject DeathTower GondorKeep; added by Meneldil for Elrond's Elven Foundation

    SelectPortrait          = BPGBattleTower
    ButtonImage             = BGKeep
    DisplayName             = OBJECT:GondorDeathTower
    CommandSet              = RuinedTowerCommandSet
    ThreatLevel             = 9
    BuildCost               = 1600; GONDOR_KEEP_BUILDCOST; (800)
    BuildTime               = 15; GONDOR_KEEP_BUILDTIME; (30)
    BountyValue             = 2000; GONDOR_KEEP_BOUNTY_VALUE; (50)
    KindOf                  = PRELOAD STRUCTURE SELECTABLE IMMOBILE SCORE
NEED_BASE_FOUNDATION CAN_ATTACK GARRISONABLE_UNTIL_DESTROYED GARRISON MADE_OF_STONE

    Behavior = HordeGarrisonContain ModuleTag hordeGarrison
        ObjectStatusOfContained = UNSELECTABLE CAN_ATTACK ENCLOSED
        ContainMax              = 4
        MaxHordeCapacity        = 4
        DamagePercentToUnits    = 0%
        PassengerFilter          = ANY +INFANTRY +HORDE +COMBO_HORDE -CAVALRY -
SUMMONED
        AllowEnemiesInside      = No
        AllowNeutralInside      = Yes
        AllowAlliesInside       = Yes
        NumberOfExitPaths       = 1
        PassengerBonePrefix     = PassengerBone:ARROW_ KindOf:INFANTRY
        EntryOffset              = X:45.0 Y:0.0 Z:0.0
        ExitOffset               = X:45.0 Y:0.0 Z:0.0
        EnterSound               = GarrisonEnter
        ExitSound                = GarrisonExit
        KillPassengersOnDeath    = No
        ShowPips                 = No
        ExitDelay                = 250
    End

    Body                      = StructureBody ModuleTag_05
        MaxHealth                = 900; GONDOR_KEEP_HEALTH; value is 3000

```



```

2000      MaxHealthDamaged      = 600; GONDOR_KEEP_HEALTH_DAMAGED; value is
is 1000   MaxHealthReallyDamaged  = 300; GONDOR_KEEP_HEALTH_REALLY_DAMAGED; value
          DamageCreationList    = OCL_BuildingDamageList01 CATAPULT_ROCK
FRONT_DESTROYED  DamageCreationList    = OCL_GBBtlTwrSD2_Chunk1 CATAPULT_ROCK
RIGHT_DESTROYED  DamageCreationList    = OCL_GBBtlTwrSD2_Chunk2 CATAPULT_ROCK
BACK_DESTROYED   DamageCreationList    = OCL_GBBtlTwrSD2_Chunk3 CATAPULT_ROCK
LEFT_DESTROYED  DamageCreationList    = OCL_GBBtlTwrSD2_Chunk4 CATAPULT_ROCK
          End

          Behavior              = StructureCollapseUpdate
ModuleTag_StructureCollapseUpdate
          MinCollapseDelay      = 0
          MaxCollapseDelay      = 0
          CollapseDamping       = 0.5
          MaxShudder            = 0.6
          MinBurstDelay         = 250
          MaxBurstDelay         = 800
          BigBurstFrequency     = 4
          FXList                = INITIAL FX_DeathTowerDestruction
          End

          ArmorSet
          Conditions            = None
          Armor                  = NoArmor
          End

          WeaponSet
          Weapon                 = PRIMARY DeathTowerBow
          Conditions            = None
          AutoChooseSources     = PRIMARY FROM_PLAYER FROM_SCRIPT FROM_AI
          End

          Behavior = CreateObjectDie ModuleTag_Revenge
          CreationList = SUPERWEAPON_SpawnOathbreakers
          End

End

```

### data\ini\object\goodfaction\goodfactionsubobjects.ini

```

;-----
Object DeathTowerArrow; Meneldil modified FaramirSpecialArrow for Gondor Death
Tower
; *** ART Parameters ***
Draw = W3DScriptedModelDraw ModuleTag_Draw
  DefaultModelState
    Model = RULegolas_AROW
    ParticleSysBone NONE FaramirArrowTrail
  End

  IdleAnimationState
    Animation              = RULegolas_AROW
    AnimationName          = RULegolas_AROW.RULegolas_AROW
    AnimationMode          = LOOP
  End
End

```

```

End

Draw = W3DStreakDraw ModuleTag_Draw2
    Length      = 500
    Width       = 10
    NumSegments = 6
    Color       = R:200 G:50 B:50
    Texture     = exaragornanduril.tga
End

; ***DESIGN parameters ***
EditorSorting = SYSTEM

ArmorSet
    Armor = NoArmor
End

VisionRange = 0.0

; *** ENGINEERING Parameters ***
KindOf = PROJECTILE
Body = ActiveBody ModuleTag_02
    MaxHealth = 10
End

Behavior = DestroyDie ModuleTag_03
;    nothing
End

Behavior = BezierProjectileBehavior ModuleTag_04
    DetonateCallsKill = Yes
    FirstHeight = 9
    SecondHeight = 9
    FirstPercentIndent = 20%
    SecondPercentIndent = 90%
    FlightPathAdjustDistPerSecond = 60
    GroundHitFX = FX_WoundingArrowHit
    CurveFlattenMinDist = 50
End

Behavior = PhysicsBehavior ModuleTag_05
    KillWhenRestingOnGround = Yes
    GravityMult = 0.0
End

Behavior = CreateObjectDie ModuleTag_06
    DeathTypes = ALL -CRUSHED -SPLATTED -KNOCKBACK
    CreationList = OCL_Sheep
End

Behavior = FXListDie ModuleTag_07
    DeathTypes = ALL
    DeathFX = FX_DeathTowerHit
End

Geometry = Sphere
GeometryIsSmall = Yes
GeometryMajorRadius = 0.8
End

```

**data\ini\object\nature\natureunits.ini**

Under "Object sheep" add "NOT\_AUTOACQUIRABLE" to the "KindOf" statement. This prevents sentry towers and archers from wasting their time killing an animal.

```
-----  
ChildObject TempSheep Sheep; Meneldil added  
  
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate  
    ; This one does the work, but the one in the horde displays the timer  
        MinLifetime      = 30000; in milliseconds  
        MaxLifetime      = 90000; in milliseconds  
        DeathType        = FADED  
    End  
  
    Behavior = SlowDeathBehavior ModuleTag_05  
        DeathTypes = NONE +FADED +KNOCKBACK  
        FadeDelay = 0  
        FadeTime = 0  
        DestructionDelay = 0  
        FX = INITIAL FX_Transition  
        OCL = INITIAL OCL_Pig  
    End  
  
    Behavior = SlowDeathBehavior ModuleTag_07  
        DeathTypes = ALL -FADED -KNOCKBACK  
        SinkDelay = 0  
        SinkRate = 0  
        DestructionDelay = 0  
        FX = INITIAL FX_Transition  
        OCL = INITIAL OCL_Pig  
    End  
  
End  
  
-----  
ChildObject TempPig Pig; Meneldil added  
  
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate  
    ; This one does the work, but the one in the horde displays the timer  
        MinLifetime      = 30000; in milliseconds  
        MaxLifetime      = 90000; in milliseconds  
        DeathType        = FADED  
    End  
  
    Behavior = SlowDeathBehavior ModuleTag_05  
        DeathTypes = NONE +FADED +KNOCKBACK  
        FadeDelay = 0  
        FadeTime = 0  
        DestructionDelay = 0  
        FX = INITIAL FX_Transition  
        OCL = INITIAL OCL_Raccoon  
    End  
  
    Behavior = SlowDeathBehavior ModuleTag_07  
        DeathTypes = ALL -FADED -KNOCKBACK  
        SinkDelay = 0  
        SinkRate = 0  
        DestructionDelay = 0  
        FX = INITIAL FX_Transition  
        OCL = INITIAL OCL_Raccoon  
    End  
  
End
```

End

-----

ChildObject TempRaccoon Raccoon; Meneldil added

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
; This one does the work, but the one in the horde displays the timer
  MinLifetime      = 30000; in milliseconds
  MaxLifetime      = 90000; in milliseconds
  DeathType        = FADED
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05
  DeathTypes = NONE +FADED +KNOCKBACK
  FadeDelay = 0
  FadeTime = 0
  DestructionDelay = 0
  FX = INITIAL FX_Transition
  OCL = INITIAL OCL_Rabbit
End
```

```
Behavior = SlowDeathBehavior ModuleTag_07
  DeathTypes = ALL -FADED -KNOCKBACK
  SinkDelay = 0
  SinkRate = 0
  DestructionDelay = 0
  FX = INITIAL FX_Transition
  OCL = INITIAL OCL_Rabbit
End
```

End

-----

ChildObject TempRabbit Rabbit; Meneldil added

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
; This one does the work, but the one in the horde displays the timer
  MinLifetime      = 30000; in milliseconds
  MaxLifetime      = 90000; in milliseconds
  DeathType        = FADED
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05
  DeathTypes = NONE +FADED +KNOCKBACK
  FadeDelay = 0
  FadeTime = 0
  DestructionDelay = 0
  FX = INITIAL FX_Transition
  OCL = INITIAL OCL_Chicken
End
```

```
Behavior = SlowDeathBehavior ModuleTag_07
  DeathTypes = ALL -FADED -KNOCKBACK
  SinkDelay = 0
  SinkRate = 0
  DestructionDelay = 0
  FX = INITIAL FX_Transition
  OCL = INITIAL OCL_Chicken
End
```

End

-----

ChildObject TempChicken Chicken; Meneldil added

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
; This one does the work, but the one in the horde displays the timer
  MinLifetime      = 30000; in milliseconds
  MaxLifetime      = 90000; in milliseconds
  DeathType        = FADED
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05
  DeathTypes = NONE +FADED +KNOCKBACK
  FadeDelay = 0
  FadeTime = 0
  DestructionDelay = 0
  FX = INITIAL FX_Transition
  OCL = INITIAL OCL_Bat
End
```

```
Behavior = SlowDeathBehavior ModuleTag_07
  DeathTypes = ALL -FADED -KNOCKBACK
  SinkDelay = 0
  SinkRate = 0
  DestructionDelay = 0
  FX = INITIAL FX_Transition
  OCL = INITIAL OCL_Bat
End
```

End

-----  
ChildObject TempBat Bat; Meneldil added

```
Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
; This one does the work, but the one in the horde displays the timer
  MinLifetime      = 30000; in milliseconds
  MaxLifetime      = 90000; in milliseconds
  DeathType        = FADED
End
```

```
Behavior = SlowDeathBehavior ModuleTag_05
  DeathTypes = NONE +FADED +KNOCKBACK
  FadeDelay = 0
  FadeTime = 0
  DestructionDelay = 0
  FX = INITIAL FX_WoundingArrowHit
End
```

```
Behavior = SlowDeathBehavior ModuleTag_07
  DeathTypes = ALL -FADED -KNOCKBACK
  SinkDelay = 0
  SinkRate = 0
  DestructionDelay = 0
  FX = INITIAL FX_WoundingArrowHit
End
```

End

### data\ini\objectcreationlist.ini

-----  
; Added by Meneldil for use with Upgraded Gondor Death Tower  
ObjectCreationList OCL\_Chicken  
 CreateObject

```

    ObjectNames = TempChicken
End
End

```

```

; -----
; Added by Meneldil for use with Upgraded Gondor Death Tower
ObjectCreationList OCL_Rabbit
  CreateObject
    ObjectNames = TempRabbit
  End
End

```

```

; -----
; Added by Meneldil for use with Upgraded Gondor Death Tower
ObjectCreationList OCL_Raccoon
  CreateObject
    ObjectNames = TempRaccoon
  End
End

```

```

; -----
; Added by Meneldil for use with Upgraded Gondor Death Tower
ObjectCreationList OCL_Pig
  CreateObject
    ObjectNames = TempPig
  End
End

```

```

; -----
; Added by Meneldil for use with Upgraded Gondor Death Tower
ObjectCreationList OCL_Sheep
  CreateObject
    ObjectNames = TempSheep
  End
End

```

```

; -----
; Added by Meneldil for use with Upgraded Gondor Death Tower
ObjectCreationList OCL_Bat
  CreateObject
    ObjectNames = TempBat
  End
End

```

### data\ini\weapon.ini

```

;-----
;This weapon is for the "Death Tower" available from Elrond's Elven Foundation
Weapon DeathTowerBow; added by Meneldil
  AttackRange           = KEEP_ARCHER_RANGE; value is 380
  WeaponSpeed           = 321           ; dist/sec
  MinWeaponSpeed        = 241
  MaxWeaponSpeed        = 481           ; dist/sec Upper limit on scaling, when
attacking past nominal "max" range
  FireFX                = FX_DeathTowerFire; FX_RohanArcherBowWeapon
  ScaleWeaponSpeed      = Yes           ; Used for lob weapons, scales speed
proportional to range

```

```

HitPercentage          = 100          ;When this weapon is used it will hit
exactly 50% of the time.
ScatterRadius          = 16.0         ;When this weapon misses it can randomly
miss by as much as this distance.
; DelayBetweenShots    = Min:KEEP_BOW_DELAYBETWEENSHOTS_MIN
Max:KEEP_BOW_DELAYBETWEENSHOTS_MAX
DelayBetweenShots      = Min:1000 Max:1000; original values are 5 & 10,
respectively
PreAttackDelay         = 1000; KEEP_BOW_PREATTACKDELAY; original value is 5
PreAttackType          = PER_SHOT    ; Do the delay each time we attack a new
target
FiringDuration         = 1000; KEEP_BOW_DELAYBETWEENSHOTS_MAX
IsAimingWeapon         = Yes
AntiAirborneVehicle    = Yes
AntiAirborneMonster    = Yes
HitPassengerPercentage = 20%
AcceptableAimDelta     = 360.0; We want to be able to shoot all round, as we
can't move.

```

```

CanBeDodged = Yes ; Will check for a DodgePercent on the target to have a second
chance at failing HitPercent

```

```

ProjectileNugget      ; Default arrow
  ProjectileTemplateName = FaramirSpecialArrow; GoodFactionArrow
  WarheadTemplateName  = GondorDeathTowerWarhead; KeepBowWarhead
  ForbiddenUpgradeNames = Upgrade_BattleTowersToUseFireArrows
End

```

```

ProjectileNugget      ; Upgraded arrow
  ProjectileTemplateName = DeathTowerArrow; UpgradedGoodFactionArrow
  WarheadTemplateName  = GondorDeathTowerUpgradedWarhead;
KeepBowUpgradedWarhead
  RequiredUpgradeNames = Upgrade_BattleTowersToUseFireArrows
End

```

```

End

```

```

;-----
Weapon GondorDeathTowerWarhead; Meneldil added for Gondor Death Tower
  ProjectileCollidesWith = ENEMIES NEUTRAL STRUCTURES WALLS
  RadiusDamageAffects = ENEMIES NEUTRALS NOT_SIMILAR
  HitStoredTarget = Yes; Always hits initial target.
  DamageNugget
    Damage      = 75
    Radius      = 0
    DelayTime   = 0
    DamageType  = PIERCE
    DamageFXType = GOOD_ARROW_PIERCE
    DeathType   = NORMAL
  End

```

```

DamageNugget
  Damage      = 5
  Radius      = 0
  DelayTime   = 0
  DamageType  = FLAME
  DamageFXType = FLAME
  DeathType   = BURNED
  DamageScalar = 0% NONE +MINE; Don't want to set off any mines
  DamageScalar = 500% NONE +RohanEntFir +RohanEntBirch +RohanTreeBerd +MONSTER
End

```

End

;-----

Weapon GondorDeathTowerUpgradedWarhead; added by Meneldil added for Upgraded Gondor Death Tower

ProjectileCollidesWith = ENEMIES NEUTRAL STRUCTURES WALLS

RadiusDamageAffects = ENEMIES NEUTRALS NOT\_SIMILAR

HitStoredTarget = Yes ; Always hits initial target.

DamageNugget

Damage = 80

Radius = 0

DelayTime = 0

DamageType = PIERCE

DeathType = NORMAL

DamageScalar = 200% NONE +MordorFellBeast +MordorWitchKingOnFellBeast

+GondorGwaihir

End

DamageNugget

Damage = 5

DamageType = FLAME

DamageFXType = FLAME

DeathType = BURNED

DamageScalar = 0% NONE +MINE; Don't want to set off any mines

DamageScalar = 1000% NONE +RohanEntFir +RohanEntBirch +RohanTreeBerd +MONSTER

DamageScalar = 7000% NONE +STRUCTURE

End

DamageNugget

Damage = 15

DamageType = MAGIC

DamageFXType = ELECTRIC

DeathType = NORMAL

DamageScalar = 200% NONE +MordorFellBeast +MordorWitchKingOnFellBeast

+GondorGwaihir

DamageScalar = 300% NONE +MACHINE

DamageScalar = 500% NONE +MordorBalrog

End

End

### data\lotr.str

OBJECT:GondorDeathTower

"Tower of Death and Transformation"

END

CONTROLBAR:ConstructGondorDeathTower

"Build Tower of &Death and Transformation"

END

CONTROLBAR:ToolTipConstructGondorDeathTower

"Tower guarded by the dead \n Garrison up to 4 units or battalions \n Evacuate before tower is destroyed"

END

### Summary of Key Changes

1. A number of particle systems are referenced. I only showed the ones that are new or have been modified for the first time.
2. The tower's cost has doubled from the original keep.
3. The tower's build time has been halved from the original keep.



4. The “KindOf” has been tweaked so the tower can be garrisoned. Also, the “Line of Sight” requirement was removed to make it more interesting.
5. The tower has no armor and low health points to help compensate for the strong attack features.
6. The tower can be garrisoned like the ruined tower. However, if there are hordes inside when the tower is destroyed, then they may be converted to units. I have not been able to fix this. It’s best to have your troops exit the tower if you think it’s going to be destroyed.
7. A new bow and arrow have been created for the tower.
8. If the tower is destroyed, a small army of the dead is created.
9. After the tower is upgraded at the Gondor Stoneworker (Battle Tower and Keep Archers), it will create animals from the destroyed arrow. The intent is to make it seem that enemies have been transformed into animals. To add some variety, the animals will go through a series of changes. They will change from sheep to pigs to raccoons to rabbits to chickens and finally to bats. Because of the min/max timer range, there will be some randomness to these changes. The bats will eventually disappear. Do you see how the OCL command is used to create the next animal? Although you can’t select the animals, they do belong to your faction. As a result, they will remove the “fog of war” wherever they are (until they disappear).
10. The rate of weapon fire has been significantly decreased.
11. The text descriptions have been updated to reflect the changes.

## Add to the Starting Units/Hordes Using the FinalBIG Editor

If you like, you can add starting units and/or hordes for a given faction when the game starts. This can be readily done by using the “WorldBuilder” program that came with the game (more on that later). Although this is pretty easy to do, if you don’t want to use WorldBuilder, you can go about it by modifying just your INI.big file with the FinalBIG editor. In this example, we’ll add some townspeople, animals, and banner carriers to Gondor.

Open your playertemplate.ini file and go to the Gondor faction code section. I’ve shown the relevant portion below.

```
PlayerTemplate FactionGondor
    Side = Gondor
    PlayableSide = Yes
    Evil = No
    StartMoney = 0
```

*Blah blah blah (existing code)*

```
    ;StartingBuilding = GondorStable
    ;StartingUnit0 = GondorFighter
```

Notice the last 2 lines. There’s a starting building entry and a starting unit entry. If you like, uncomment them and see what happens. You’ll find that the stable is placed smack up against the citadel. No matter what building you select, it will be placed next to the citadel, which is not very aesthetically pleasing. You can, however, add a unit or horde. Unfortunately, you have to have a starting building in order to add a new starting unit or horde. If you disable the “StartingBuilding” line and use just the “StartingUnit0” line, nothing will happen. To get around this, we’ll create a temporary invisible building that will allow new units/hordes to be added.

### data\ini\object\goodfaction\goodfactionbuildings.ini

```
-----
;Added by Meneldil for dummy building in order to add new units or hordes at game
start
;A building is required to generate new starting units/hordes; however, I don't
want a building to be seen since
;it is adjacent to the citadel. This building is invisible and lasts long enough to
generate the desired units.
;The structure collapse code is modified to eliminate the destruction special
effect and remove all traces.
```

```
ChildObject DummyBuilding RohanRefugeeCampA
```

```
    Draw = W3DScriptedModelDraw ModuleTag_Draw
        DefaultModelConditionState
            Model = None
        End
    End
```

```
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate
        MinLifetime = 10000
        MaxLifetime = 10000
    End
```

```
    Behavior = StructureCollapseUpdate ModuleTag_8
        DestroyObjectWhenDone = Yes
    End
```

```
End
```

You’ll notice that there’s a zero after the “StartingUnit” code entry. I’ve verified that you can have “StartingUnit0,” “StartingUnit1,” “StartingUnit2,” etc. For reasons that are not clear to me, I can use these

multiple entries for units, but I can only add one new horde. A more efficient solution is to use an OCL entry to generate everything you want.

### data\ini\object\goodfaction\units\gondor\gondorinfantry.ini

```
;;-----  
-----  
ChildObject GondorAdditionalPopulation GondorBanner; added by Meneldil to add more  
units/hordes to Gondor settlements  
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate  
        MinLifetime = 0  
        MaxLifetime = 0  
    End  
    Behavior      = SlowDeathBehavior ModuleTag_05  
        DeathTypes = ALL  
        OCL        = INITIAL OCL_PopulateGondor; refer to objectcreationlist.ini  
    End  
End
```

### data\ini\objectcreationlist.ini

```
; -----  
-----  
; Create additional Gondor units or battalions; added by Meneldil  
ObjectCreationList OCL_PopulateGondor  
    CreateObject  
        ObjectNames = GondorBanner; refer to gondorinfantry.ini  
        Count = 2  
        Disposition = SPAWN_AROUND  
        DispositionAngle = 120  
        DispositionIntensity = 200  
    End  
    CreateObject  
        ObjectNames = GondorTownsmenTorch; refer to civilianunit.ini  
        Count = 1  
        Offset = X:60 Y:75 Z:0  
    End  
    CreateObject  
        ObjectNames = GondorTownsmenTorch; refer to civilianunit.ini  
        Count = 1  
        Offset = X:-80 Y:-30 Z:0  
    End  
    CreateObject  
        ObjectNames = GondorTownsmen  
        Count = 1  
        Offset = X:35 Y:35 Z:0  
    End  
    CreateObject  
        ObjectNames = GondorTownsmen  
        Count = 1  
        Offset = X:-35 Y:-35 Z:0  
    End  
    CreateObject  
        ObjectNames = GondorTownswoman  
        Count = 1  
        Offset = X:30 Y:30 Z:0  
    End  
    CreateObject  
        ObjectNames = GondorTownswoman  
        Count = 1  
        Offset = X:-30 Y:-30 Z:0  
    End  
    CreateObject
```

```

        ObjectNames = GondorTownPair
        Count = 1
        Offset = X:60 Y:-75 Z:0
    End
    CreateObject
        ObjectNames = GondorTownPair
        Count = 1
        Offset = X:40 Y:95 Z:0
    End
    CreateObject
        ObjectNames = Dog; refer to natureunits.ini
        Count = 1
        Offset = X:70 Y:80 Z:0
    End
    CreateObject
        ObjectNames = Rabbit; refer to natureunits.ini
        Count = 3
        SpreadFormation = Yes
        MinDistanceAFormation = 40
        MinDistanceBFormation = 60
        MaxDistanceFormation = 80
    End
    CreateObject
        ObjectNames = Crow; refer to natureunits.ini
        Count = 5
        SpreadFormation = Yes
        MinDistanceAFormation = 80
        MinDistanceBFormation = 160
        MaxDistanceFormation = 250
    End
End

```

### data\ini\playertemplate.ini

```

PlayerTemplate FactionGondor
    Side = Gondor
    PlayableSide = Yes
    Evil = No
    StartMoney = 0; Meneldil note: This overrides what is in the
    "mygamedata.ini" file (if > 0)

```

*Blah blah blah (existing code)*

```

    ;StartingBuilding = GondorStable; Meneldil note: This places the building
right next to the citadel
    ;StartingUnit0 = GondorFighter; Meneldil note: StartingBuilding must be
enabled for starting unit to appear
    StartingBuilding = DummyBuilding; Meneldil added (refer to
goodfactionbuildings.ini)
    StartingUnit0 = GondorAdditionalPopulation; Meneldil added (refer to
gondorinfantry.ini)

```

*Blah blah blah (existing code)*

**End**

The advantage to this approach is that you can easily spread units around your settlement. The downside is that you can only add units, you cannot delete any of the default starting characters.

Tip: In your civilian.ini file, be sure that "IGNORES\_SELECT\_ALL" is included in the "KindOf" statement for the "GondorTownsmenTorch," "GondorTownsmen," "GondorTownswoman," and "GondorTownspair" objects. Otherwise, they will be included if you select all your units/hordes (letter Q).

If you want the townfolk to wander randomly on their own, then add the following code block just before the "LocomotorSet" code section. I took this code block from the natureunits.ini file (refer to "Object Dog"). Feel free to adjust it to meet your needs.

```
; ***** Start Meneldil added
*****
    Behavior = AnimalAIUpdate ModuleTagWanderAround
        FleeRange      = 200 ; how close enemies have to be before we panic
        FleeDistance   = 800 ; how far the animal will run once spooked
        WanderPercentage = 5  ; percentage of the time we should move
        MaxWanderDistance = 100 ; maximum distance to move at once
        MaxWanderRadius  = 100 ; how far to wander on our own
        UpdateTimer     = 13  ; how often do we want to check for enemies
    End
; ***** End Meneldil added
*****
```

## Changing Starting Units/Hordes Using WorldBuilder

As mentioned above, you can change what units or hordes appear at the start of the game using the WorldBuilder program that came with your game. In this example, we'll add the 2 banner carriers and the townspeople & critters that we previously added in in our object creation list.

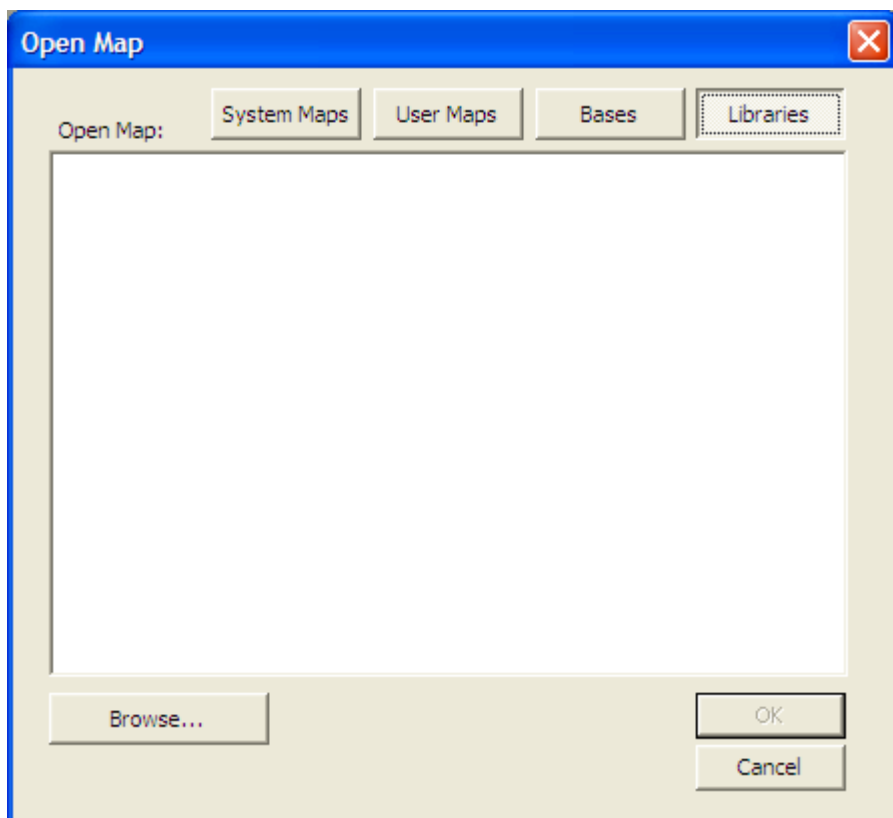
Open the original Libraries.big file in your "The Battle for Middle-earth (tm)" folder using the FinalBIG editor. You should see the following.



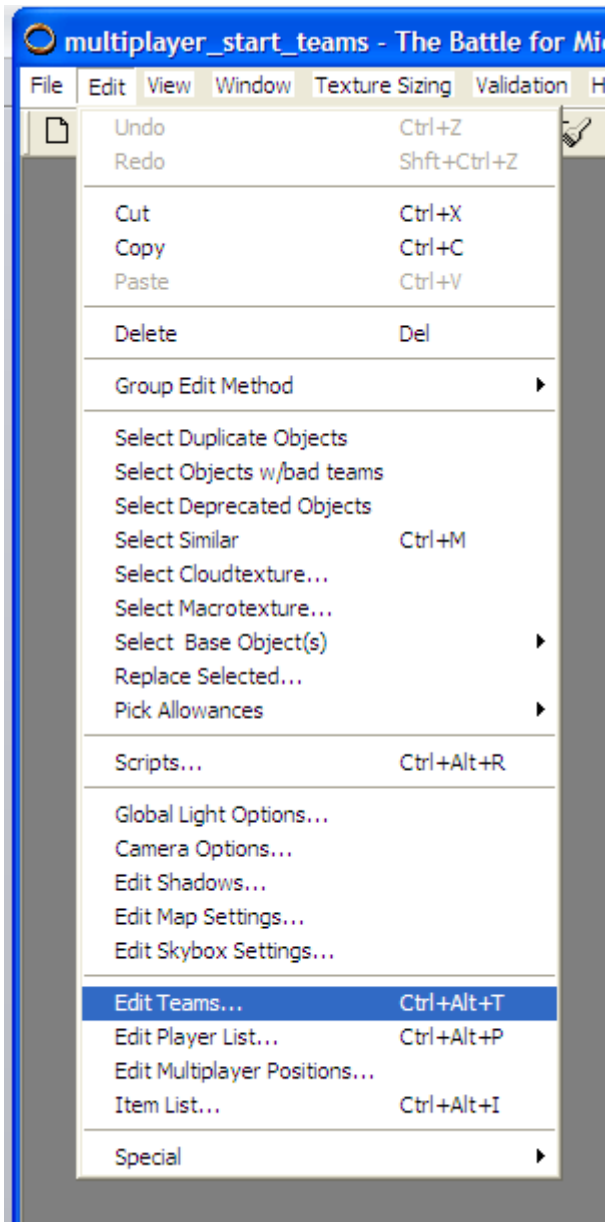
Extract the "libraries\multiplayer\_start\_teams\multiplayer\_start\_teams.map" file (third from the bottom of the list) to your mod folder. A separate sub-folder for scripts is recommended.

Start the WorldBuilder program. Don't try to start the program by opening your map file (I changed the file type affiliation thinking I could open the program by clicking on the file) as it will likely crash. Ignore the "Object

Properties” window (I moved it to the right side of the screen) and open the file you just extracted. To do this, select File > Open from the menu. The window below should appear. I selected the “Libraries” tab but it doesn’t seem to matter.

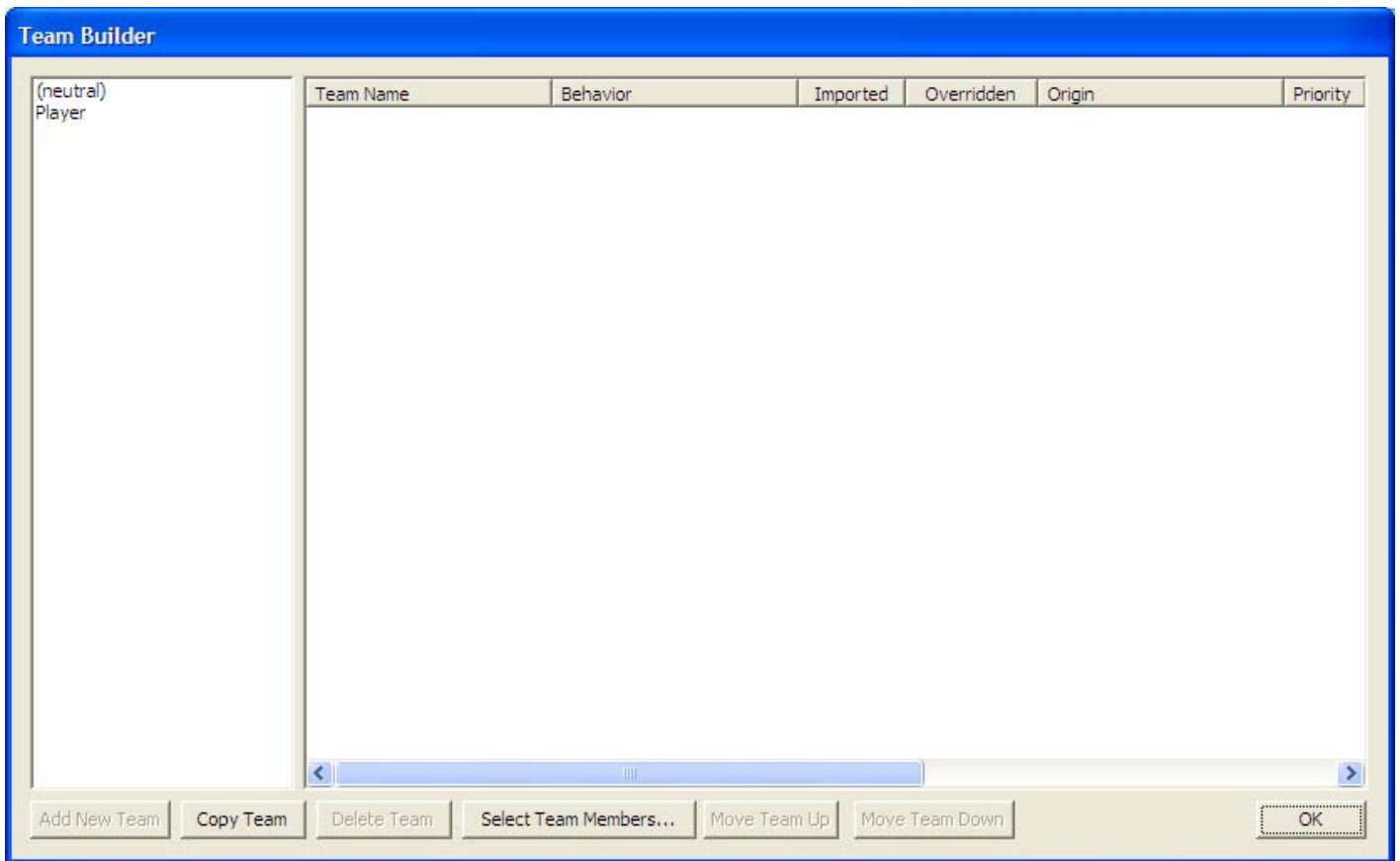


Browse to your folder and open the “multiplayer\_start\_teams” file you previously extracted. Go to the Edit menu tab and select “Edit Teams...” as shown on the next page.

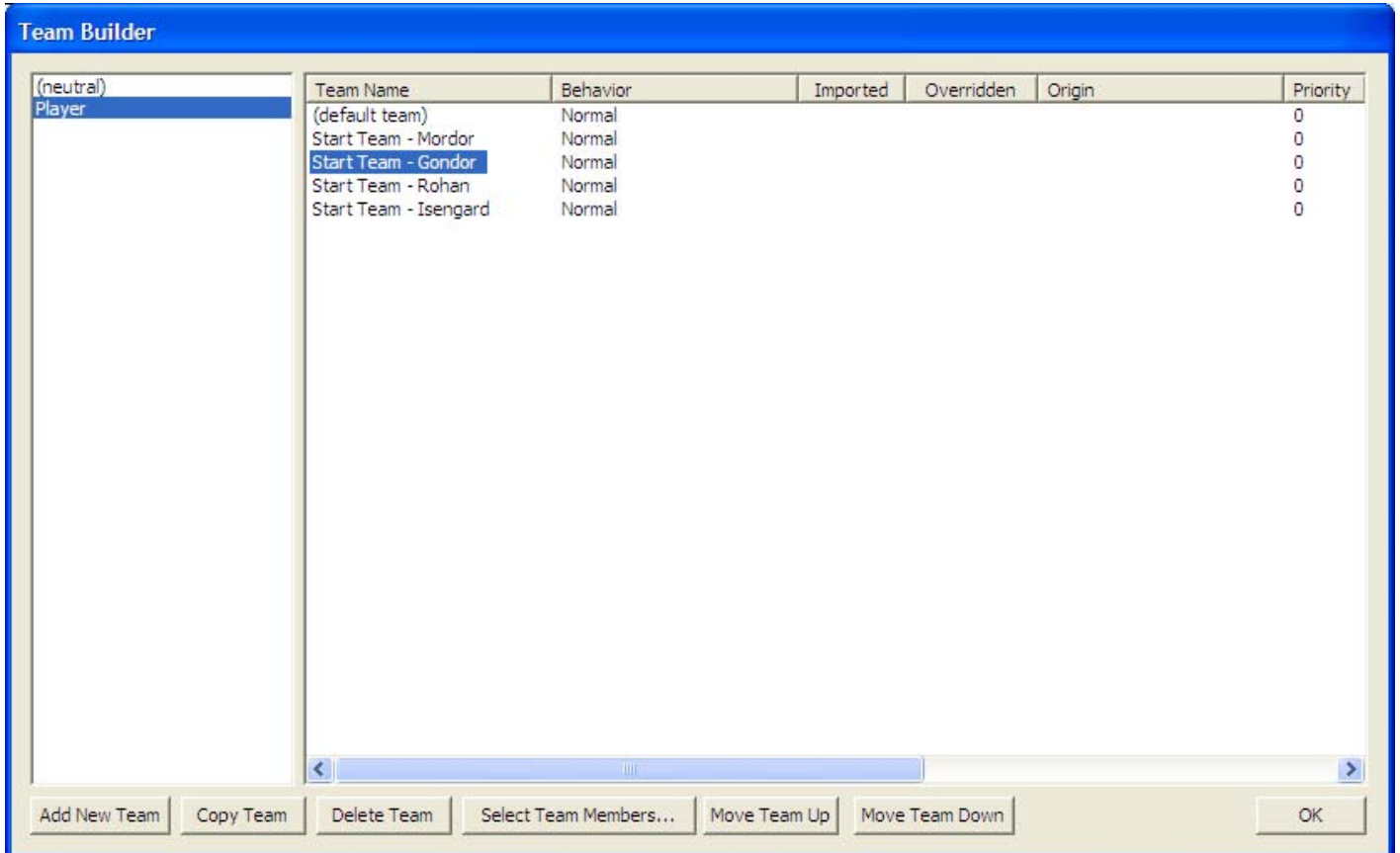


The following window should appear.

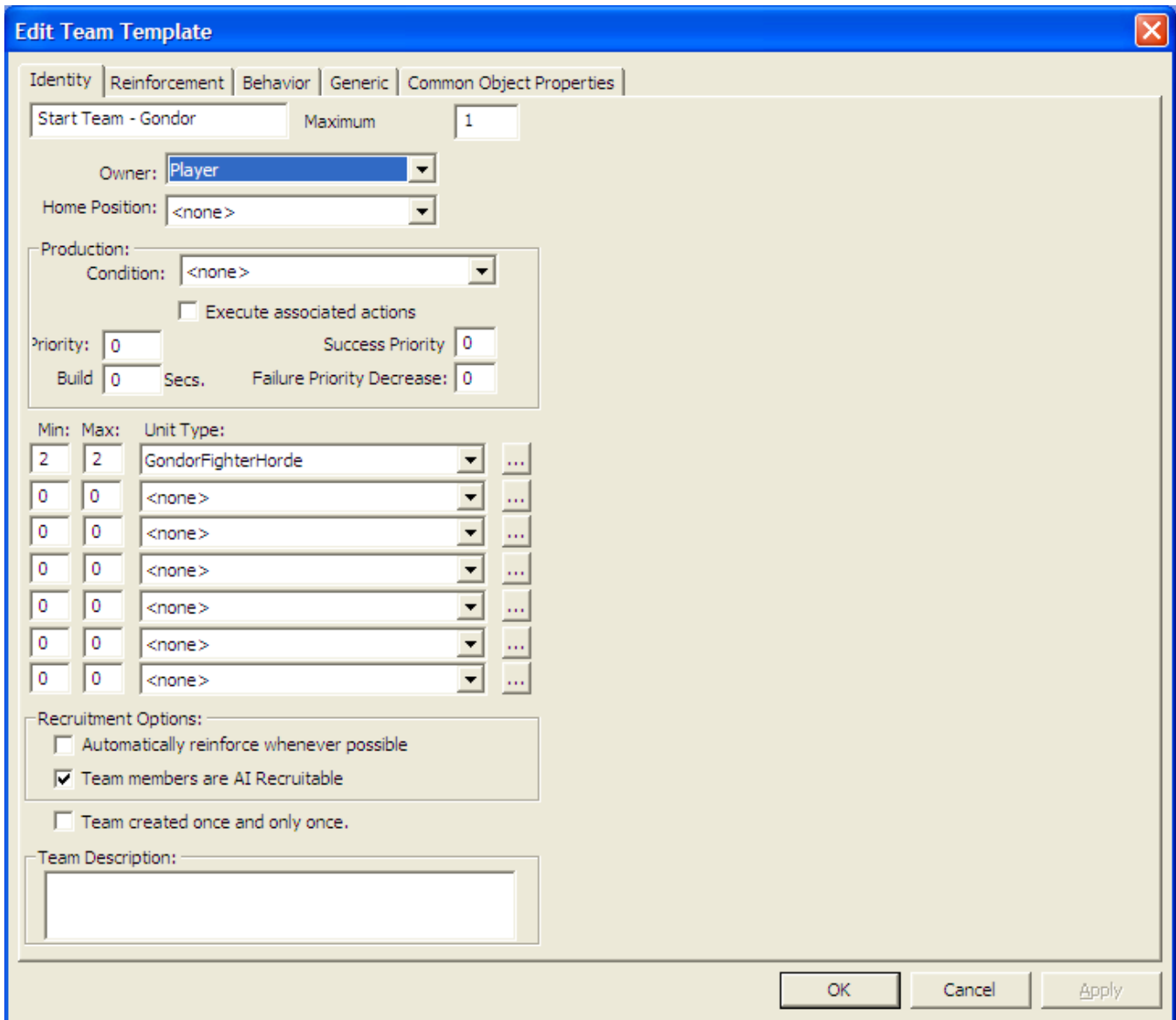




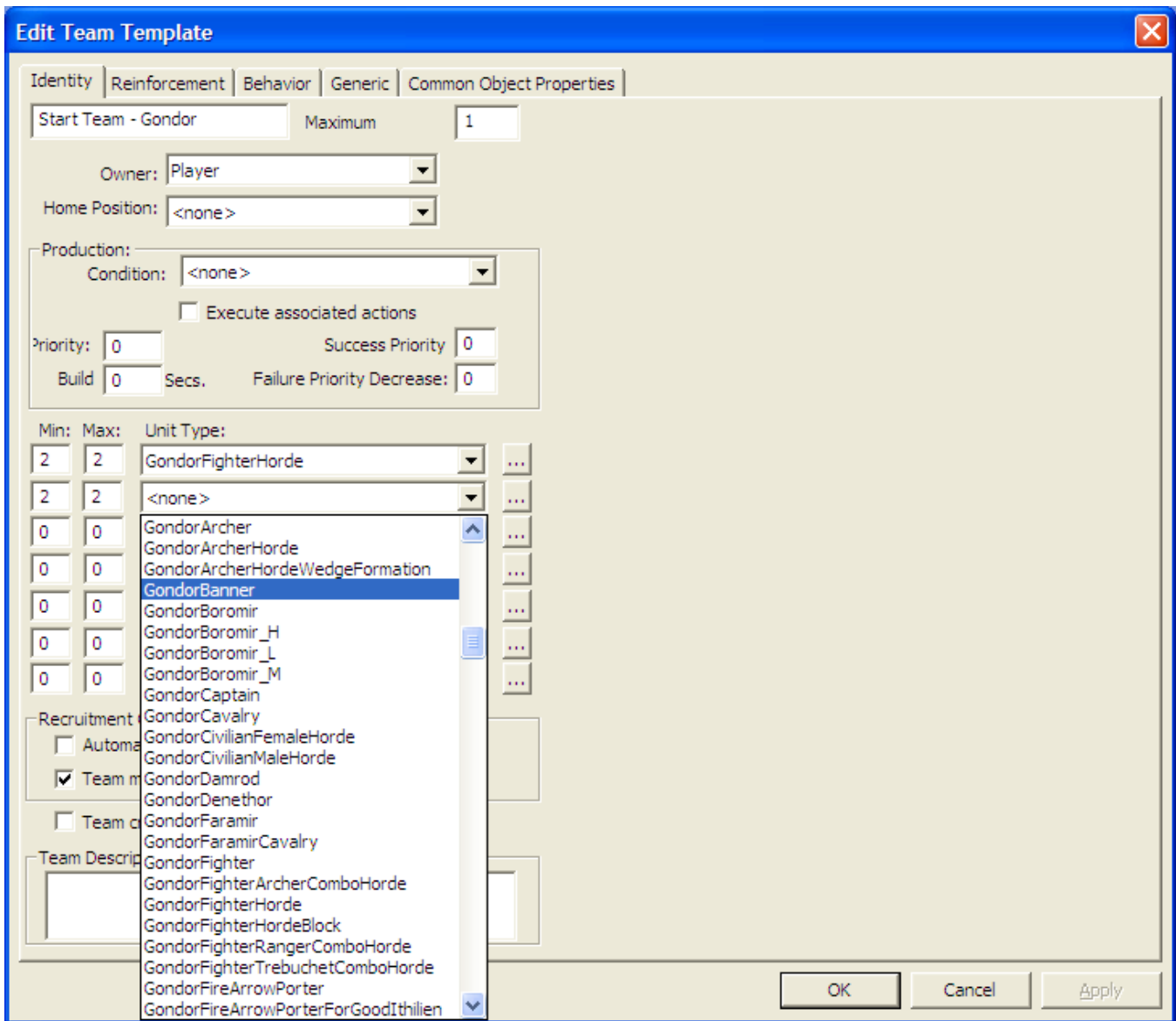
Click on “Player” and then double-click “Start Team – Gondor” as indicated below.



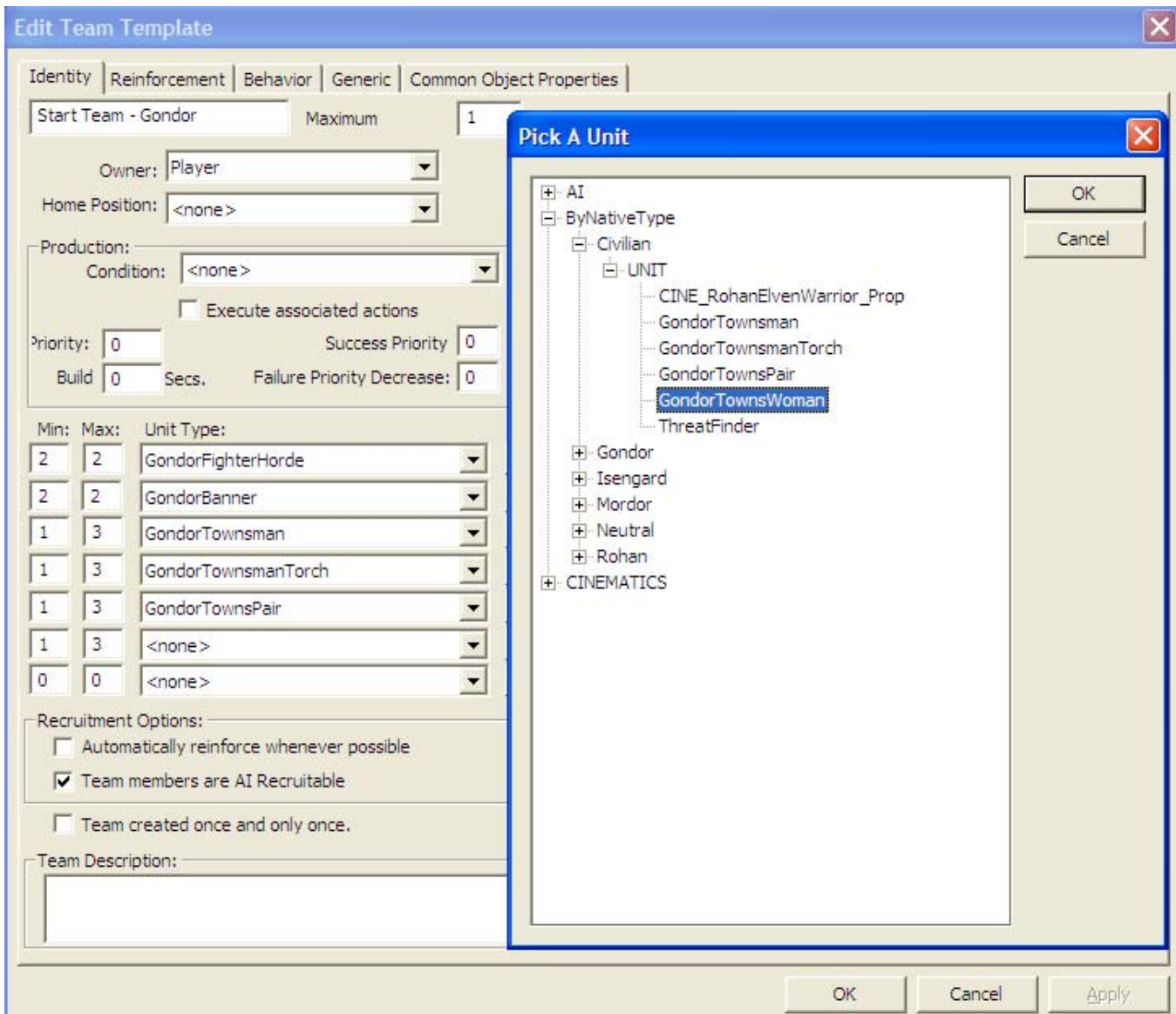
The following window should appear.



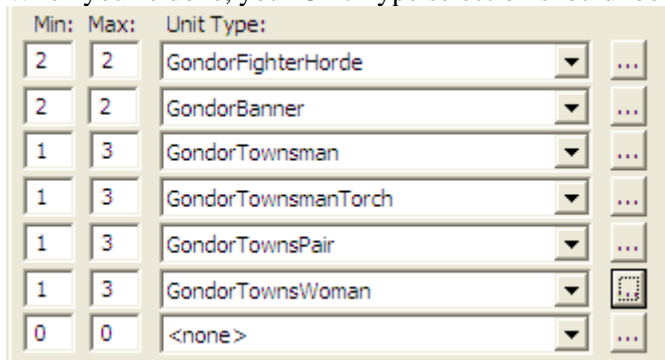
As you can see, the initial 2 fighter hordes are already present as you would expect. For this example, we'll add 2 banner carriers as well as some townfolk. Just under the "GondorFighterHorde" entry, enter "2" for the Min and Max quantities. Next, under "Unit Type," select "GondorBanner" from the drop-down menu and click on the "OK" button. Refer to the next picture.



Continue doing this for the townspeople. Choose quantities as you desire. Choosing different Min/Max values will add some variety everytime you start a new game. Note that you don't have to use the drop-down menu. If you click on the box to the right (with the 3 dots), you can select by category, as shown below.

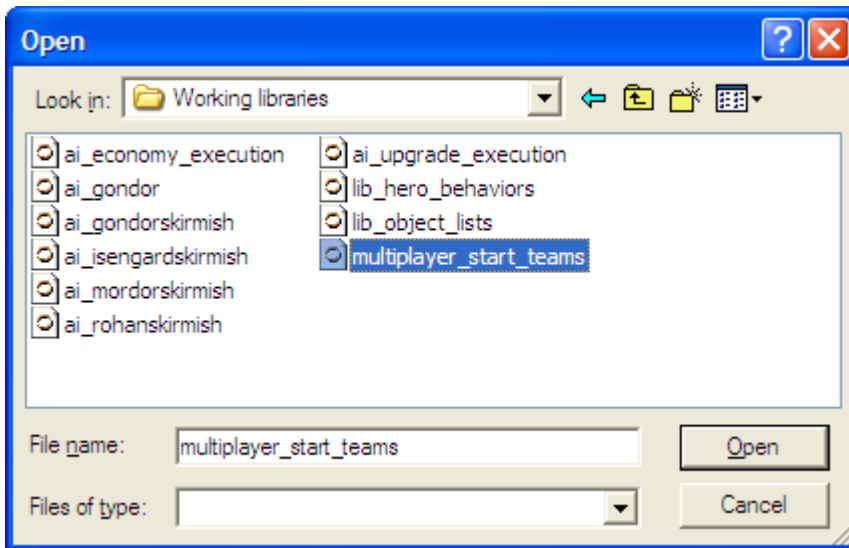


When you're done, your Unit Type selection should look similar to this:



Now click the "OK" button of the "Team Builder" window. Now save your changes. You can give the file a new name if you like (in order to differentiate it for your mod). Note that a TGA version is also saved automatically. You can delete this file.

Now add this file to your mod with the FinalBIG editor.



Regardless of what you may have called the file, in the File name entry box, use “libraries\multiplayer\_start\_teams\multiplayer\_start\_teams.map” for the file name entry when you place it in your mod.

Next, we have to adjust our object creation list to allow for the fact that we’ve added banner carriers and townfolk via a library addition. We need to adjust our previous OCL so that we only create the animals.

### data\ini\objectcreationlist.ini

```

; -----
; Create additional Gondor units or battalions; added by Meneldil
ObjectCreationList OCL_PopulateGondor
  CreateObject
    ObjectNames = Dog; refer to natureunits.ini
    Count = 1
    Offset = X:70 Y:80 Z:0
  End
  CreateObject
    ObjectNames = Rabbit; refer to natureunits.ini
    Count = 3
    SpreadFormation = Yes
    MinDistanceAFormation = 40
    MinDistanceBFormation = 60
    MaxDistanceFormation = 80
  End
  CreateObject
    ObjectNames = Crow; refer to natureunits.ini
    Count = 5
    SpreadFormation = Yes
    MinDistanceAFormation = 80
    MinDistanceBFormation = 160
    MaxDistanceFormation = 250
  End
End

```

Save your mod and start the game playing as Gondor. If you followed the directions correctly, you should see pretty much the same thing we achieved with our FinalBIG version. The only difference is that the townfolk will be bunched up together near the citadel at the start of the game; however, they will soon start wandering around (assuming you added the appropriate code), so it’s not a big deal. There may also be a random number of townfolk depending on your min/max values.

You can now readily reapply this approach to adjust all of your faction's starting units/hordes as you see fit.

Note that in this example of using WorldBuilder, I only used original game units. You may want to include new units, hordes, models, artwork, etc. Before doing so, there is a very important tip from "GothmogtheOrc" that I found on the T3A forums. I'll paraphrase it here (I can't find the original post).

1. Copy your mod (e.g., MeneldilMod.big) to your BFME main directory. For Windows XP, your main directory is probably located in C:\Program Files\EA GAMES\The Battle for Middle-earth (tm).
2. Rename your mod such that it starts with the letter "A" (e.g., AMeneldilMod.big). This is so it will load your files before the EA files. Note that you can use a lower or upper case letter.
3. If you have created a new asset.dat file for new models and/or artwork, then you will need to temporarily move the original EA asset.dat file from the main directory to another location. Once you've done that, copy your asset.dat file to the main directory.
4. Open WorldBuilder. You should be able to find your new units in the proper lists. Also, their new artwork or models should show up correctly.
5. When you are done, remove your mod and asset files from the main directory. Don't forget to restore the original EA asset file to the BFME main directory.

Again, this is a very easy, but very important tip that you should be aware of whenever you are using WorldBuilder to incorporate custom made items. The reason this is necessary is that WorldBuilder reads files in your game folder when it starts. It needs to be able to reference unique items you may have added. The only way to do that is for you to place a copy of your mod in the game folder. The reason you need to put the letter "A" at the front of the file name is so that WorldBuilder reads it before the existing unmodified INI file.

## Adding Heroes to the Game AI

Objective: Add Frodo, Sam, and Elrond to the game's artificial intelligence such that they are automatically recruited and deployed by the Gondor Faction. We'll use FinalBIG and WorldBuilder to do this.

Before beginning, I suggest you refer to a tutorial by "Hubblewhite" on the Third Age Website:

<http://www.the3rdage.net/item-192?addview>

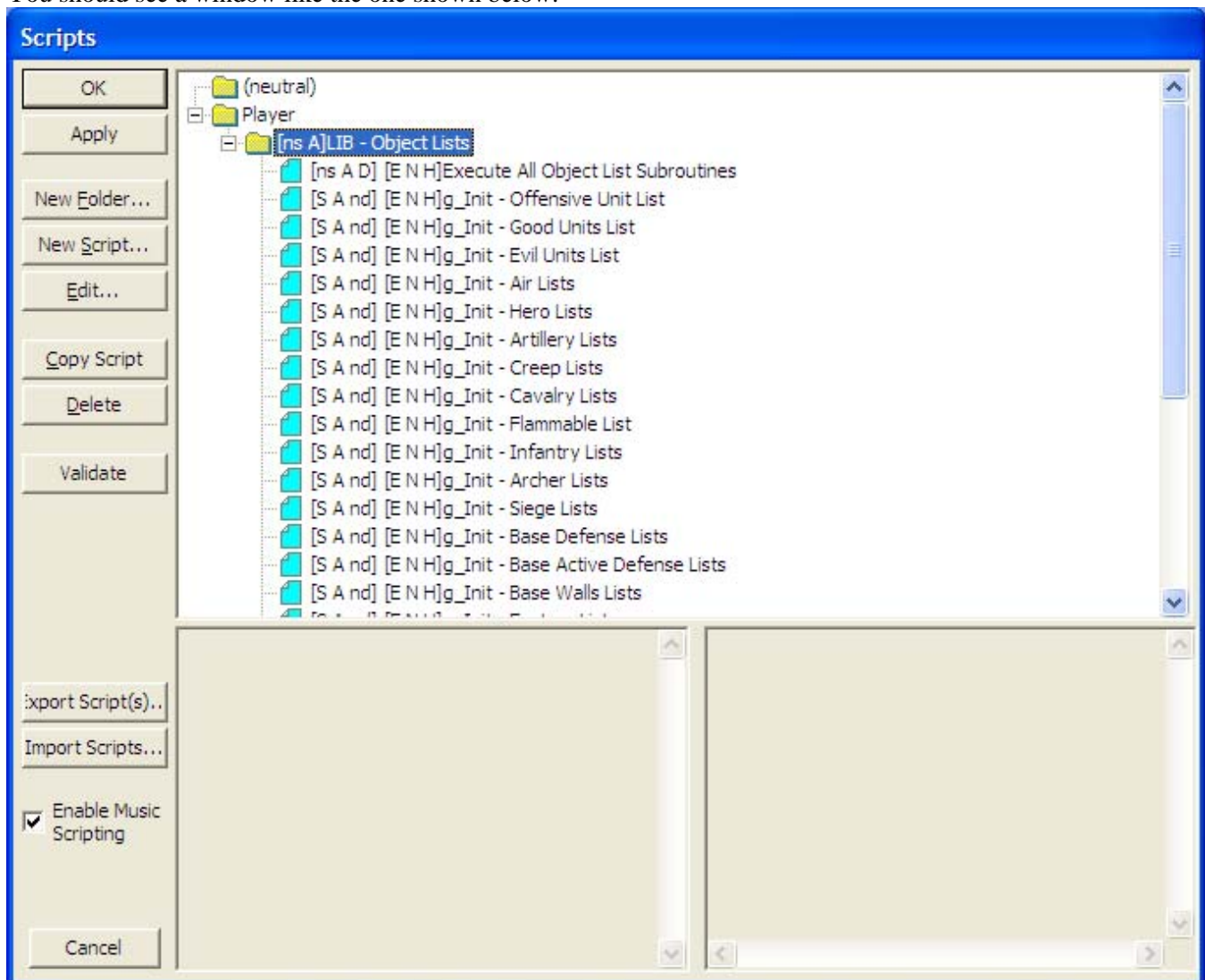
This is a very helpful guide and saved me a lot of trial and error. His guide was focused on adding Sauron to the Mordor Faction (however, it did not address how to add special Palantir powers to the AI). Therefore, I'll show my version since different heroes are used.

Open the Libraries.big file in your "The Battle for Middle-earth (tm)" folder using the FinalBIG editor. Extract the following two files to a folder for your modified library files:

- libraries\ai\_gondor\ai\_gondor.map
- libraries\lib\_object\_lists\lib\_object\_lists.map

Be sure the "map" extension is present at the end of the file name. From within WorldBuilder, open the "lib\_object\_lists" map file. We need to be sure our heroes are listed here.

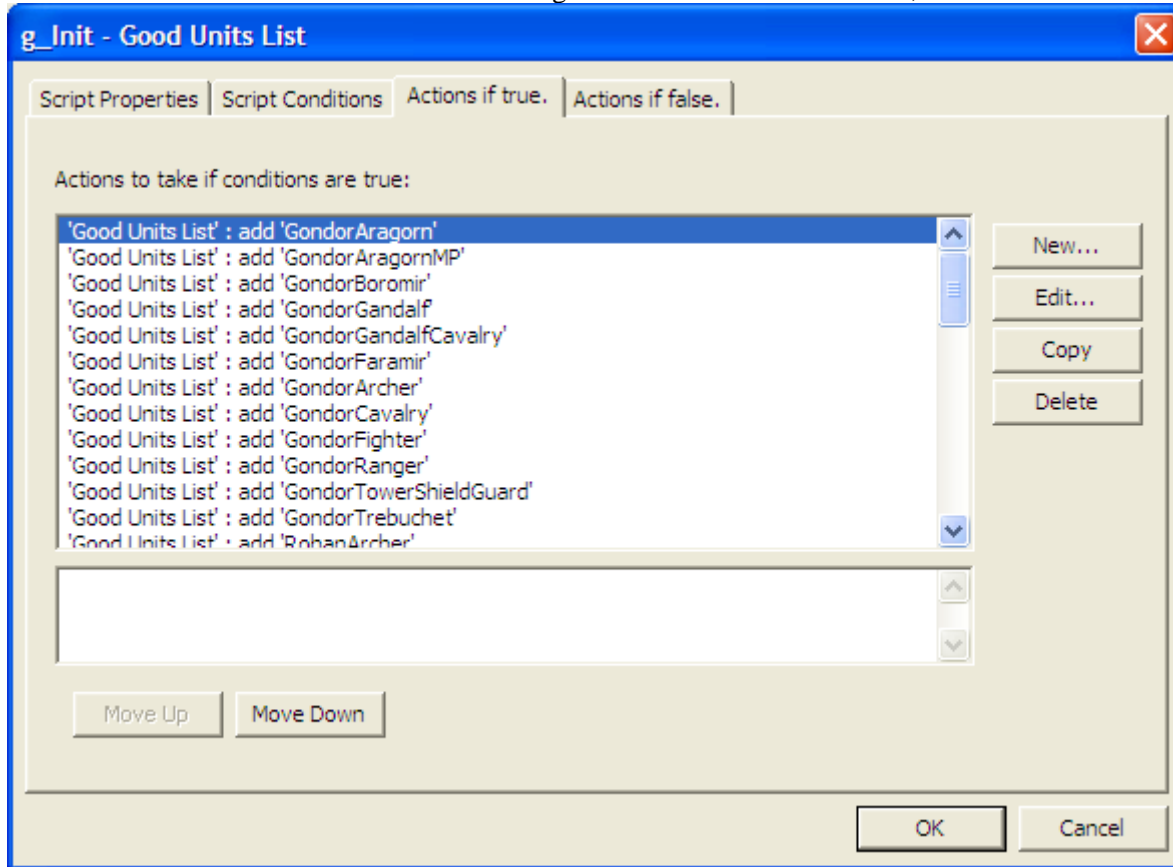
From the menu, select Edit > Scripts. Expand the Player folder. Then expand the [ns A]LIB - Object Lists folder. You should see a window like the one shown below.



We're going to modify the following scripts:

- Good Units List
- Hero Lists
- Gondor Lists

Double-click on the Good Units List and then go to the “Actions if True” tab, as shown below.



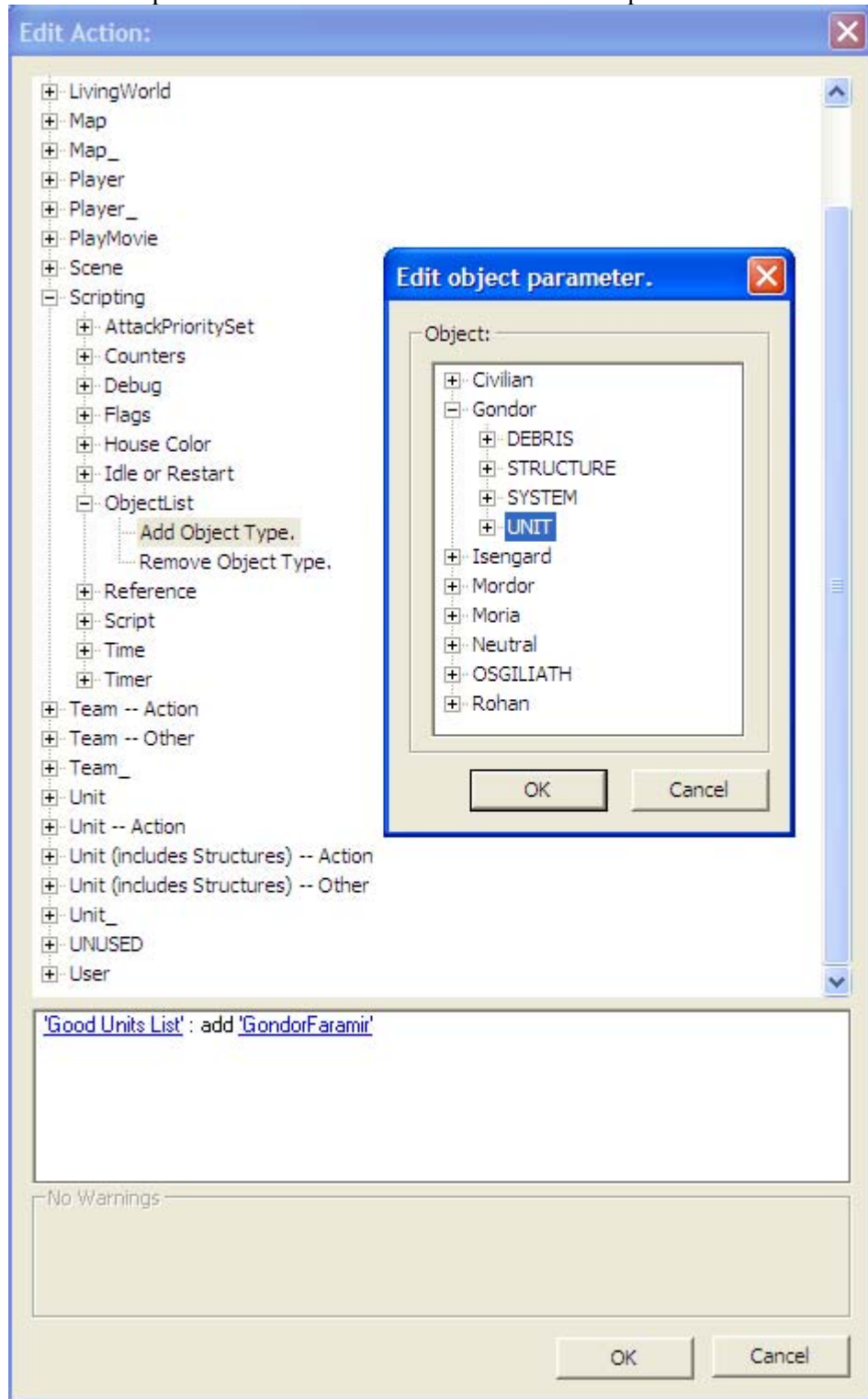
Scroll through the list and you'll see that Sam and Frodo are already present. We're going to copy the “GondorFaramir” script and then edit it for Elrond. I selected Faramir because he is already pretty similar to Elrond (e.g., toggles between sword and bow), but you could pick any existing hero.

Select “GondorFaramir” and then click the Copy button. Next, click the Edit button (one of the Faramir copies should already be selected). Click on the blue text “GondorFaramir” and the “Edit object parameter” window will open. Expand “Gondor” and then “UNIT.” Scroll down until you find “ElvenElrond.” Select him and click OK. The blue text that read “GondorFaramir” will now read “ElvenElrond.” Click OK. This will take you back to the “Good Units List” window.

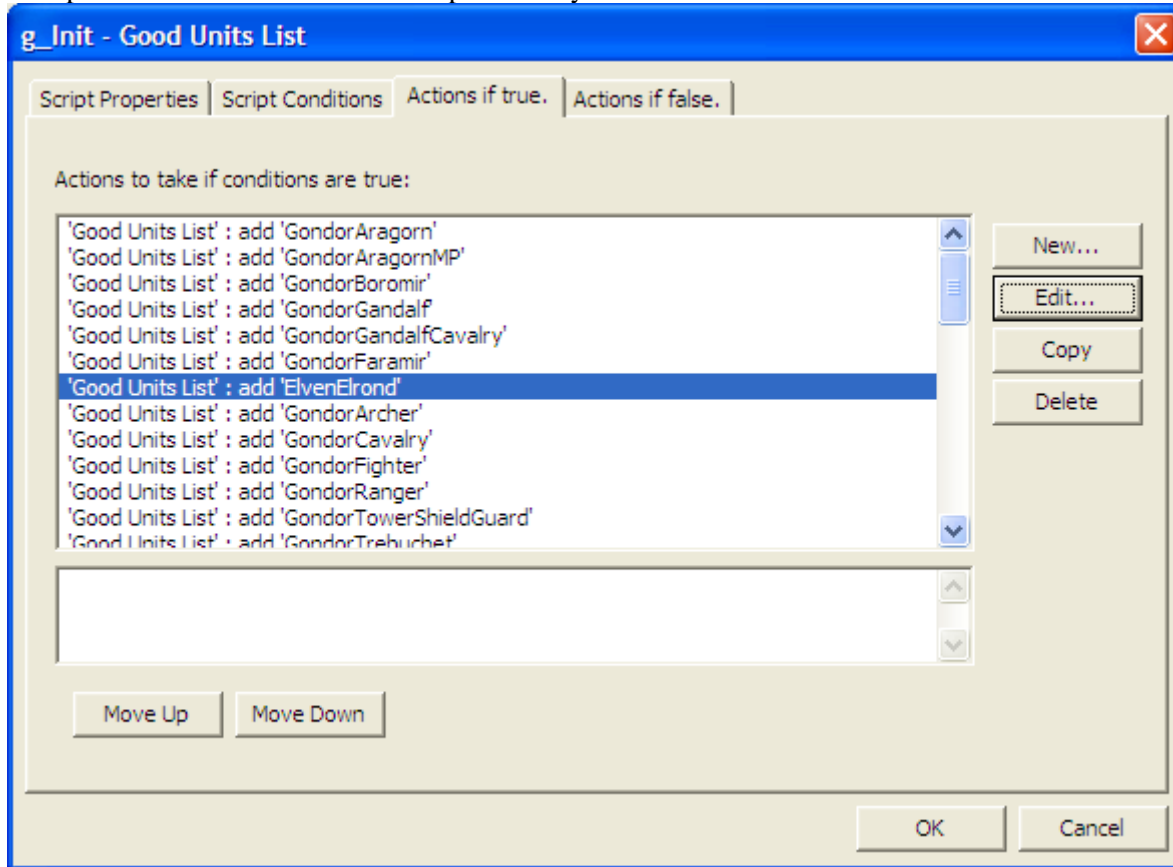
You'll see that Elrond is now present. You can move his entry to the top if you like (to be alphabetic), but it's not necessary. The next two pictures recap these steps.



Recap: Click on “GondorFaramir” (blue text). This will open a smaller “Edit object parameter” window. Find “ElvenElrond” under Gondor > UNIT. Select him to replace Faramir. Click the OK button to close the window. Note that I repositioned the window in order to make the picture fit better below.



Recap: You'll see that Elrond is now present in your Good Units List.



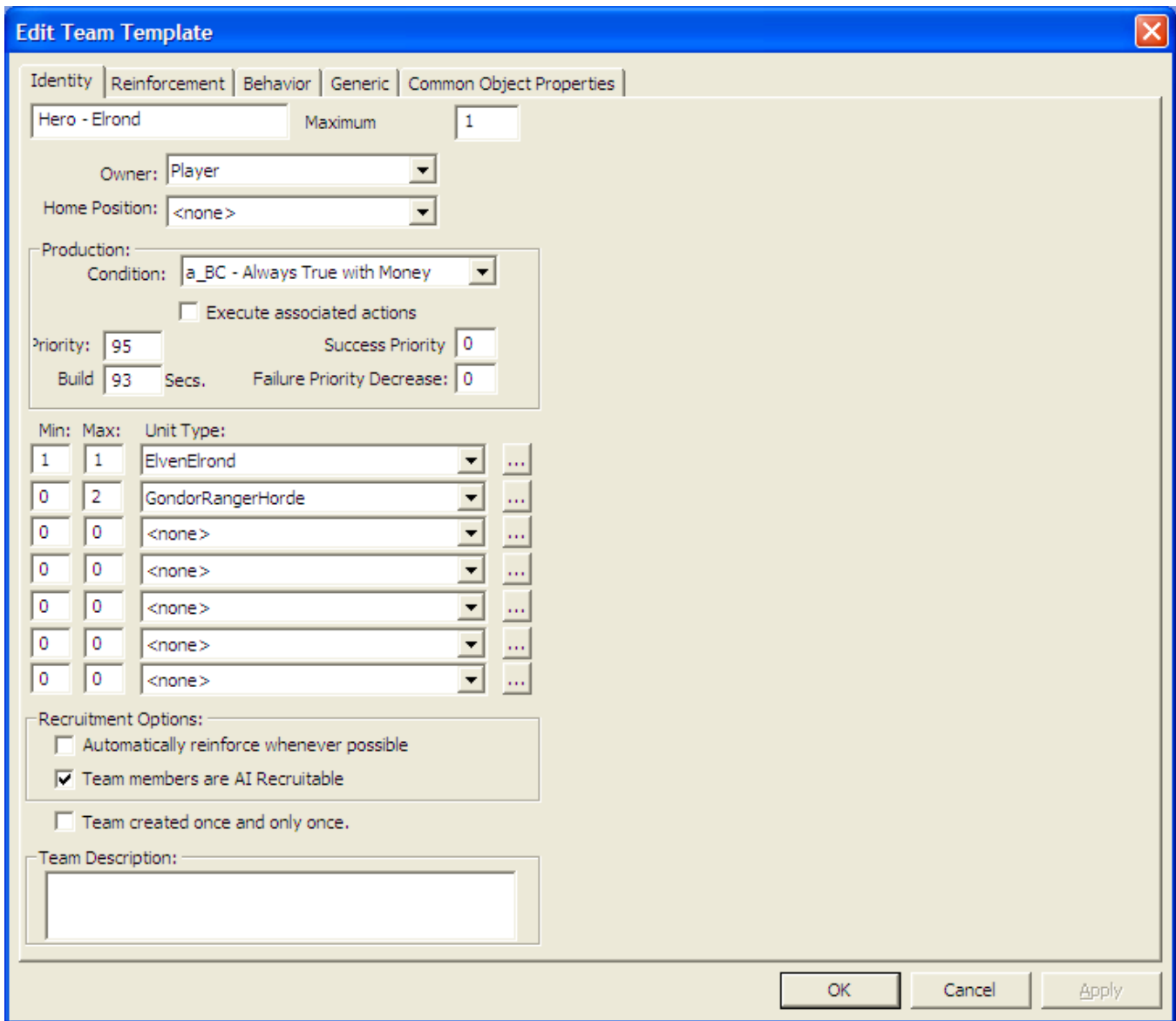
Now repeat this process for the Hero Lists. Again, Sam and Frodo are already present so you only need to add Elrond. In the Gondor Lists, however, Sam and Frodo are not present, so you'll have to add them. I copied the "RohanPippin" file twice and then modified them (one for Frodo and one for Sam). You'll find Sam and Frodo under the Rohan > Unit heading ("RohanSam" and "RohanFrodo"). I kept the list alphabetized.

From the Scripts window, click OK. From the WorldBuilder main menu, save the file. If you want to give it a new name to make it easier to know what it is for, select File > Save As. Select the Browse button so that you can direct where you want the file to go and what to name it. Note that a TGA file will also be created every time you save. You can delete it; you only need the MAP file extension type for what we are doing here.

**Tip: If you hit the escape key, your window will automatically close without warning and nothing will be saved. Save periodically so that you don't accidentally lose your work.**

Now open the "ai\_gondor.map" file. This file will provide scripts for your heroes such that they will actively seek out & engage enemies. For now, nothing will be done with new Palantir powers that you may have added. From the WorldBuilder menu, select Edit > Edit Teams. Click on "Player" in the upper left of the window. You'll see that the only heroes present are Faramir, Boromir, Gandalf, and Pippin. Select "Hero - Faramir" and click the Copy Team button. Scroll down until you find the "Hero - Faramir 1" team. I don't know why the program doesn't put it adjacent to the original. Select and then double-click "Hero - Faramir 1".

In the Identity tab, change "Hero - Faramir 1" to "Hero - Elrond." Change "a\_BC - Faramir" to "a\_BC - Always True With Money." This forces the AI to create your hero when enough money is available. Under Unit Type, change "GondorFaramir" to "ElvenElrond." When you're done, the window should look something like this.

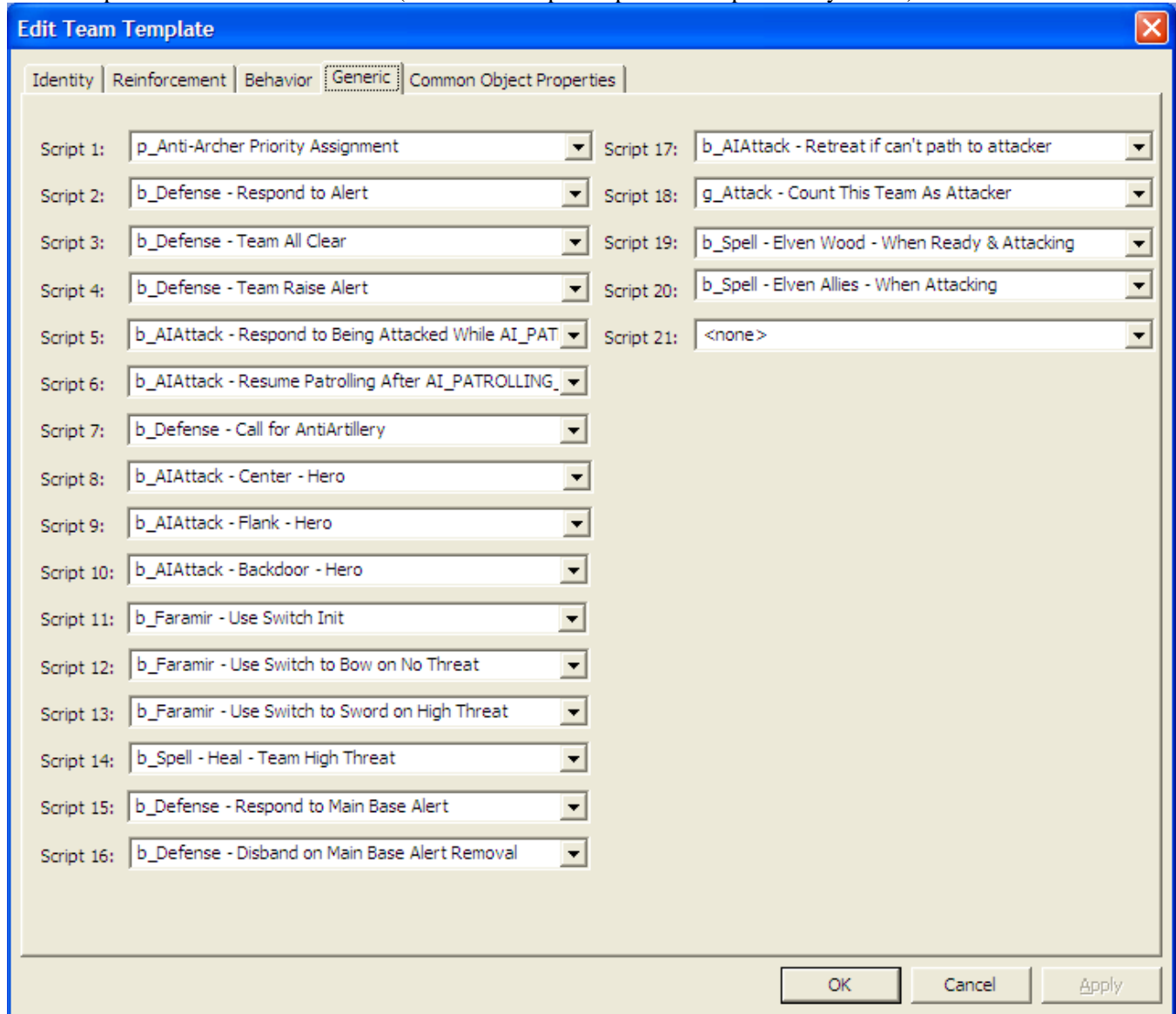


Now go to the Behavior tab. “b\_AIAttack - Patrol Combat Areas” should already be selected. If not, select it or choose another action (you may have to experiment). Now go to the Generic tab. We need to remove the scripts that won’t be applicable to Elrond. These are “b\_Faramir - Set Unit Ref,” “b\_Hero - Toggle Mounted Once,” “b\_Faramir - Use Captain of Gondor when Ready,” “b\_Faramir - Use Wound Arrow on Enemy Sighted,” and “b\_Faramir - Retreat to Combat Area.” Change all of these to <none>. Leave the weapon switching codes in place. Feel free to add other scripts as you feel appropriate, but they should be scripts that Elrond can use. Click OK.

Now select “Hero - Pippin” and copy him twice. Change one copy to Frodo and the other to Sam, similar to what you did for Elrond. In the Behavior tab, you can leave the “On Create” script as “b\_Econ\_Secure\_LumberMill” if you like, but I prefer “b\_AIAttack - Patrol Combat Areas.” Change the Identity & Generic tabs as appropriate, similar to what you did for Elrond.

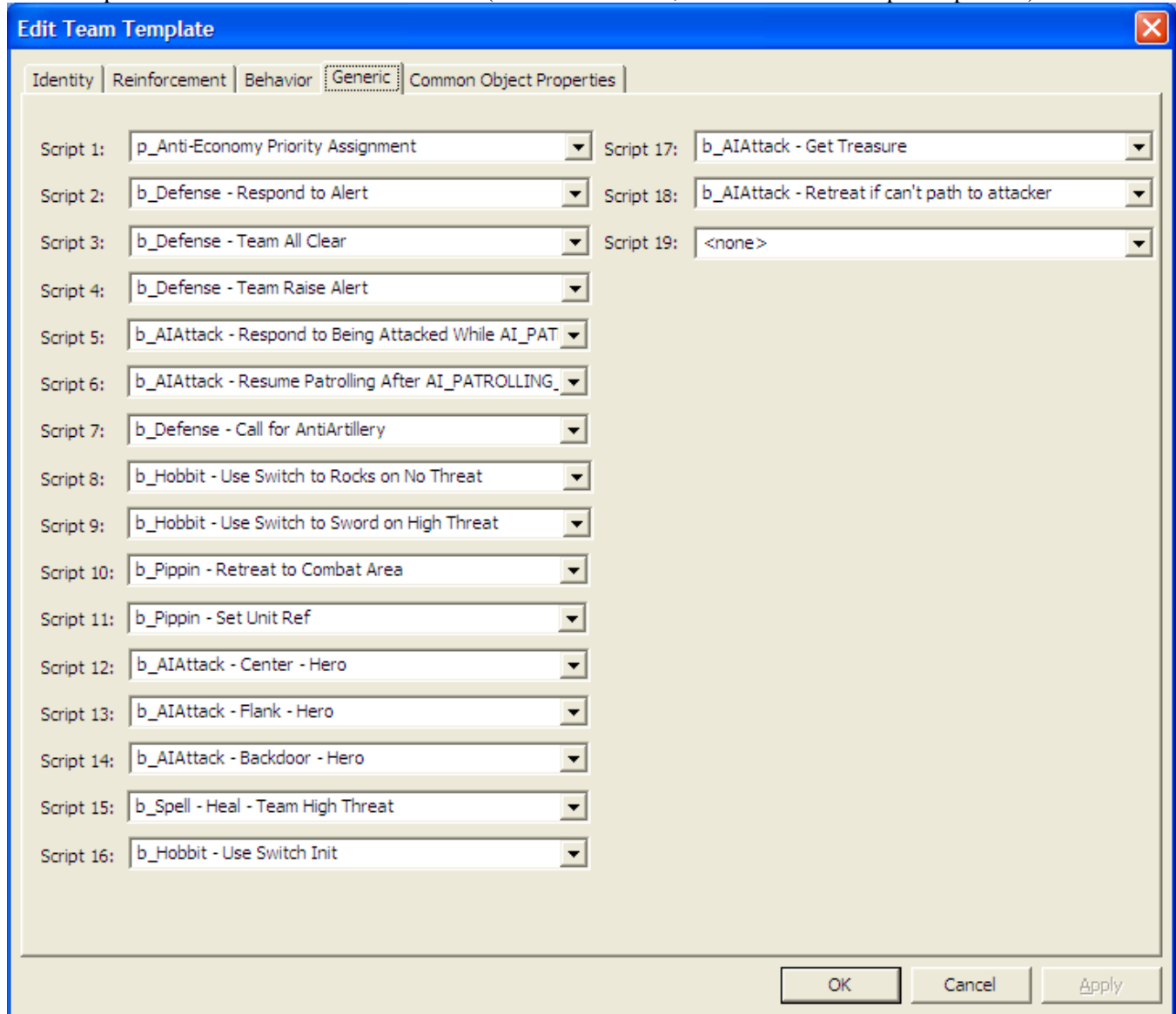
Click OK on the Team Builder window and save your file (e.g., “Meneldil ai\_gondor.map”). Here are example screenshots of the Generic tab for these heroes. I added some existing scripts that are present in the original game. Feel free to adjust or experiment as you wish.

An Example of Elrond's Generic Tab (does not use special powers we previously added)

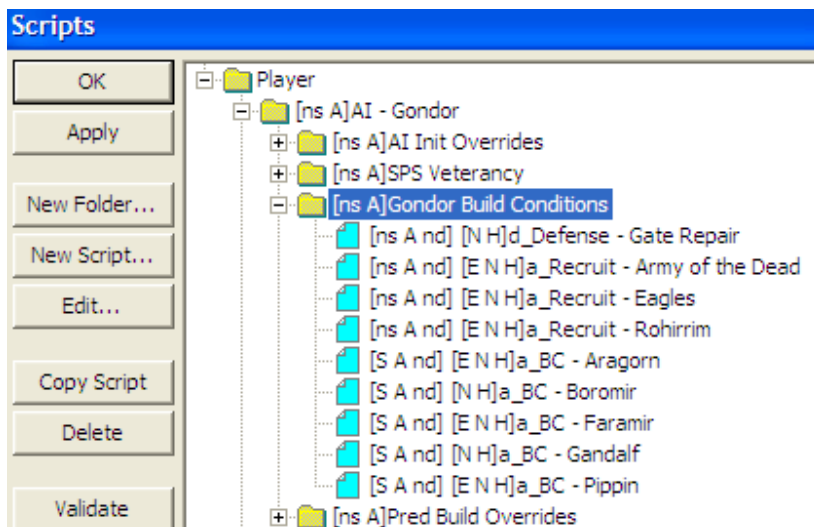


Note that Elrond can use Faramir's scripts for switching between bow and sword because the commands are the same.

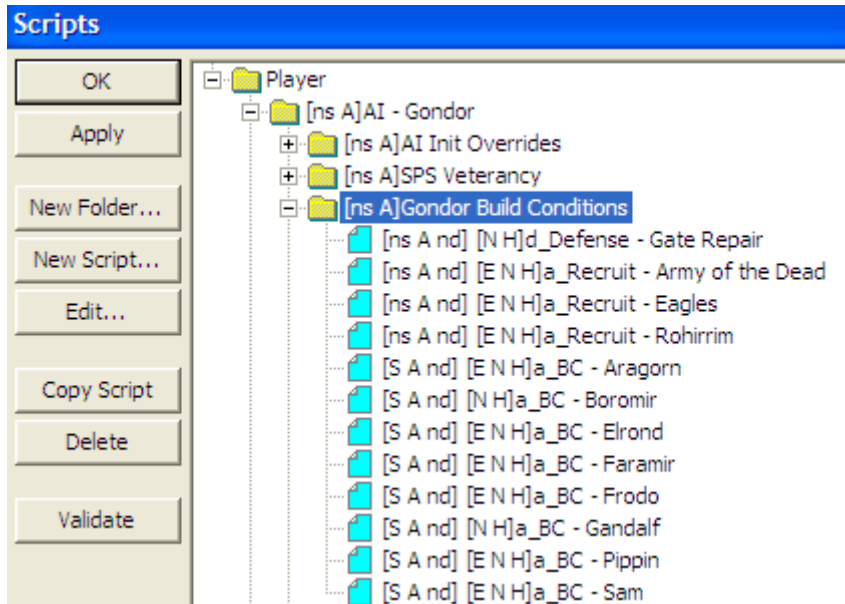
An Example of Sam's & Frodo's Generic Tab (both are the same, but do not include special powers)



If you prefer to follow the same convention as for the other heroes, then go to the Scripts window (Edit > Scripts) and open the “Gondor Build Conditions” folder as indicated below.



Copy Pippin’s script (a\_BC - Pippin) and rename it a\_BC - Elrond. Repeat the process for Frodo and Sam. You only need to change the script name – don’t modify the actual script code. When you’re done, your window should look something like this. Note that like Gandalf and Boromir, I selected only “Normal” and “Hard” in Elrond’s Script Properties tab so that the game’s AI does not recruit him when playing in “Easy” mode.



Save your work and go to the Team Builder window (Edit > Edit Teams...). Click on “Player” and then double click “Hero - Elrond” so that the Edit Team Template window is open. Change his Production Condition from “a\_BC - Always True with Money” to “a\_BC - Elrond” from the drop down menu. Repeat this for Frodo and Sam and save your file.

When you’re done, take your modified library files and add them to your mod with the following path names:

- libraries\ai\_gondor\ai\_gondor.map
- libraries\lib\_object\_lists\lib\_object\_lists.map

Save your mod and start a skirmish game against Gondor. Elrond, Frodo, and Sam should all be automatically created by the game (temporarily reduce build costs if appropriate). They will actively seek out and engage their enemies. However, they will not use any special powers you have given them. To provide this capability can be complicated, so I’ve provided these directions so you can at least get your heroes into the game.

If you really want to enjoy the efforts you put into creating customized hero powers, then have the game throw them back at you. It can be quite rewarding (or unpleasant if you made them too powerful). Please refer to the next section for further details.

Folder naming convention: The bracketed letters are automatically generated and tell you whether the folder contains scripts that are subroutines or are active. Note that if a script is not active, it will have a red “X” in the blue icon.

Script naming convention: The first set of bracketed letters are automatically generated and tell you which script flags are applicable (Script is Subroutine, Script is Active, and Deactivate upon success). The second set of bracketed letters are also automatically created and indicated whether the script applies to Easy, Normal, or Hard game play mode.

## Adding Hero's Special Powers to the Game AI

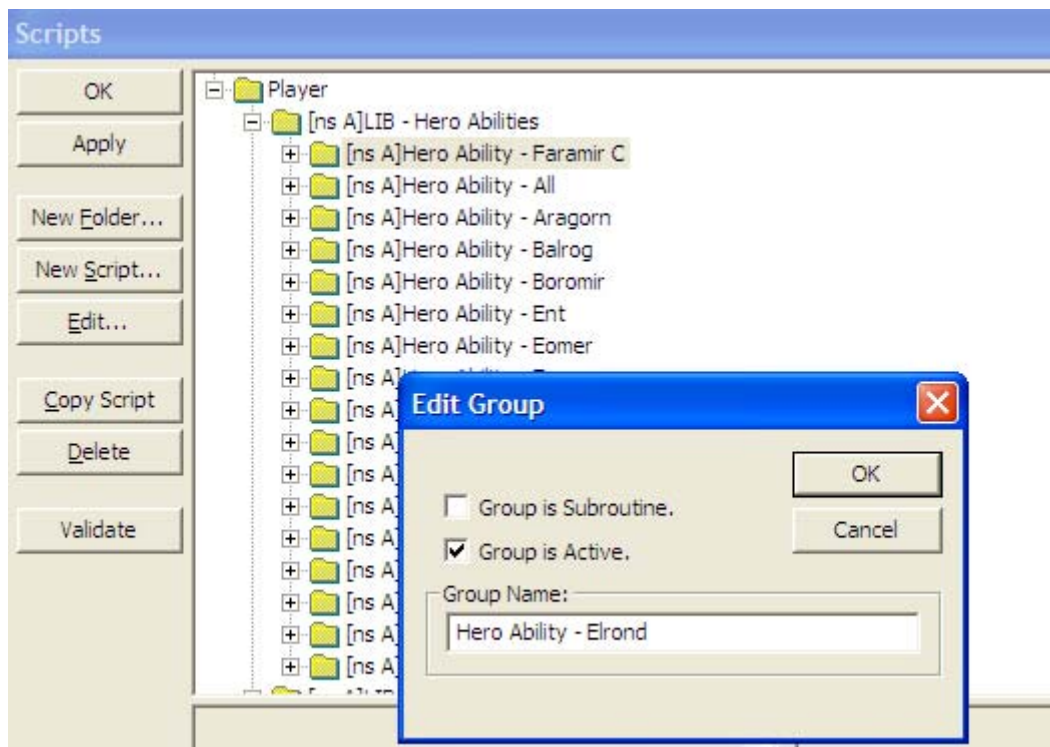
Objective: Add to the game's AI some of the special powers previously provided to the Gondor Heroes such that they are automatically used against you. We'll use FinalBIG and WorldBuilder to do this.

This is a bit complicated and time consuming. It could be argued that this doesn't belong in a basic modifications guide. Nonetheless, we're going to make the attempt. After all, if I can do it, so can you.

Open the original Libraries.big file in your "The Battle for Middle-earth (tm)" folder using the FinalBIG editor. Extract libraries\lib\_hero\_behaviors\lib\_hero\_behaviors.map and place it in your modified library folder. I usually append the word "Original" to the beginning of the file name so I can refer back to it. Be sure the "map" extension is present.

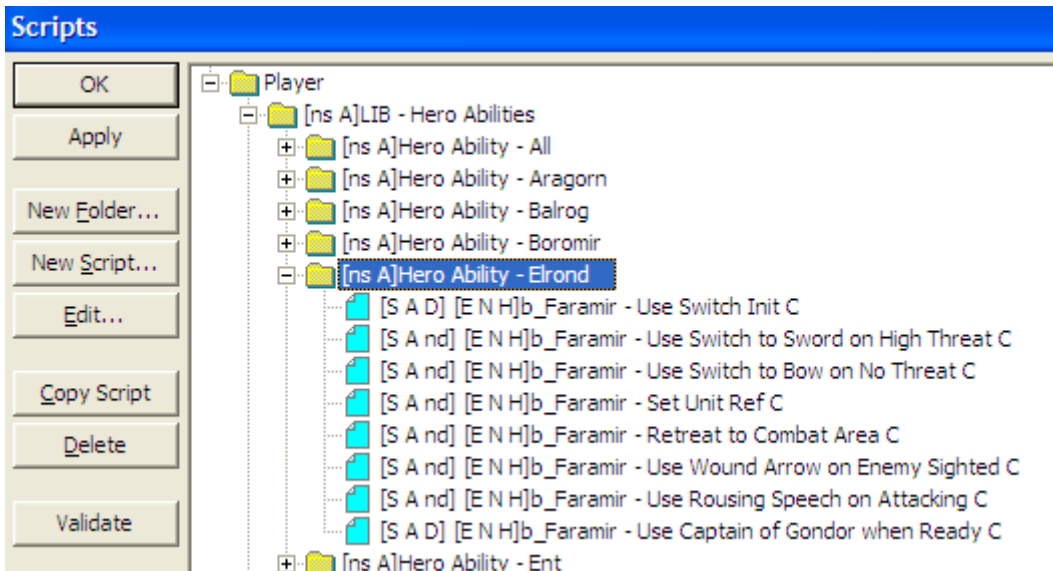
If you haven't already, place a copy of your current mod in your main program window. Place the letter "A" at the beginning of the file name so that WorldBuilder will read it before other key "big" files (the letter can be upper or lower case). If WorldBuilder is open when you do this, you must close it and then restart it. Otherwise, it will not read the appropriate data.

Now open the extracted "lib\_hero\_behaviors.map" file with WorldBuilder. From the menu, select Edit > Scripts. Expand the Player folder and then the [ns A]LIB - Hero Abilities folder. Select and copy the Faramir script folder, then rename it to Elrond after double-clicking it, as indicated in the next picture.



After you click OK, your screen should look similar to the next picture. Note that I dragged the Elrond folder below Boromir in order to keep things alphabetical.





Now we have to change the scripts so that they make sense for Elrond. Note that the letter “C” has been automatically added to designate that the scripts are copies.

First, let’s set the reference for Elrond. This is so the AI knows how to deal with him and so that other scripts reference him properly. Select “Set Unit Ref C” and drag it up to the first script position. It’s not really necessary to arrange the scripts in a particular order, but I think it’s good practice to set the reference first.

When you click on the script, the script code will appear in the lower right hand corner of the window. Here is what you should see for this first script:

```

*** IF ***
  Team '<This Team>' has one or more units.
*** THEN ***
  Find 'GondorFaramir' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef
  'AI_HERO_FARAMIR'

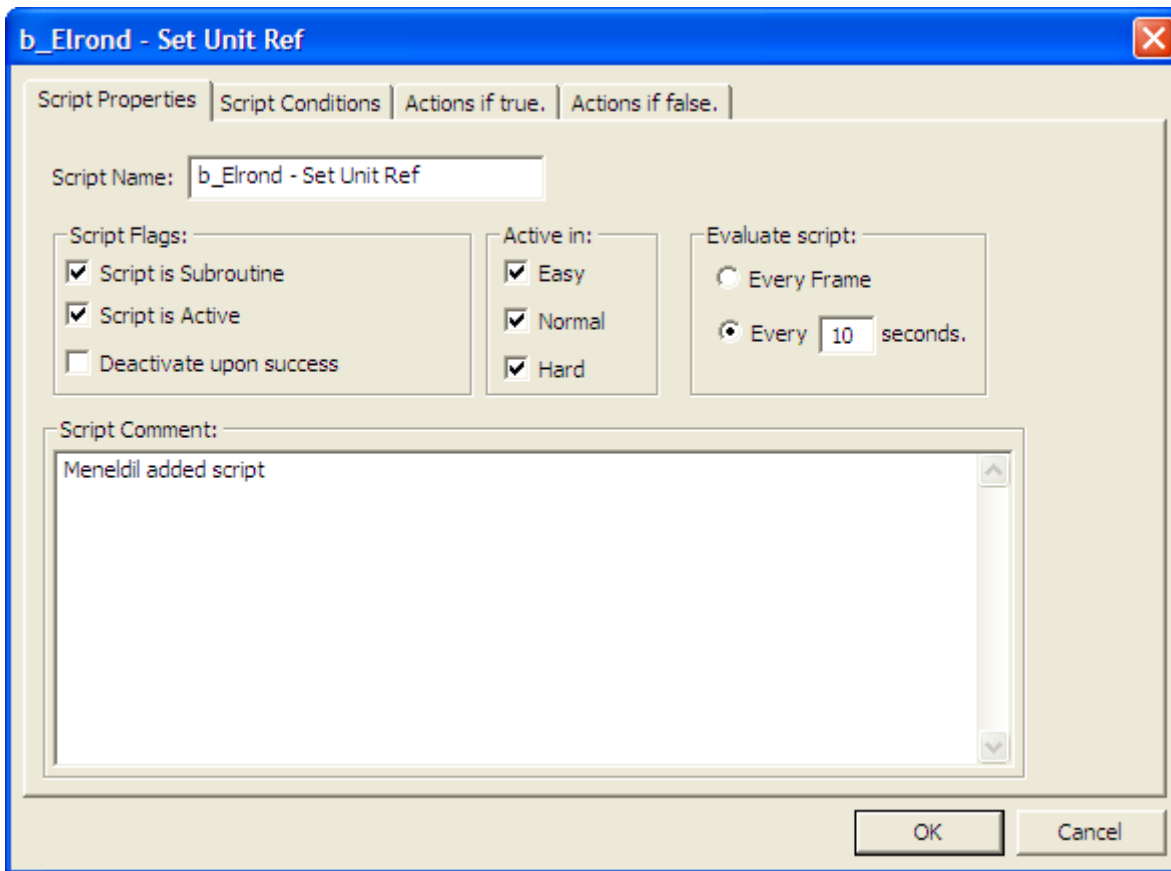
```

As you can see, scripts are basically just If/Then statements. That is, if one or more conditions are met, then certain actions will happen. In the above script, the game finds Faramir and references him as an AI hero. Don’t worry, you don’t have to manually enter all of this script code. Fortunately, most of it is automatically generated by selecting it from a list of options.

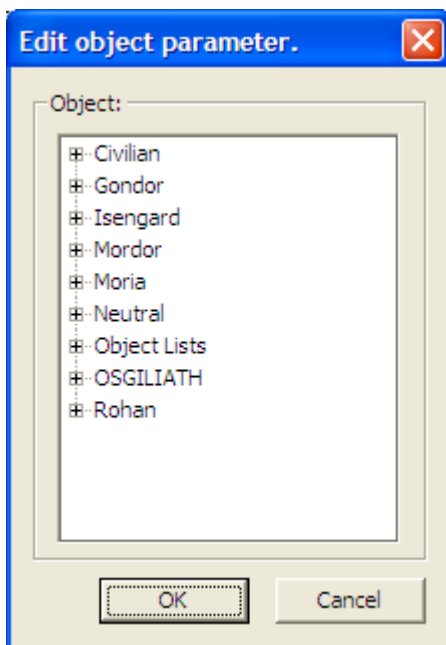
Double-click “Set Unit Ref C” and change the script name (in the Script Properties tab) from “b\_Faramir - Set Unit Ref C” to “b\_Elrond - Set Unit Ref” as shown in the next picture.

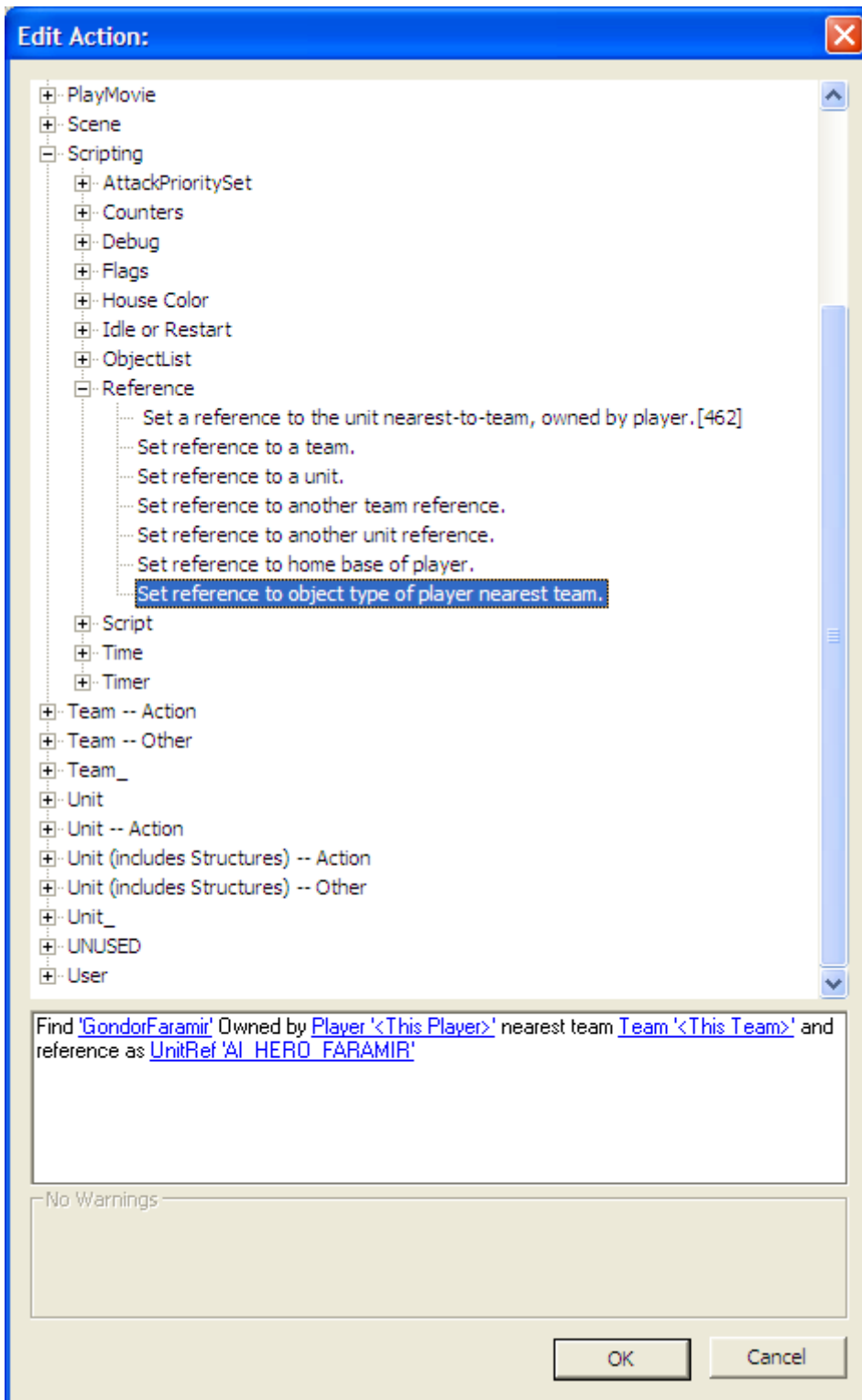
It’s also a good practice to add comments in the Script Properties tab. This allows you to come back later and remember what you did. In some cases, I’ve modified existing scripts while in other cases I’ve added all new scripts.





Now click on the “Actions if True” tab. We have to change the reference from Faramir to Elrond. Click on the Edit button or double-click the blue highlighted script. This will cause the Edit Action window to appear, as shown on the next page. The blue text near the bottom of the window is what you edit for a given script. That is, you pick the script you want from the Edit Action window and adjust the variables in blue text as needed. In this case, we need to change [GondorFaramir](#) to [ElvenElrond](#). Click on “[GondorFaramir](#).” This will open the Edit Object Parameter window, as shown immediately below on this page.





Now that you've clicked on "GondorFaramir" you need to replace him with Elrond. Since Elrond is associated with Gondor, expand the Gondor entry in the Edit Object Parameter window. Since Elrond is also a unit, expand the Unit entry. Scroll down and select "ElvenElrond." Click OK. You will see that "ElvenElrond" is now shown.

Now click on UnitRef 'AI HERO FARAMIR' and manually change "AI\_HERO\_FARAMIR" to "AI\_HERO\_ELROND." Click OK. A warning will appear at the bottom of the window indicating that this does not exist, as shown in the next picture (a snippet of the Edit Action window).

```
Find 'ElvenElrond' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef 'AI_HERO_ELROND'
```

Warnings:

Unit Reference 'AI\_HERO\_ELROND' does not exist.

Don't worry. Click OK until only the Scripts window is showing. Click the Apply button and then the OK button. Save the file with a new name (e.g., Meneldil lib\_hero\_behaviors) and close WorldBuilder. You will notice that a TGA version of your file is also created everytime you save. You can delete it. Restart WB and open your hero behaviors file. The warning will now be gone. Your script should now look like this:

```
*** IF ***
```

```
Team '<This Team>' has one or more units.
```

```
*** THEN ***
```

```
Find 'ElvenElrond' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef 'AI_HERO_ELROND'
```

Note that you didn't really have to save the file as I showed above just to clear the error. You can wait until you've completed your other changes for the file.

If you want to make things a bit more interesting, have Elrond gain some experience points everytime the script is evaluated (10 seconds in this case). This will allow him to level up faster, thereby making it more challenging to play against Gondor. To do this, select "Unit (includes Structures) -- Action" from within the Edit Action window and then select "Gives the unit experience points." Pick a relatively small number (e.g., 4).

Your script would then look like this.

```
*** IF ***
```

```
Team '<This Team>' has one or more units.
```

```
*** THEN ***
```

```
Find 'ElvenElrond' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef 'AI_HERO_ELROND'
```

```
Gives Unit 'AI_HERO_ELROND' experience points 4.
```

Next, we'll update the "Switch Init" script to allow Elrond to switch between his bow and sword.

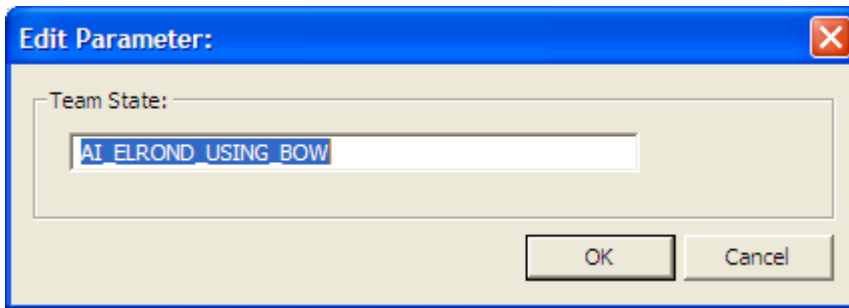
Unit (includes Structures) -- Action

- Attack or Hunt
- CommandButton
- Experience
  - Gives a unit an experience level.
  - Gives the unit experience points.
  - Sets the unit's experience points.
  - Unit levels up with FX settings
- Garrison
- Guard
- Idle
- Move
- Siege
- Siege deploy
- Special Power
- Status
- Stop
- Transport
- Upgrades
- Weapon Upgrade
- Unit (includes Structures) -- Other
- Unit\_
- UNUSED
- User

Gives Unit 'AI\_HERO\_ELROND' experience points 4.

Select the “Use Switch Init C” script and in the Script Properties tab change the script name from “b\_Faramir - Use Switch Init C” to “b\_Elrond - Use Switch Init” by manually typing over the original text.

Now go to the Actions if true tab and click on the “Edit...” button. Click on the “AI\_FARAMIR\_USING\_BOW” (in blue text) and manually change it to read “AI\_ELROND\_USING\_BOW” as indicated below.



Click OK twice to get back to the main Scripts screen. Your script should now look like this:

```
*** IF ***
  True.
*** THEN ***
  Team '<This Team>' set custom state 'AI_ELROND_USING_BOW' to TRUE
```

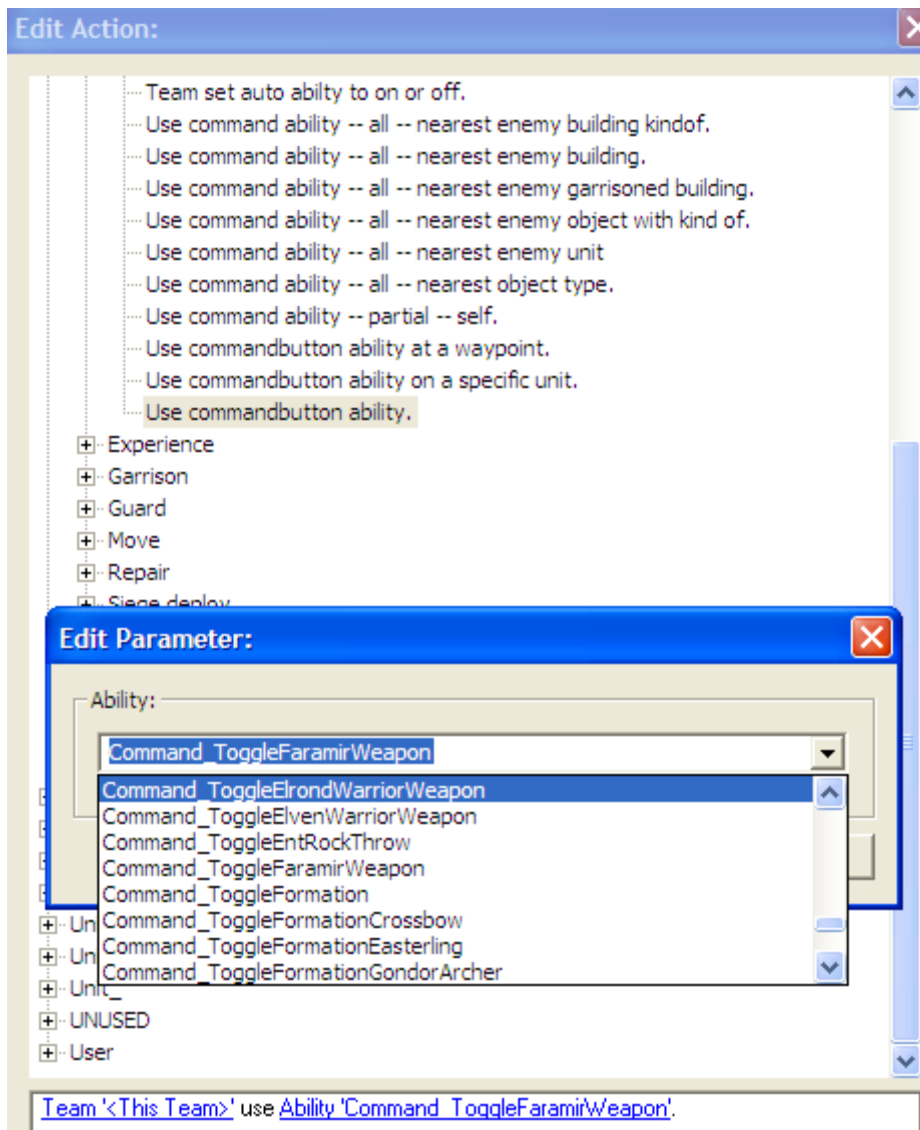
To make things more interesting, you can override the command points so that more Gondor troops can be created. This is a good script to do this with because it is only run once (the “Deactivate upon success” box should be checked in the Script Properties window). In the “Edit Action” window, select “Player” > “CommandPoints” > “Override player command points.” You would select “<This Player>” and then choose a new command point limit. Recall from earlier, we set the maximum good command points to 400. So if you select a higher number, then Gondor becomes a mightier force to reckon with. Since Elrond has a high recruitment cost, he is more likely to come into play later in the game. Therefore, things could become more difficult later in the game, assuming Elrond is even recruited. The script would then look something like this.

```
*** IF ***
  True.
*** THEN ***
  Team '<This Team>' set custom state 'AI_ELROND_USING_BOW' to TRUE
  Override command points for Player '<This Player>' to 460
```

Keep in mid that Elrond and Gandalf each use 10 command points. Also, if you use a really large command point number, be aware that your game map may become too crowded or that your computer’s CPU may not be able to keep up. Of course, you can omit this and leave the maximum command points at 400 (or whatever value you have selected).

Select the next script and change “b\_Faramir - Use Switch to Sword on High Threat C” to “b\_Elrond - Use Switch to Sword on High Threat” in the Script Properties tab. In the Script Conditions tab, change “AI\_FARAMIR\_USING\_BOW” to “AI\_ELROND\_USING\_BOW.” In the Actions if true tab, change “AI\_FARAMIR\_USING\_BOW” to “AI\_ELROND\_USING\_BOW” and “AI\_FARAMIR\_USING\_SWORD” to “AI\_ELROND\_USING\_SWORD.”

We also have to tell the AI which command to use. Change “Command\_ToggleFaramirWeapon” to “Command\_ToggleElrondWarriorWeapon” from the drop down menu as indicated in the next picture. Don’t forget that for this to work, a copy of your mod containing the desired commands has to be in the game’s program folder and that its file name has to be altered such that the letter “A” is at the beginning so that it is read first.



Click OK until you are back at the main scripts window. Your script should look like this:

```

*** IF ***
  Team '<This Team>' has Greater Than threat level 5.00 within radius 50.00
  *AND* Team '<This Team>' has the custom state 'AI_ELROND_USING_BOW'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleElrondWarriorWeapon'.
  Team '<This Team>' set custom state 'AI_ELROND_USING_BOW' to FALSE
  Team '<This Team>' set custom state 'AI_ELROND_USING_SWORD' to TRUE

```

Now go to the next script. Change the script name from “b\_Faramir - Use Switch to Bow on No Threat C” to “b\_Elrond - Use Switch to Bow on No Threat .” On the Script Conditions tab, change “AI\_FARAMIR\_USING\_SWORD” to “AI\_ELROND\_USING\_SWORD.” On the Actions if true tab, change “Command\_ToggleFaramirWeapon” to “Command\_ToggleElrondWarriorWeapon” like before. Also, change “AI\_FARAMIR\_USING\_BOW” to “AI\_ELROND\_USING\_BOW” and “AI\_FARAMIR\_USING\_SWORD” to “AI\_ELROND\_USING\_SWORD.” That is, replace Faramir’s name with Elrond’s name.

Click OK until you are back at the main scripts window. Your script should look like this:

```
*** IF ***
  Team '<This Team>' has Less Than or Equal threat level 5.00 within radius 50.00
  *AND* Team '<This Team>' has the custom state 'AI_ELROND_USING_SWORD'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleElrondWarriorWeapon'.
  Team '<This Team>' set custom state 'AI_ELROND_USING_BOW' to TRUE
  Team '<This Team>' set custom state 'AI_ELROND_USING_SWORD' to FALSE
```

On to the next script. Change the name from “b\_Faramir - Retreat to Combat Area C” to “b\_Elrond - Retreat to Combat Area.” In the Script Conditions tab, change “AI\_HERO\_FARAMIR” to “AI\_HERO\_ELROND.” Note that you can select Elrond from the drop down menu. You can also change the health level if you like. Your script should now look something like this:

```
*** IF ***
  Unit 'AI_HERO_ELROND' Health IS Less Than 30 percent.
*** THEN ***
  Team '<This Team>' executes Script 'be_Hero - Retreat to Combat Area' sequentially.
```

Now it’s time to create some unique scripts for Elrond. First, delete the three remaining Faramir script copies.

We’re going to have the AI use Elrond’s Light Beam weapon under the following scenarios.

- If the Witch King (on Fellbeast) is nearby
- If a Fellbeast is nearby
- If Saruman is nearby
- If Lurtz is nearby
- If another enemy hero is nearby
- If an enemy structure is nearby

Since this is based on Gandalf’s Istari light, let’s reapply the script that calls for it. Under Gandalf’s scripts, click on “b\_Gandalf - Use Istari Light on Sighted Enemy.” You will see the following script code.

```
*** IF ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'MordorFellBeast' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight'
(at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_GondorGandalfIstariLight' on nearest object of type 'MordorFellBeast'.
```

This script will cause Gandalf to shoot a nearby Fellbeast with Istari Light if the command is ready. We will copy this to Elrond and modify it to suit our needs.

There’s a lot of steps here, so I’m going to number them.

1. Select “b\_Gandalf - Use Istari Light on Sighted Enemy” and click on the “Copy Script” button.
2. Drag the copied script to just after the “b\_Elrond - Retreat to Combat Area” script.
3. Change the script name to “b\_Elrond - Use Light Beam on Mordor Heroes” or something similar. I also unchecked “Easy” under the “Active in:” frame, but that’s optional.
4. Click on the Script Conditions tab and change “AI\_HERO\_GANDALF” to “AI\_HERO\_ELROND” and “Command\_GondorGandalfIstariLight” to “Command\_SpecialAbilityElrondLightBeam.”
5. With the last line of script selected, click on the “Or” button.
6. Copy the first line of script (the one right after “\*\*\* IF \*\*\*”) and move it down to just after \*\*\* OR \*\*\*.
7. Open the script and change “MordorFellBeast” to “MordorWitchKingOnFellBeast” via the Edit Object Parameter window. It’s easy to find them if you remember that they are both Mordor units.
8. Go to the Actions if True tab and change “Command\_GondorGandalfIstariLight” to “Command\_SpecialAbilityElrondLightBeam.”

9. While still in the Actions if True tab, copy the script and in one of them, change “MordorFellBeast” to “MordorWitchKingOnFellBeast.”

When you’re done, your script should look like this:

```
*** IF ***
  Unit 'AI_HERO_ELROND' sees a(n) 'MordorFellBeast' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
  'Command_SpecialAbilityElrondLightBeam' (at least one member).
  *** OR ***
  Unit 'AI_HERO_ELROND' sees a(n) 'MordorWitchKingOnFellBeast' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
  'Command_SpecialAbilityElrondLightBeam' (at least one member).
  *** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondLightBeam' on nearest object of type
  'MordorFellBeast'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondLightBeam' on nearest object of type
  'MordorWitchKingOnFellBeast'.
```

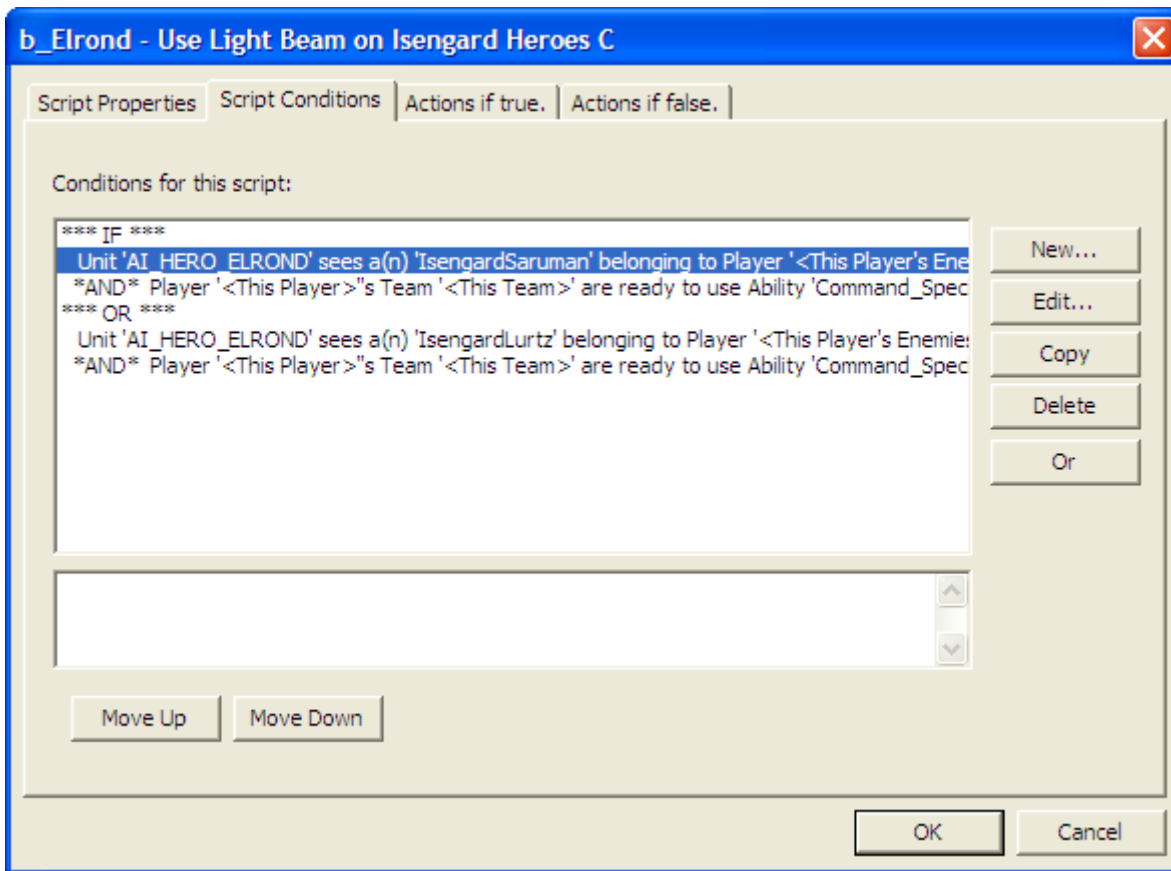
We’ve now added an “Or” command to the mix. This gives us even greater flexibility with our scripting. Now, if either a Fellbeast or the WitchKing on Fellbeast is nearby and the ability is ready, Elrond will blow it from the sky. Feel free to reapply this logic to Gandalf if you like.

Now copy this script and change the duplicate’s name to “b\_Elrond - Use Light Beam on Isengard Heroes” or something similar. Reapply the above steps so that your code looks like this:

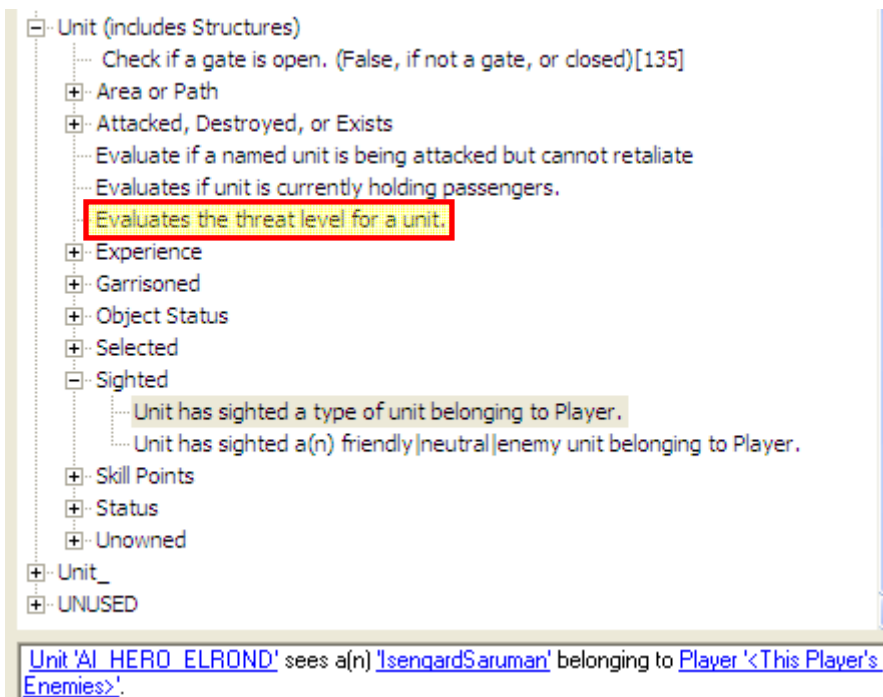
```
*** IF ***
  Unit 'AI_HERO_ELROND' sees a(n) 'IsengardSaruman' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
  'Command_SpecialAbilityElrondLightBeam' (at least one member).
  *** OR ***
  Unit 'AI_HERO_ELROND' sees a(n) 'IsengardLurtz' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
  'Command_SpecialAbilityElrondLightBeam' (all applicable members).
  *** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondLightBeam' on nearest object of type
  'IsengardSaruman'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondLightBeam' on nearest object of type
  'IsengardLurtz'.
```

If you’re wondering why I just didn’t combine all of this into one script, the answer is that I prefer to keep my Mordor and Isengard hero scripts separate. Although I haven’t tried it, I don’t see why it wouldn’t work.

Now let’s create a script for any enemy hero that Elrond may come across. Copy the above script and name it “b\_Elrond - Use Light Beam on Any Hero” or something similar. Go the Script Conditions tab and select the first line of script, as indicated in the next picture. Click on the Edit button.



Select “Evaluates the threat level for a unit” as indicated below.



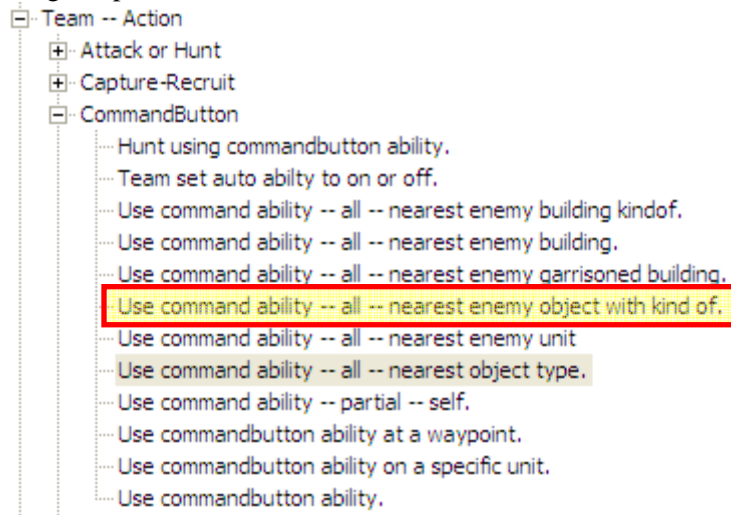
Change Unit??? to “AI\_HERO\_ELROND,” “LT Less Than” to “GE Greater Than or Equal,” threat level “0.00” to “30,” and radius “0.00” to “240.” Click the OK button. Now select the \*\*\* OR \*\*\* line and click Delete. Note that all of the following script lines were deleted.

In the Actions if True tab, delete one of the lines of script. Select the remaining line and click the Edit button.

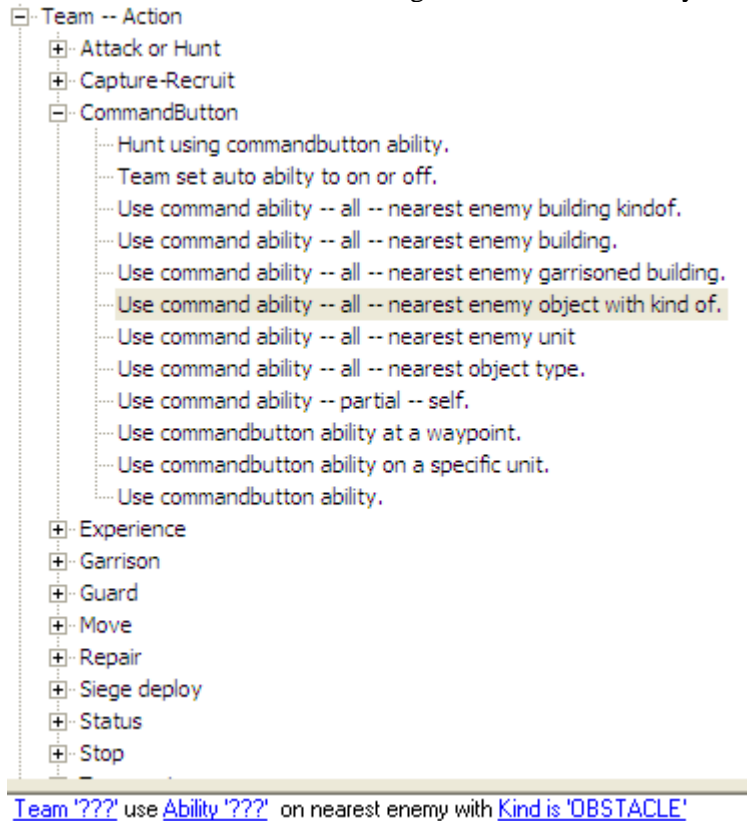


Instead of the existing “Use command ability -- all -- nearest object type” select “Use command ability -- all -- nearest enemy object with kind of” as indicated below.

### Original part of Edit Action Window



### Edit Action Window after selecting “Use command ability -- all -- nearest enemy object with kind of.”



Change Team ??? to <This Team>, Ability ??? to Command\_SpecialAbilityElrondLightBeam, and OBSTACLE to HERO. Your script should now look like this:

```

*** IF ***
  Unit 'AI_HERO_ELROND' has Greater Than or Equal To threat level 30.00 within radius 240.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityElrondLightBeam' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondLightBeam' on nearest enemy with Kind is 'HERO'

```

This will allow Elrond to zap any enemy hero if the criteria are met. Note that the first line of script that specifies a threat level is optional. I added it because I wanted Elrond to have first crack at a Mordor or Isengard hero; adding the threat level makes it a bit less likely. Also, this power recharges quickly and kills with a single shot. I really don't want Elrond killing off my heroes that easily. In case you're wondering where the threat level comes from, recall that every unit and building has a "threatlevel" line of code. Feel free to adjust the threat concentration trigger as you wish. Just remember that as the threat level to radius ratio increases, the more enemies will need to be nearby to activate the command.

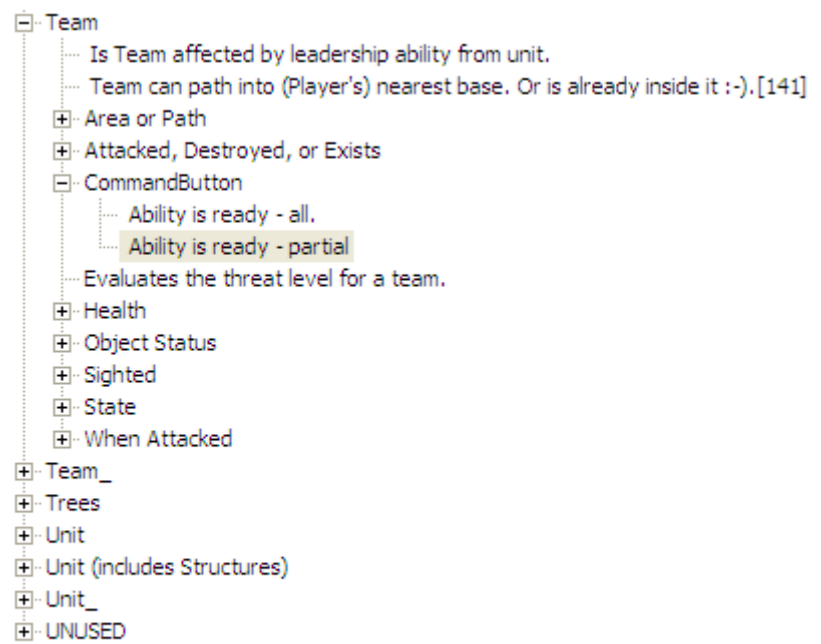
Finally, we'll create a Light Beam script for enemy buildings. Click on the last script (b\_Elrond - Use Light Beam on Any Hero) and click the New Script... button. Change the script name from "Script 1" to "b\_Elrond - Use Light Beam on Structure" or something similar. Also decide if you want this for Easy, Normal, or Hard game play. The default script code looks like this:

```

*** IF ***
  True.
*** THEN ***
  Null operation. (Does nothing.)

```

In the Script Conditions tab, select "True" and click the Edit button. Go to Team > CommandButton > Ability is ready - partial as indicated below.



Player '???'s Team '???' are ready to use Ability '???' (at least one member).

Change it so that the text at the bottom of the Edit Condition window looks like this:

Player '<This Player>'s Team '<This Team>' are ready to use Ability '<Command\_SpecialAbilityElrondLightBeam>' (at least one member).

In the Actions if True tab, Edit the Null Operation script by selecting Team – Action > CommandButton > Use command ability -- all -- nearest enemy building kindof.

Change

Team '???' use Ability '???' on nearest enemy building with Kind is 'OBSTACLE'

To

Team '<This Team>' use Ability '<Command\_SpecialAbilityElrondLightBeam>' on nearest enemy building with Kind is 'VITAL FOR BASE SURVIVAL'

Repeat this for “MP\_COUNT\_FOR\_VICTORY” AND “FS\_FACTORY.”

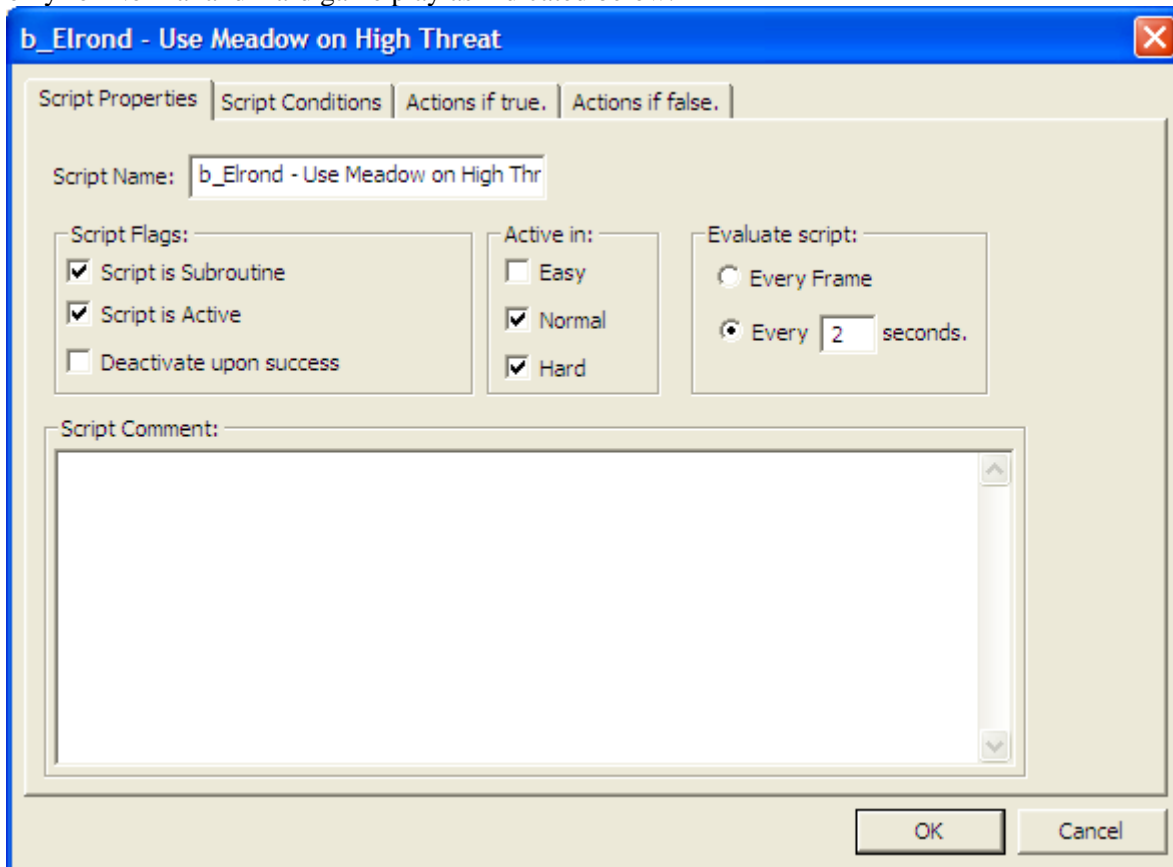
Your script should now look like this:

```
*** IF ***
  Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpecialAbilityElrondLightBeam' (at
  least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondLightBeam' on nearest enemy building with Kind is
  'VITAL_FOR_BASE_SURVIVAL'
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondLightBeam' on nearest enemy building with Kind is
  'MP_COUNT_FOR_VICTORY'
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondLightBeam' on nearest enemy building with Kind is
  'FS_FACTORY'
```

This will allow Elrond to use his light beam on the more valuable buildings (depending on which one he sees first). However, there’s not a good way to prioritize or weight the Light Beam scripts we created. Adding conditions such as the threat level concentration can help. You may wish to adjust the values I used to better suit your preferences. The game will follow the scripts as best it can, but there will still be a degree of variation in executing the scripts (this is a good thing). However, I have verified that they all work.

Now let’s make scripts for the “Elrond Meadow” command we created. We’ll execute the command when there is a high threat level, including if Elrond is inside an enemy castle, or if Elrond sees enemy castle gates.

1. Create a new script and call it “b\_Elrond - Use Meadow on High Threat” or something similar. I made this only for Normal and Hard game play as indicated below.



2. In the Script Conditions tab, select the default script and go to Unit (includes Structures) > Evaluates the threat level for a unit. Change the default entries to “AI\_HERO\_ELROND,” “GE Greater Than or Equal,” “40,” and “400.”

3. Create a new script and go to Team > CommandButton > Ability is ready - partial. Change the defaults to <This Player>, <This Team>, and “Command\_SpecialAbilityElrondMeadow.”

The code so far should look like this:

```
*** IF ***
  Unit 'AI_HERO_ELROND' has Greater Than or Equal To threat level 40.00 within radius 400.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityElrondMeadow' (at least one member).
```

4. Click the last line of script in the Script Conditions tab and click the “Or” button.
5. Create a new script and go to Unit (includes Structures) > Object Status > Unit has object status. Change the default entries to “AI\_HERO\_ELROND” and “IS\_ATTACKING.”
6. Copy the above script and change the object status from “IS\_ATTACKING” to “INSIDE\_CASTLE.”
7. Copy the previous “ready to use” script and move it so that it appears below the above “object status” line of script.

The code so far should look like this:

```
*** IF ***
  Unit 'AI_HERO_ELROND' has Greater Than or Equal To threat level 40.00 within radius 400.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityElrondMeadow' (at least one member).
*** OR ***
  Unit 'AI_HERO_ELROND' has Object Status is 'IS_ATTACKING'
  *AND* Unit 'AI_HERO_ELROND' has Object Status is 'INSIDE_CASTLE'
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityElrondMeadow' (at least one member).
```

8. In the Actions if True tab, click on the Edit button and go to Team -- Action > CommandButton > Use commandbutton ability. Change the default entries to <This Team> and “Command\_SpecialAbilityElrondMeadow.”

Your final script should look like this:

```
*** IF ***
  Unit 'AI_HERO_ELROND' has Greater Than or Equal To threat level 40.00 within radius 400.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityElrondMeadow' (at least one member).
*** OR ***
  Unit 'AI_HERO_ELROND' has Object Status is 'IS_ATTACKING'
  *AND* Unit 'AI_HERO_ELROND' has Object Status is 'INSIDE_CASTLE'
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityElrondMeadow' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondMeadow'.
```

As you can see, if the threat level concentration meets the above criteria of 40/400, the command will execute if it’s ready; or if Elrond is attacking inside a castle and the command is ready, it will execute.

Now let’s create a script that will fire the “Elrond Meadow” command when Elrond is near closed castle gates. This is desirable because Elrond’s Meadow spell will destroy castle gates if he is close enough. We’ve shown examples where we modified copied scripts or where we started with a new script. In general, I copy and modify scripts versus starting from scratch because I generally can find something I can reapply.

Copy an existing script or create a new one, but name it “b\_Elrond - Use Meadow on Castle Gate” or something similar. Again, I only made this for Normal and Hard game play.

In the Script Conditions tab, we're going to create the following script code:

```
*** IF ***
  Unit 'AI_HERO_ELROND' sees a(n) 'Castle_Gates' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityElrondMeadow' (at least one member).
```

You can find these scripts in the following Edit Conditions:

- Unit (includes Structures) > Sighted > Unit has sighted a type of unit belonging to Player.
- Team > CommandButton > Ability is ready - partial

In the Actions if True tab, we're going to create the following script code:

```
Team '<This Team>' use Ability 'Command_SpecialAbilityElrondMeadow' on nearest enemy building with Kind is
'BLOCKING_GATE'
```

You can find this in the following Edit Condition: Team -- Action > CommandButton > Use command ability -- all -- nearest enemy building kindof.

The final script code will look like this:

```
*** IF ***
  Unit 'AI_HERO_ELROND' sees a(n) 'Castle_Gates' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityElrondMeadow' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityElrondMeadow' on nearest enemy building with Kind is
'BLOCKING_GATE'
```

So if Elrond sees a castle gate, he'll destroy it if he can.

What if you want to add a capability that you don't have access to when you are playing the faction? For example, let's say we want Elrond to summon a tower and some elves only when playing against him. That is, we can't use this same command when playing as Gondor.

To do this, create a command ability that appears after #6 in the command set. Further, do not give it a hotkey letter. The net result is that when you are in control, you can't see the ability in your Palantir or trigger it with a hotkey. However, the game's AI can access it when the game is in control of the hero.

First, we need to create the code.

### **Elrond Summon Death Tower & Elven Warriors**

Objective is to provide Elrond to the ability to summon a tower as well as some elves. This will only be implemented by the AI when playing against Gondor. Elrond has to be at level 5 to use this.

#### **data\ini\commandbutton.ini**

CommandButton Command\_SpecialAbilityDeathTower; added by Meneldil for playing against Elrond

```
Command          = SPECIAL_POWER
SpecialPower     = SuperweaponSpawnDeathTower
TextLabel        = CONTROLBAR:SpawnDeathTower
DescriptLabel    = CONTROLBAR:ToolTipSpawnDeathTower
Options          = NEED_TARGET_POS CONTEXTMODE_COMMAND
ButtonImage      = BGKeep
ButtonBorderStyle = BUILD
RadiusCursorType = INDUSTRY
InvalidCursorName = GenericInvalid
InPalantir       = Yes
```

End

### data\ini\commandset.ini

```
CommandSet ElrondCommandSet; Meneldil modified
  1 = Command_ToggleElrondWarriorWeapon
  2 = Command_InvisibilityCloak ; added by Meneldil
  3 = Command_CreateElvenFoundation ; added by Meneldil
  4 = Command_SpecialAbilityElrondLeadership; added by Meneldil
  5 = Command_SpecialAbilityElrondLightBeam ; added by Meneldil
  6 = Command_SpecialAbilityElrondMeadow ; added by Meneldil
  7 = Command_SpecialAbilityDeathTower ; added by Meneldil
 13 = Command_AttackMove
 14 = Command_Stop
 15 = Command_Guard
End
```

### data\ini\experiencelevels.ini

```
ExperienceLevel ElrondLevel5
  TargetNames = ElvenElrond
  RequiredExperience = ELROND_LVL5_EXP_NEEDED
  ExperienceAward = ELROND_LVL5_EXP_AWARD
  AttributeModifiers = HeroLevelUpDamage4
  Rank = 5
  Upgrades = Upgrade_SpecialAI; added by
Meneldil for use in game AI
  LevelUpFx = FX:GandalfLevelUp1FX
  ;LevelUpOCL = OCL_GandalfLevelUp1OCL
  SelectionDecal
    Texture = decal_hero_good
    Style = SHADOW_ALPHA_DECAL
    OpacityMin = 50%
    OpacityMax = 100%
    MinRadius = 40
    MaxRadius = 200
    MaxSelectedUnits = 40
  End
END
```

### data\ini\object\goodfaction\units\elven\elrond.ini

```
;-----Start of Meneldil added Death Tower Summon code-----
;Create Death Tower and Elves when playing against Gondor
  Behavior = UnpauseSpecialPowerUpgrade ModuleTag_DeathTower
    SpecialPowerTemplate = SuperweaponSpawnDeathTower
    TriggeredBy = Upgrade_SpecialAI
  End

  Behavior = OCLSpecialPower SummonDeathTower
    SpecialPowerTemplate = SuperweaponSpawnDeathTower
    OCL = OCL_SpawnDeathTowerEgg
    TriggerFX = FX_SplatDust; copied from FXList.ini file
    CreateLocation = USE_OWNER_OBJECT
    StartsPaused = Yes
    SetModelCondition = ModelConditionState:LEVELED
    SetModelConditionTime = 8.1
  End
;-----End of Meneldil added Death Tower Summon code-----
```

### data\ini\objectcreationlist.ini

```
;-----
; Create a Gondor Death Tower; added by Meneldil for when playing against Elrond
ObjectCreationList OCL_SpawnDeathTowerEgg
  CreateObject
```

```

    ObjectNames = DeathTower
    Disposition = ON_GROUND_ALIGNED
    Count = 1
    FadeIn = Yes
    FadeTime = 2000
End
CreateObject
    ObjectNames = BuildingDamageBits01; these are the small debris chunks
    Count = 20
    Disposition = SEND_IT_UP
    DispositionIntensity = 10
    SpreadFormation = Yes
    MinDistanceAFormation = 10
    MinDistanceBFormation = 10
    MaxDistanceFormation = 20
End
CreateObject
    ObjectNames = BuildingDamageBits02; these are the larger debris chunks
    Count = 10
    Disposition = SEND_IT_UP
    DispositionIntensity = 20
    SpreadFormation = Yes
    MinDistanceAFormation = 20
    MinDistanceBFormation = 20
    MaxDistanceFormation = 40
End
CreateObject
    ObjectNames = BuildingDamageBits03; these are even larger debris chunks
    Count = 20
    Disposition = SEND_IT_UP
    DispositionIntensity = 20
    SpreadFormation = Yes
    MinDistanceAFormation = 15.0
    MinDistanceBFormation = 25.0
    MaxDistanceFormation = 50.0
End
CreateObject
    ObjectNames = GondorElvenWarriorHorde
    Count = 1
    IgnoreCommandPointLimit = Yes
    FadeIn = Yes
    FadeTime = 4000
    Offset = X:-50 Y:50 Z:0
End
CreateObject
    ObjectNames = ElvenScout
    Count = 2
    IgnoreCommandPointLimit = Yes
    FadeIn = Yes
    FadeTime = 2000
    Offset = X:50 Y:-50 Z:0
End
End

```

### data\ini\specialpower.ini

```

; -----
SpecialPower SuperweaponSpawnDeathTower; added by Meneldil for Elrond
Enum          = SPECIAL_SPAWN_OATHBREAKERS
ReloadTime    = 360000; 6 minutes
PublicTimer   = No
RadiusCursorRadius = 80

```

End

### data\ini\upgrade.ini

Upgrade Upgrade\_SpecialAI; added by Meneldil for lib\_hero\_behaviors.map

Type = OBJECT

End

### data\lotr.str

CONTROLBAR:SpawnDeathTower

"Death Tower"

END

CONTROLBAR:ToolTipSpawnDeathTower

"Required: Rank 5 \n Create an armed defensive tower along with Elven warriors"

END

Note: This assumes you have already implemented the Death Tower and Gonder Elven Warrior codes previously presented in this document. If you haven't, then this won't work!

Note: It's not necessary to include the lotr.str code if this command can only be accessed by the AI. If you do elect to update the lotr.str file, do not provide a letter hotkey. This is to prevent you from accessing this capability while playing as Gondor. If on the other hand, you really do want this capability while playing as Gondor, then give it a hotkey. It won't show up in your Palantir, but you can still use it.

To verify that this works, temporarily change the command set so that this command is #6. Play as Gondor with Elrond starting at level 5 or higher. The ability should work. Put things back when you're done.

Now we have to create a script so that the AI can use it. Here is the script that I created (lib\_hero\_behaviors.map):

```
*** IF ***
  Team '<This Team>' is completely outside area '[Skirmish]MyOuterPerimeter' (Surfaces Allowed: Ground).
  *AND* Unit 'AI_HERO_ELROUND' sees a(n) 'Offensive_Units' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpecialAbilityDeathTower'
(at least one member).
  *** OR ***
  Unit 'AI_HERO_ELROUND' sees a(n) 'Castle_Gates' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpecialAbilityDeathTower'
(at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityDeathTower'.
```

Here are the Edit Conditions that I used:

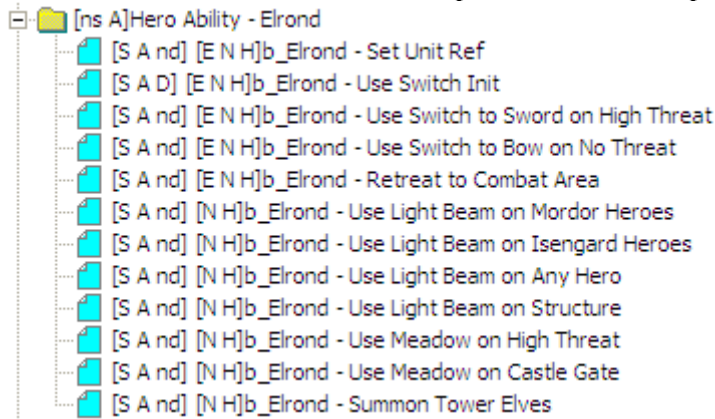
- Team > Area or Path > Team is completely outside an area.
- Unit (includes Structures) > Sighted > Unit has sighted a type of unit belong to Player.
- Team > CommandButton > Ability is ready – partial
- Team -- Action > CommandButton > Use commandbutton ability.

We now have a very strong character with Elrond, whether playing with or against him. When playing against Gondor, I've had a level 8 Elrond inflict a tremendous amount of damage on me. I have verified that all of these scripts work.

Please note that there are lots of script commands. Some of them are not always consistent and some will simply crash your game. You may have to go through some trial and error to find something you are satisfied with. Look at existing scripts for guidance. In general, keep your scripts as simple as possible. The more complicated they are, the more likely something will fail to work. With that in mind, it's a good idea to save and test your scripts as you complete them. However, we haven't gotten to how to get your scripts to work yet – that is yet to come.



Here are the various hero behavior scripts we now have in place for Elrond.



Now that we've created these scripts, we need to get them into Elrond's Generic Tab (Edit Team Template window) in the ai\_gondor.map file. Here's the critical next step (I missed this initially and had to seek help on the forums). In order for this to work, WorldBuilder has to be able to read your new scripts.

Open your modified INI file with FinalBIG and add your modified hero behaviors file as "libraries\lib\_hero\_behaviors\lib\_hero\_behaviors.map."

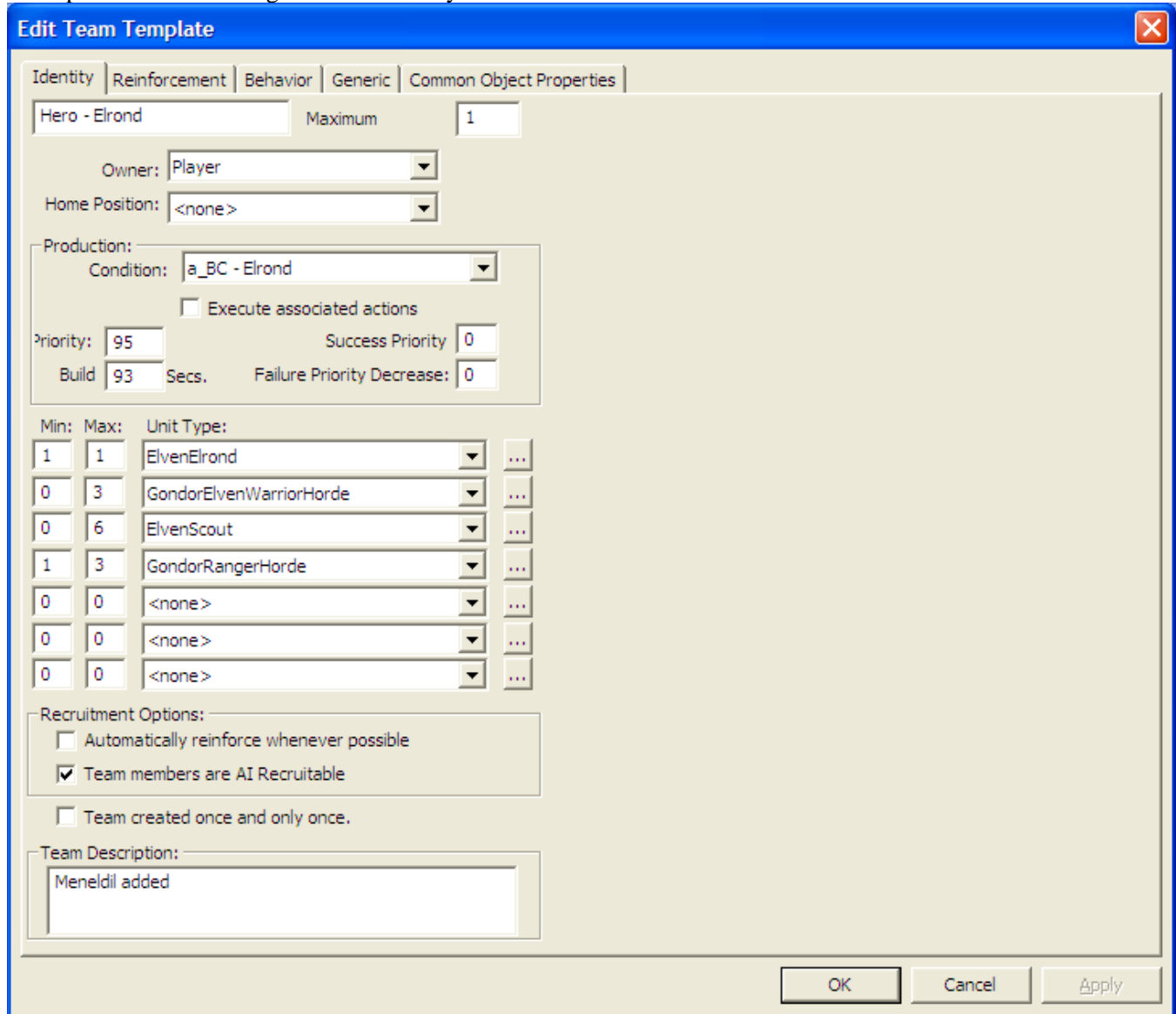
Next, place a copy of your current mod in your main program window. Place the letter "A" (upper or lower case) at the beginning of the file name so that WorldBuilder will read your new scripts before the original library files. If you've done this previously, delete the older copy and replace it with the latest one. However, you should keep a backup copy of your mod in case a problem occurs that you cannot fix. If WorldBuilder is open when you do this, you must close it and then restart it. Otherwise, it will not read your modified files.

Next, open your modified ai\_gondor.map file and from the menu, select Edit > Edit Teams... so that the Team Builder window is showing. Click on "Player" to show all of the team names. Open up "Hero - Elrond" and make any further changes you'd like to the Identity tab. An example is shown below.

If you want Elrond to have other team members with him whenever they are available, check the "Automatically reinforce whenever possible" box. If you leave it unchecked, other team members will join if they are nearby and aren't being distracted by something else. If you do plan to automatically reinforce, be sure you only use existing units or battalions for now.

I almost always leave the "Automatically reinforce whenever possible" box unselected and the "Team members are AI Recruitable" selected.

## Example window showing Elrond's Identity Tab

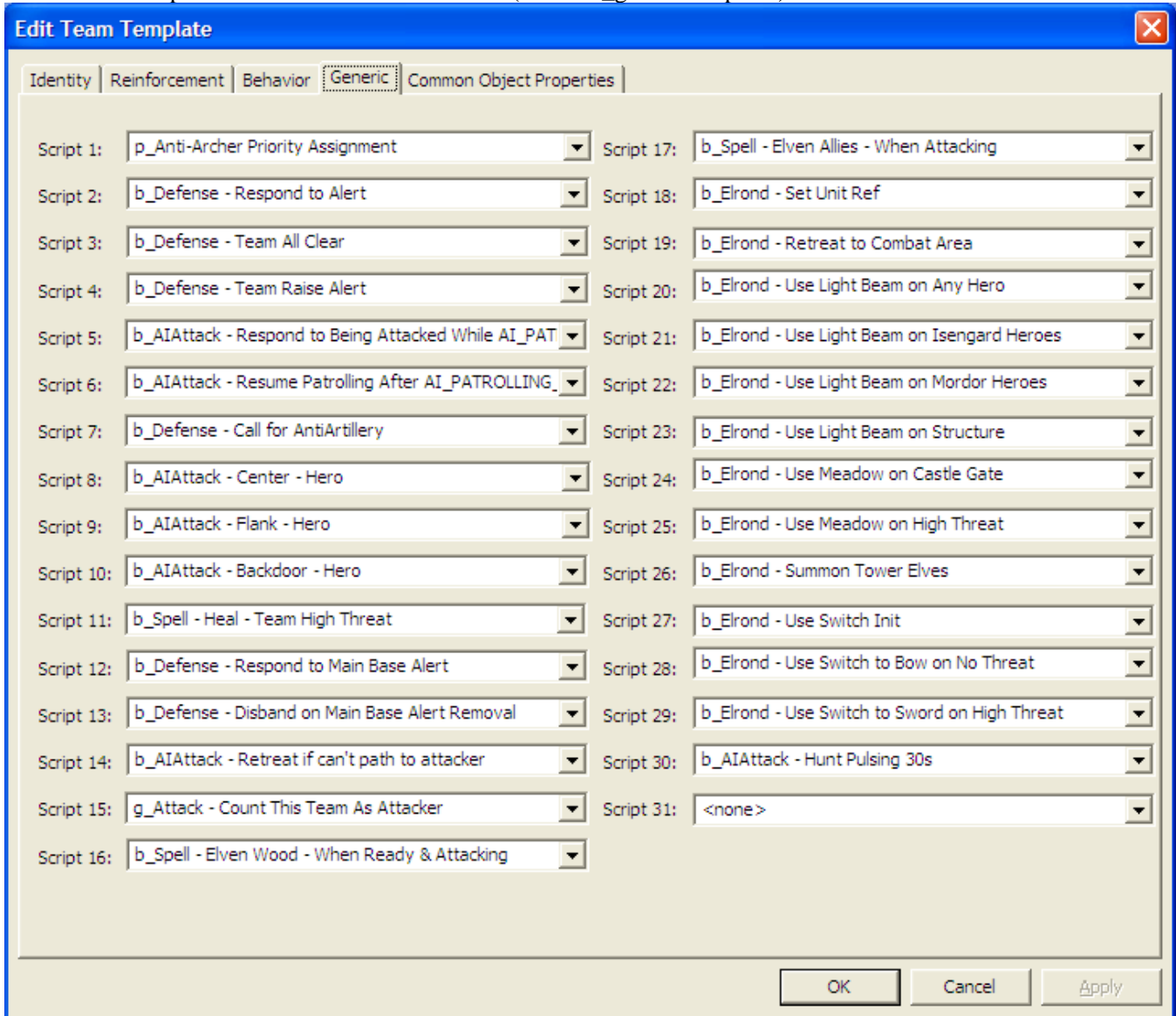


Note: Do not use a Min value greater than zero for any new units or hordes for now. This is because they have not been fully integrated into the AI yet. Using a Min value > 0 for a new unit or horde may prevent your hero from being recruited.

Now go to the Generic tab and add the scripts you've created for Elrond. You'll see that you can now find your scripts in the pull-down menu. Here's another important piece of information: You don't need to place another copy of your mod in your game folder so long as you don't change the names of your scripts or add new ones. If you only change the coding of existing scripts without changing the script name, then you only have to add the file to you mod and not place a new copy of your mod in the game folder. When you're done, don't forget to remove your mod copy from the game folder.

On the next page is an example Generic tab for Elrond based on what we've done.

Here is an example of what Elrond's Generic tab (in the ai\_gondor.map file) looks like.



Now save your ai\_gondor.map file and add it to your mod, overwriting the one that is already there. Save your mod and start a new game, playing against Gondor. In order to remove the “fog of war” so that you can watch what develops, add the “Map View” code described later on in this document. If you’ve added the code correctly, you will see Elrond be created and attack his enemies using the scripts that you’ve provided him.

Now let's create some scripts for Frodo and Sam. Note that these go in the "Hero Ability – Hobbit" directory.

I assume you now know how to make script changes. I'm just going to list the scripts and summarize where in the Edit Conditions window they are referenced. Just remember to copy an existing script and modify it to suit your needs when practical in order to save time. Otherwise, you'll have to start from scratch (not that big of a deal).

Here is a screen shot showing my various Gondor hobbit scripts, both new and existing.



#### b\_Frodo - Set Unit Ref

```
*** IF ***
  Team '<This Team>' has one or more units.
*** THEN ***
  Find 'RohanFrodo' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef 'AI_HERO_FRODO'
  Gives Unit 'AI_HERO_FRODO' experience points 2 .
```

Team > Attacked, Destroyed, or Exists > Team has units.  
Scripting > Reference > Set reference to object type of player nearest team.  
Unit (includes Structures) -- Action > Gives the unit experience points.

#### b\_Frodo - Retreat to Combat Area

```
*** IF ***
  Unit 'AI_HERO_FRODO' Health IS Less Than 30 percent.
*** THEN ***
  Team '<This Team>' executes Script 'be_Hero - Retreat to Combat Area' sequentially.
```

Unit (includes Structures) > Attacked, Destroyed, or Exists > Unit health % compared to a value  
Team - other > SequentialScript > Execute script sequentially -- start.

#### b\_Frodo - Use Phial of Galadriel

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 10.00 within radius 50.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpecialAbilityPhialOfGaladriel' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityPhialOfGaladriel'.
```

Team > Evaluates the threat level for a team.  
Team > CommandButton > Ability is ready - partial  
Team -- Action > CommandButton > Use commandbutton ability.

### b\_Frodo - Use Mithril Coat

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 10.00 within radius 50.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_FrodoMithrilCoat' (at least
one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_FrodoMithrilCoat'.
```

Team > Evaluates the threat level for a team.

Team > CommandButton > Ability is ready - partial

Team -- Action > CommandButton > Use commandbutton ability.

### b\_Sam - Set Unit Ref

```
*** IF ***
  Team '<This Team>' has one or more units.
*** THEN ***
  Find 'RohanSam' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef
'AI_HERO_SAM'
  Gives Unit 'AI_HERO_SAM' experience points 2 .
```

Team > Attacked, Destroyed, or Exists > Team has units.

Scripting > Reference > Set reference to object type of player nearest team.

Unit (includes Structures) -- Action > Gives the unit experience points.

### b\_Sam - Use Frying Pan

```
*** IF ***
  Team '<This Team>' has Object Status is 'IS_ATTACKING'
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_BonkEnemyWithFryingPan'
(at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_BonkEnemyWithFryingPan' on nearest enemy unit.
```

Team > Object Status > Unit has object status - partial.

Team > CommandButton > Ability is ready - partial

Team -- Action > CommandButton > Use command ability -- all -- nearest enemy unit

### b\_Sam - Summon Eagle

```
*** IF ***
  Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpawnWingSupport' (at least one
member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpawnWingSupport'.
```

Team > CommandButton > Ability is ready - partial

Team -- Action > CommandButton > Use command ability.

### b\_Sam - Summon Elven Aid

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 30.00 within radius 300.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpawnElvenAid' (at least
one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpawnElvenAid' on nearest enemy unit.
```

Team > Evaluates the threat level for a team.

Team > CommandButton > Ability is ready - partial

Team -- Action > CommandButton > Use command ability -- all -- nearest enemy unit

You'll notice that in the above hobbit hero ability screen shot that I added some scripts for Pippin. Here they are.

#### b\_Pippin - Set Unit Ref

```
*** IF ***
  Team '<This Team>' has one or more units.
*** THEN ***
  Find 'RohanPippin' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef
  'AI_HERO_PIPPIN'
  Gives Unit 'AI_HERO_PIPPIN' experience points 2.
```

Note: This is existing. I added the experience points gain as was done for Frodo.

#### b\_Pippin - Retreat to Combat Area

```
*** IF ***
  Unit 'AI_HERO_PIPPIN' Health IS Less Than 30 percent.
*** THEN ***
  Team '<This Team>' executes Script 'be_Hero - Retreat to Combat Area' sequentially.
```

Note: This is existing. I changed the health criterion from 25 to 30 (I did this for all heroes).

#### b\_Pippin - Use Palantir

```
*** IF ***
  Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpecialAbilitySeeingStone' (at least
  one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilitySeeingStone'.
```

Team > CommandButton > Ability is ready - partial

Team -- Action > CommandButton > Use commandbutton ability.

#### b\_Pippin - Summon Gondor Soldiers

```
*** IF ***
  Team '<This Team>' sees a(n) Relation 'Enemy' unit belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpawnGondorSoldiers' (at
  least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpawnGondorSoldiers' on nearest enemy unit.
```

Team > Sighted > Team has sighted a(n) friendly|neutral|enemy unit belonging to Player.

Team > CommandButton > Ability is ready - partial

Team -- Action > CommandButton > Use command ability -- all -- nearest enemy unit

#### b\_Pippin - Summon Ents

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 40.00 within radius 300.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpawnFangornEnts' (at
  least one member).
*** OR ***
  Unit 'AI_HERO_PIPPIN' has Object Status is 'IS_ATTACKING'
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpawnFangornEnts' (at
  least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpawnFangornEnts' on nearest enemy unit.
```

Team > Evaluates the threat level for a team.

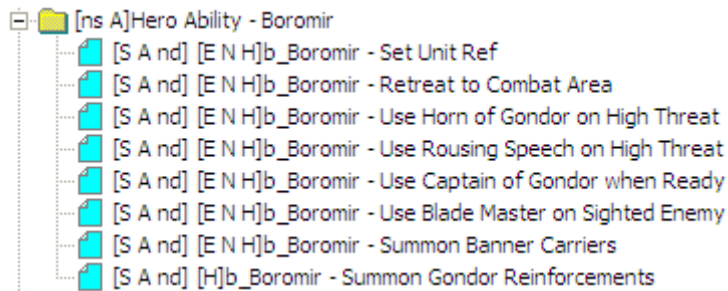
Team > CommandButton > Ability is ready - partial

Unit (includes Structures) > Object Status > Unit has object status.

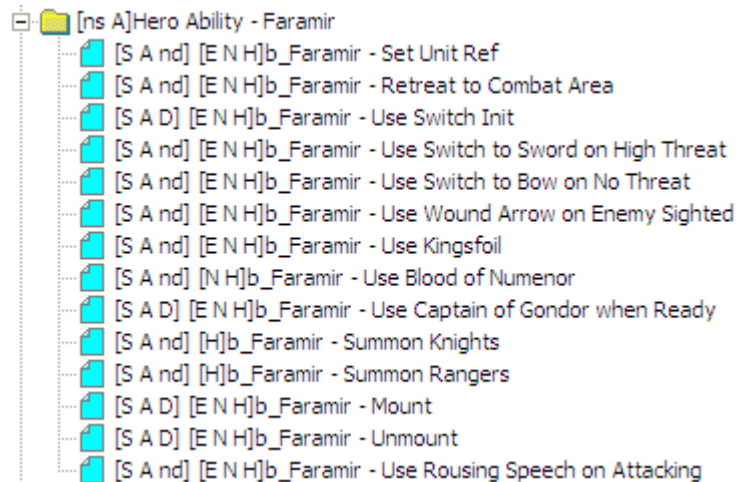
Team > CommandButton > Ability is ready - partial

Team -- Action > CommandButton > Use command ability -- all -- nearest enemy unit

I also added or altered scripts for the other Gondor heroes as well. Here they are.



Note that “Rousing Speech” is an existing script that doesn’t work



Note that “Use Shadowfax” is an existing script that doesn’t work

I am providing these as additional examples that you can reapply.

#### b\_Boromir - Set Unit Ref

```
*** IF ***
    Team '<This Team>' has one or more units.
*** THEN ***
    Find 'GondorBoromir' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef
    'AI_HERO_BOROMIR'
    Gives Unit 'AI_HERO_BOROMIR' experience points 4.
```

Boromir receives 4 experience points every 10 seconds.

### b\_Boromir - Retreat to Combat Area

```
*** IF ***
  Unit 'AI_HERO_BOROMIR' Health IS Less Than 30 percent.
*** THEN ***
  Team '<This Team>' executes Script 'be_Hero - Retreat to Combat Area' sequentially.
```

I changed the health criterion from 25 to 30.

### b\_Boromir - Use Horn of Gondor on High Threat

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 20.00 within radius 300.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityHornOfGondor' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityHornOfGondor'.
```

I changed the threat level concentration from 10/300 to 20/300.

### b\_Boromir - Use Captain of Gondor when Ready

```
*** IF ***
  Team '<This Team>' sees a(n) Relation 'Friend' unit belonging to Player '<This Player>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityCaptainOfGondorBoromir' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondorBoromir' on nearest object of type
'GondorTowerShieldGuardHorde'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondorBoromir' on nearest object of type
'GondorKnightHorde'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondorBoromir' on nearest object of type
'GondorRangerHorde'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondorBoromir' on nearest object of type
'GondorFighterHorde'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondorBoromir' on nearest object of type
'GondorArcherHorde'.
```

I significantly modified this script (the original didn't work). Note that the command will work on whichever one of the hordes listed above that are identified as being closest to Boromir. It doesn't mean that all of these hordes will be affected, although it is possible that one or more types will be affected, depending on how close they are when the command is executed.

### b\_Boromir - Use Blade Master on Sighted Enemy

```
*** IF ***
  Team '<This Team>' has Object Status is 'IS_ATTACKING'
  *AND* Team '<This Team>' has Greater Than or Equal To threat level 20.00 within radius 200.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityBoromirBladeMaster' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityBoromirBladeMaster'.
```

This is a new script based on Aragorn's Blade Master script.

### b\_Boromir - Summon Banner Carriers

```
*** IF ***
  Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpawnGondorBannerCarriers' (at
least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpawnGondorBannerCarriers'.
```

This is a new script. The banner carriers will act as individual soldiers. Additional steps need to be taken to have them combine with level one battalions.



### b\_Boromir - Summon Gondor Reinforcements

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 60.00 within radius 600.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpawnGondorReinforcements' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpawnGondorReinforcements'.
```

This is a new script. It is essentially a reapplication of Gandalf's WOP script. Adjust the threat level to better suit your needs if desired.

### b\_Faramir - Set Unit Ref

```
*** IF ***
  Team '<This Team>' has one or more units.
*** THEN ***
  Find 'GondorFaramir' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef
'AI_HERO_FARAMIR'
  Gives Unit 'AI_HERO_FARAMIR' experience points 4 .
```

Faramir receives 4 experience points every 10 seconds.

### b\_Faramir - Retreat to Combat Area

```
*** IF ***
  Unit 'AI_HERO_FARAMIR' Health IS Less Than 30 percent.
*** THEN ***
  Team '<This Team>' executes Script 'be_Hero - Retreat to Combat Area' sequentially.
```

I changed the health criterion from 25 to 30.

### b\_Faramir - Use Switch Init

```
*** IF ***
  True.
*** THEN ***
  Team '<This Team>' set custom state 'AI_FARAMIR_USING_BOW' to TRUE
  Team '<This Team>' set custom state 'AI_FARAMIR_MOUNTED' to FALSE
```

I added a mounted condition state because I wanted to see Faramir riding a horse.

### b\_Faramir - Use Switch to Bow on No Threat

```
*** IF ***
  Team '<This Team>' has Less Than or Equal threat level 5.00 within radius 50.00
  *AND* Team '<This Team>' has the custom state 'AI_FARAMIR_USING_SWORD'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFaramirWeapon'.
  Team '<This Team>' set custom state 'AI_FARAMIR_USING_BOW' to TRUE
  Team '<This Team>' set custom state 'AI_FARAMIR_USING_SWORD' to FALSE
```

I changed the threat level from “=0” to “<=5” to better complement the sword usage criterion.

### b\_Faramir - Use Kingsfoil

```
*** IF ***
  Unit 'AI_HERO_FARAMIR' Health IS Less Than 40 percent.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpecialAbilityFaramirHeal'
(at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityFaramirHeal'.
```

This new script is essentially a reapplication of Aragorn's Athelas script.

### b\_Faramir - Use Blood of Numenor

```
*** IF ***
  Team '<This Team>' has the custom state 'AI_FARAMIR_USING_SWORD'
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityFaramirBladeMaster' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityFaramirBladeMaster'.
```

This new script is essentially a reapplication of Aragorn's Blade Master script.

### b\_Faramir - Use Captain of Gondor when Ready

```
*** IF ***
  Team '<This Team>' sees a(n) Relation 'Friend' unit belonging to Player '<This Player>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityCaptainOfGondor' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondor' on nearest object of type
'GondorRangerHorde'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondor' on nearest object of type
'GondorTowerShieldGuardHorde'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondor' on nearest object of type
'GondorKnightHorde'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondor' on nearest object of type
'GondorArcherHorde'.
  Team '<This Team>' use Ability 'Command_SpecialAbilityCaptainOfGondor' on nearest object of type
'GondorFighterHorde'.
```

I significantly modified this script (the original didn't work). This is similar to what was done for Boromir. Again, this doesn't mean that all of these hordes will gain experience points, although it's possible if they are close enough when the command is triggered.

### b\_Faramir - Summon Knights

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 30.00 within radius 200.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpawnGondorKnights' (at
least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpawnGondorKnights' on nearest enemy unit.
```

This is a new script.

### b\_Faramir - Summon Rangers

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 40.00 within radius 200.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpawnGondorRangers' (at
least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpawnGondorRangers' on nearest enemy unit.
```

This is a new script.

## b\_Faramir - Mount

```
*** IF ***
    Unit 'AI_HERO_FARAMIR' Health IS Greater Than or Equal To 50 percent.
    *AND* Team '<This Team>' state IS NOT 'AI_FARAMIR_MOUNTED'
    *AND* Unit 'AI_HERO_FARAMIR' sees a(n) 'Cavalry_Units' belonging to Player '<This Player's Enemies>'.
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_ToggleMounted' (at least
one member).
    *** OR ***
    Unit 'AI_HERO_FARAMIR' Health IS Greater Than or Equal To 50 percent.
    *AND* Team '<This Team>' state IS NOT 'AI_FARAMIR_MOUNTED'
    *AND* Unit 'AI_HERO_FARAMIR' sees a(n) 'Cavalry_All' belonging to Player '<This Player>'.
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_ToggleMounted' (at least
one member).
    *** OR ***
    Unit 'AI_HERO_FARAMIR' Health IS Greater Than or Equal To 50 percent.
    *AND* Team '<This Team>' state IS NOT 'AI_FARAMIR_MOUNTED'
    *AND* Unit 'AI_HERO_FARAMIR' sees a(n) 'Artillery_Units' belonging to Player '<This Player's Enemy>'.
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_ToggleMounted' (at least
one member).
    *** OR ***
    Unit 'AI_HERO_FARAMIR' Health IS Greater Than or Equal To 50 percent.
    *AND* Team '<This Team>' state IS NOT 'AI_FARAMIR_MOUNTED'
    *AND* Unit 'AI_HERO_FARAMIR' sees a(n) 'Siege_Units' belonging to Player '<This Player's Enemy>'.
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_ToggleMounted' (at least
one member).
*** THEN ***
    Team '<This Team>' use Ability 'Command_ToggleMounted'.
    Team '<This Team>' set custom state 'AI_FARAMIR_MOUNTED' to TRUE
    Team '<This Team>' set custom state 'AI_FARAMIR_USING_BOW' to FALSE
```

This is a new script that enables Faramir to ride a horse. I picked 50% health because I don't want Faramir transitioning to a horse rider if his health is low.

## b\_Faramir - Unmount

```
*** IF ***
    Unit 'AI_HERO_FARAMIR' Health IS Greater Than 75 percent.
    *AND* Team '<This Team>' has the custom state 'AI_FARAMIR_MOUNTED'
    *AND* Team '<This Team>' has Equal To threat level 0.00 within radius 120.00
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_ToggleMounted' (at least
one member).
*** THEN ***
    Team '<This Team>' use Ability 'Command_ToggleMounted'.
    Team '<This Team>' set custom state 'AI_FARAMIR_MOUNTED' to FALSE
    Team '<This Team>' set custom state 'AI_FARAMIR_USING_BOW' to TRUE
```

This new script is biased towards keeping Faramir on horseback. Adjust as you see fit.

## b\_Faramir - Use Rousing Speech on Attacking

```
*** IF ***
    Unit 'AI_HERO_FARAMIR' sees a(n) 'Cavalry_Units' belonging to Player '<This Player>'.
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityFaramirGloriousCharge' (at least one member).
*** THEN ***
    Unit 'AI_HERO_FARAMIR' use Ability 'Command_SpecialAbilityFaramirGloriousCharge' on nearest object of type
'GondorCavalry_Summoned'.
    Unit 'AI_HERO_FARAMIR' use Ability 'Command_SpecialAbilityFaramirGloriousCharge' on nearest object of type
'GondorKnightHorde_Summoned'.
    Unit 'AI_HERO_FARAMIR' use Ability 'Command_SpecialAbilityFaramirGloriousCharge' on nearest object of type
'GondorKnightHorde'.
```

This new script is intended to give Faramir's Glorious Charge to Gondor cavalry.

### b\_Gandalf - Set Unit Ref

```
*** IF ***
    Team '<This Team>' has one or more units.
*** THEN ***
    Find 'GondorGandalf' Owned by Player '<This Player>' nearest team Team '<This Team>' and reference as UnitRef
    'AI_HERO_GANDALF'
    Gives Unit 'AI_HERO_GANDALF' experience points 4 .
```

The original script is modified so that Gandalf gains 4 experience points every 10 seconds.

### b\_Gandalf - Use Switch Init

```
*** IF ***
    True.
*** THEN ***
    Team '<This Team>' set custom state 'AI_GANDALF_MOUNTED' to FALSE
```

I added this new script because I wanted to see Gandalf riding Shadowfax. I didn't erase the original Shadowfax script; it just doesn't get used because it doesn't work properly.

### b\_Gandalf - Retreat to Combat Area

```
*** IF ***
    Unit 'AI_HERO_GANDALF' Health IS Less Than 30 percent.
*** THEN ***
    Team '<This Team>' executes Script 'be_Hero - Retreat to Combat Area' sequentially.
```

I changed the health criterion from 25 to 30.

### b\_Gandalf - Use Lightning Sword on Sighted Enemy

```
*** IF ***
    Unit 'AI_HERO_GANDALF' sees a(n) 'MordorBalrog' belonging to Player '<This Player's Enemy>'.
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
    'Command_GondorGandalfLightningSword' (all applicable members).
    *** OR ***
    Team '<This Team>' sees a(n) Relation 'Enemy' unit belonging to Player '<This Player's Enemies>'.
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
    'Command_GondorGandalfLightningSword' (all applicable members).
    *** THEN ***
    Unit 'AI_HERO_GANDALF' use Ability 'Command_GondorGandalfLightningSword' on nearest object of type
    'MordorBalrog'.
    Team '<This Team>' use Ability 'Command_GondorGandalfLightningSword' on nearest enemy unit.
```

I added the Balrog. Also, I added a Balrog damage scalar in the weapon.ini file.

### b\_Gandalf - Use Istari Light on Sighted Enemy

```
*** IF ***
    Unit 'AI_HERO_GANDALF' sees a(n) 'MordorWitchKingOnFellBeast' belonging to Player '<This Player's Enemies>'.
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight'
    (at least one member).
    *** OR ***
    Unit 'AI_HERO_GANDALF' sees a(n) 'MordorFellBeast' belonging to Player '<This Player's Enemies>'.
    *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight'
    (at least one member).
    *** THEN ***
    Team '<This Team>' use Ability 'Command_GondorGandalfIstariLight' on nearest object of type
    'MordorWitchKingOnFellBeast'.
    Team '<This Team>' use Ability 'Command_GondorGandalfIstariLight' on nearest object of type 'MordorFellBeast'.
```

I added the Witch King.

### b\_Gandalf - Use Istari Light on Sighted Troll

```
*** IF ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'MordorMountainTroll' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight'
(at least one member).
*** OR ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'MordorDrummerTroll' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight'
(at least one member).
*** OR ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'MordorCaveTroll' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight'
(at least one member).
*** OR ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'CaveTroll_Slaved' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight'
(at least one member).
*** OR ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'MordorMumakil' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight'
(at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_GondorGandalfIstariLight' on nearest enemy with Kind is 'TROLL'
```

This is an all new script aimed at trolls. Mumakils were added as an afterthought.

### b\_Gandalf - Use Istari Light on Sighted Hero

```
*** IF ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'Hero_Units' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight'
(at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_GondorGandalfIstariLight' on nearest enemy with Kind is 'HERO'
```

This is an all new script aimed at heroes. There is some redundancy with the existing “Sighted Enemy” script.

### b\_Gandalf - Use Istari Light on Sighted Building

```
*** IF ***
  Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GondorGandalfIstariLight' (at least
one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_GondorGandalfIstariLight' on nearest enemy building.
```

This is an all new script aimed at buildings.

As you can see, Gandalf will use his Istari Light ability very effectively, making him an even more dangerous enemy.

## b\_Gandalf - Use Word of Power on High Threat

```
*** IF ***
  Team '<This Team>' has Greater Than threat level 50.00 within radius 600.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** OR ***
  Team '<This Team>' has Greater Than threat level 40.00 within radius 400.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** OR ***
  Unit 'AI_HERO_GANDALF' Health IS Less Than 35 percent.
  *AND* Evaluate if any team member of Team '<This Team>' is being attacked and cannot retaliate.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** OR ***
  Unit 'AI_HERO_GANDALF' Health IS Less Than 25 percent.
  *AND* Team '<This Team>' has Greater Than threat level 20.00 within radius 200.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityWordOfPower'.
```

I modified the original threat concentration from 60/600 to 50/600. I also added another threat concentration level as well as two health conditions.

## b\_Gandalf - Use Word of Power on Citadel

```
*** IF ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'MordorCampKeep' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** OR ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'IsengardCampKeep' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** OR ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'RohanCastleBaseKeep' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** OR ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'RohanCampKeep' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** OR ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'GondorCastleBaseKeep' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** OR ***
  Unit 'AI_HERO_GANDALF' sees a(n) 'GondorCampKeep' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability
'Command_SpecialAbilityWordOfPower' (at least one member).
  *** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityWordOfPower'.
```

I modified the weapon.ini file (refer to the miscellaneous section further below) such that Gandalf's WOP spell does building damage as well. This script takes advantage of that.

Please experiment/modify as you wish. That's how you learn.

## b\_Gandalf - Mount

```
*** IF ***
  Unit 'AI_HERO_GANDALF' Health IS Greater Than or Equal To 50 percent.
  *AND* Team '<This Team>' state IS NOT 'AI_GANDALF_MOUNTED'
  *AND* Unit 'AI_HERO_GANDALF' sees a(n) 'Cavalry_Units' belonging to Player '<This Player's Enemies>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GandalfShadowfax' (at least
one member).
  *** OR ***
  Unit 'AI_HERO_GANDALF' Health IS Greater Than or Equal To 50 percent.
  *AND* Team '<This Team>' state IS NOT 'AI_GANDALF_MOUNTED'
  *AND* Unit 'AI_HERO_GANDALF' sees a(n) 'Artillery_Units' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GandalfShadowfax' (at least
one member).
  *** OR ***
  Unit 'AI_HERO_GANDALF' Health IS Greater Than or Equal To 50 percent.
  *AND* Team '<This Team>' state IS NOT 'AI_GANDALF_MOUNTED'
  *AND* Unit 'AI_HERO_GANDALF' sees a(n) 'Siege_Units' belonging to Player '<This Player's Enemy>'.
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GandalfShadowfax' (at least
one member).
  *** THEN ***
  Team '<This Team>' use Ability 'Command_GandalfShadowfax'.
  Team '<This Team>' set custom state 'AI_GANDALF_MOUNTED' to TRUE
```

This is an all new script similar to the one I provided Faramir.

## b\_Gandalf - Unmount

```
*** IF ***
  Unit 'AI_HERO_GANDALF' Health IS Greater Than or Equal To 60 percent.
  *AND* Team '<This Team>' has the custom state 'AI_GANDALF_MOUNTED'
  *AND* Team '<This Team>' has Equal To threat level 0.00 within radius 120.00
  *AND* Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_GandalfShadowfax' (at least
one member).
  *** THEN ***
  Team '<This Team>' use Ability 'Command_GandalfShadowfax'.
  Team '<This Team>' set custom state 'AI_GANDALF_MOUNTED' to FALSE
```

This is an all new script similar to the one I provided Faramir.

These are all provided as examples of how to adjust the game AI to make use of hero powers. Feel free to experiment with these scripts. You may find something that works better for you!

Now I'll show examples of the "Identity" and "Generic" tabs for these Gondor heroes that we've modified. Open your modified "ai\_gondor" file from within WorldBuilder. Then open the Team Builder window (Menu Edit > Edit Teams) as you've done before. We'll start with Frodo.

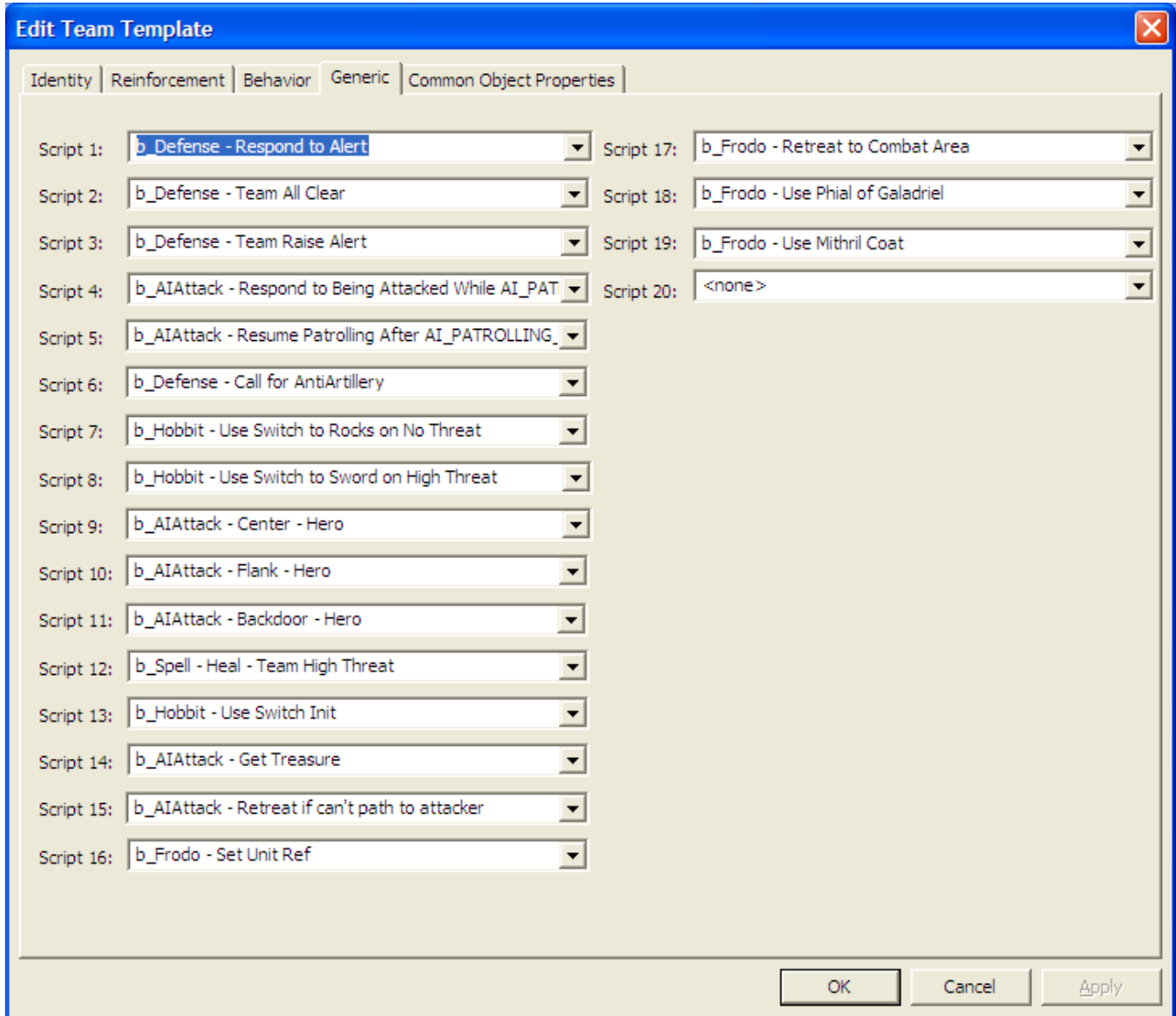
Here is Frodo's Identity Tab

The screenshot shows the 'Edit Team Template' dialog box with the 'Identity' tab selected. The team name is 'Hero - Frodo' and its maximum size is 1. The owner is 'Player' and the home position is '<none>'. The production condition is 'a\_BC - Frodo' and the 'Execute associated actions' checkbox is unchecked. The priority is 55, success priority is 0, build time is 63 seconds, and failure priority decrease is 0. The unit list contains seven entries with their respective min/max counts and unit types. Recruitment options include 'Automatically reinforce whenever possible' (unchecked), 'Team members are AI Recruitable' (checked), and 'Team created once and only once.' (unchecked). The team description is 'Meneldil added'.

Min	Max	Unit Type
1	1	RohanFrodo
1	2	GondorFighterHorde
1	2	GondorArcherHorde
0	2	GondorFighterArcherComboHorde
0	1	RohanSam
0	1	RohanPippin
0	0	<none>



Here is Frodo's Generic Tab.



Here is Sam's Identity Tab.

**Edit Team Template**

Identity | Reinforcement | Behavior | Generic | Common Object Properties

Hero - Sam      Maximum      1

Owner: Player

Home Position: <none>

Production:  
Condition: a\_BC - Sam  
 Execute associated actions

Priority: 55      Success Priority 0  
Build 63 Secs.      Failure Priority Decrease: 0

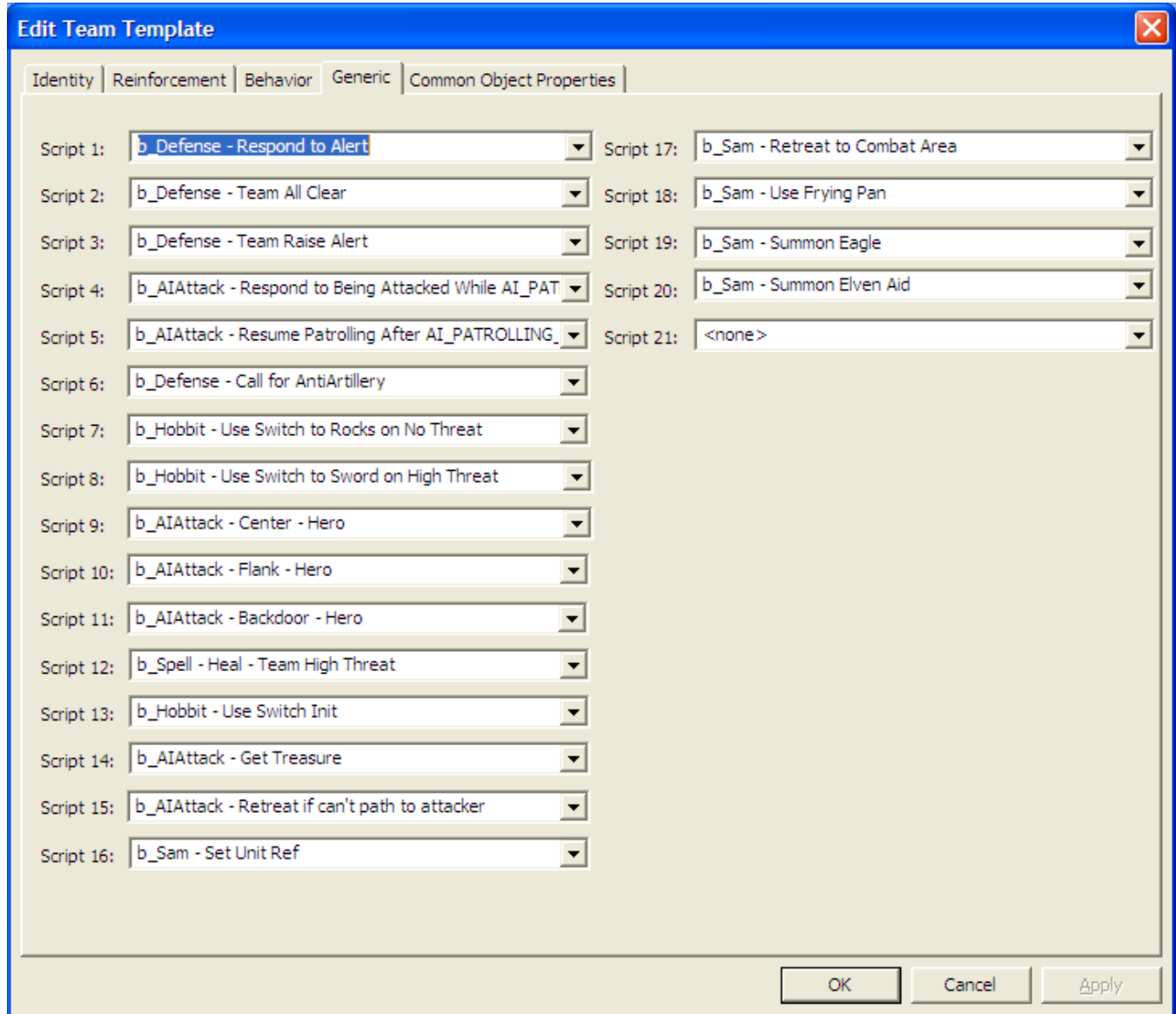
Min:	Max:	Unit Type:
1	1	RohanSam
1	2	GondorFighterHorde
1	2	GondorArcherHorde
0	0	<none>
0	0	<none>
0	0	<none>
0	0	<none>

Recruitment Options:  
 Automatically reinforce whenever possible  
 Team members are AI Recruitable  
 Team created once and only once.

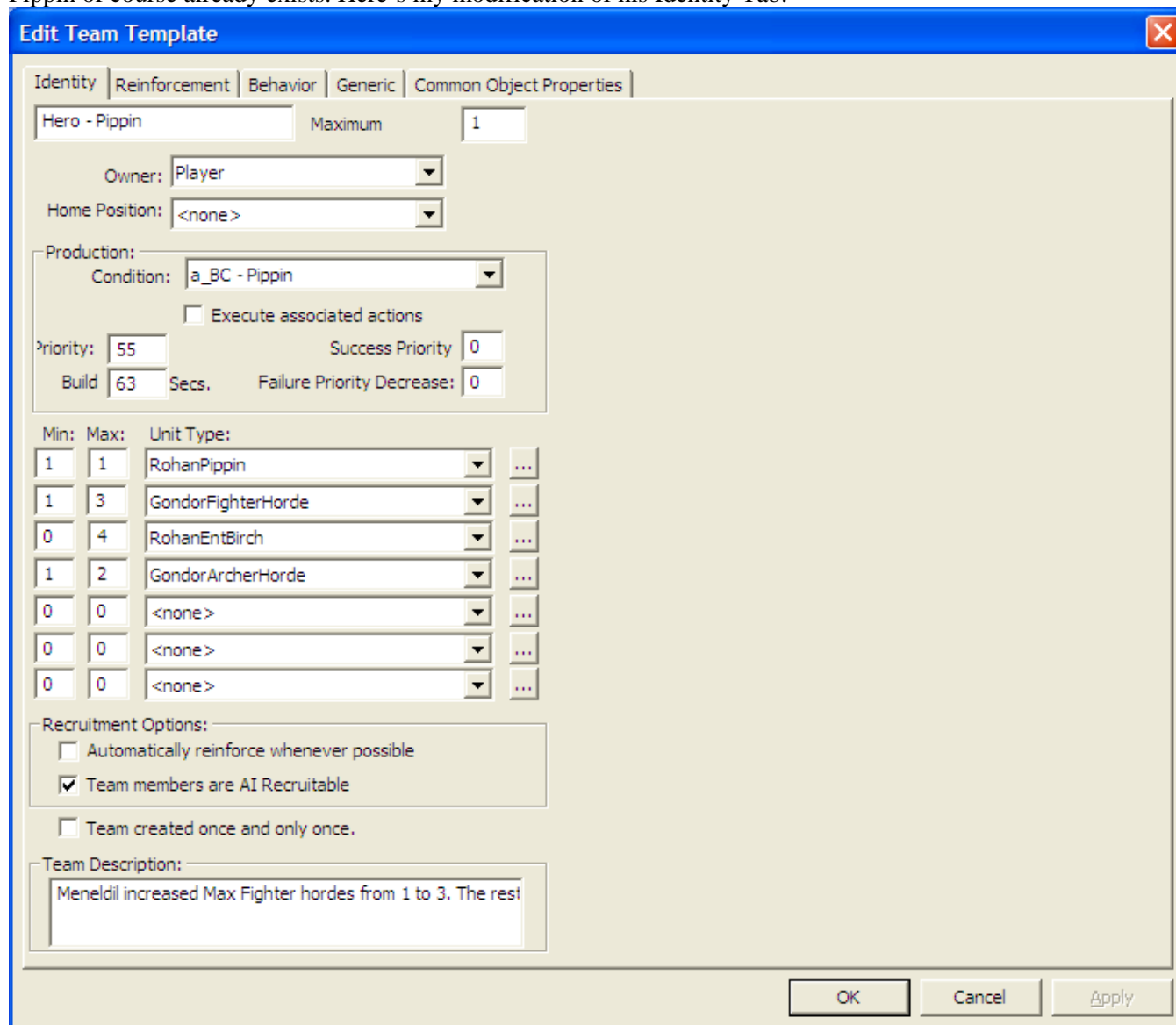
Team Description:  
Meneldil added

OK      Cancel      Apply

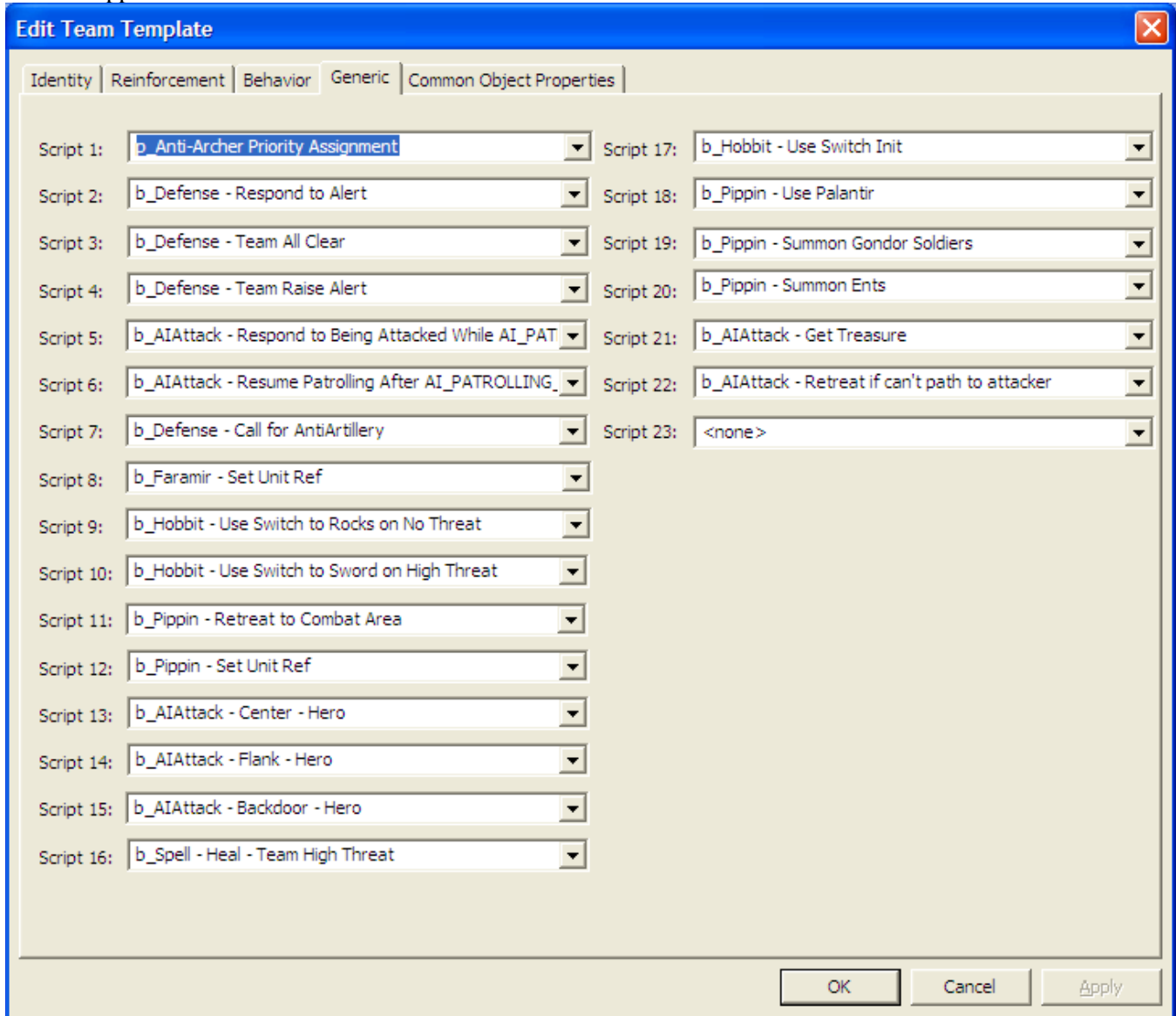
Here is Sam's Generic Tab.



Pippin of course already exists. Here's my modification of his Identity Tab.



Here is Pippin's modified Generic Tab.



Did you notice that the hobbits now seek at treasure chests?

Here's my modified version of Faramir's Identity Tab.

**Edit Team Template**

Identity | Reinforcement | Behavior | Generic | Common Object Properties

Hero - Faramir      Maximum      1

Owner: Player

Home Position: <none>

Production:  
Condition: a\_BC - Faramir  
 Execute associated actions

Priority: 95      Success Priority: 0  
Build: 93 Secs.      Failure Priority Decrease: 0

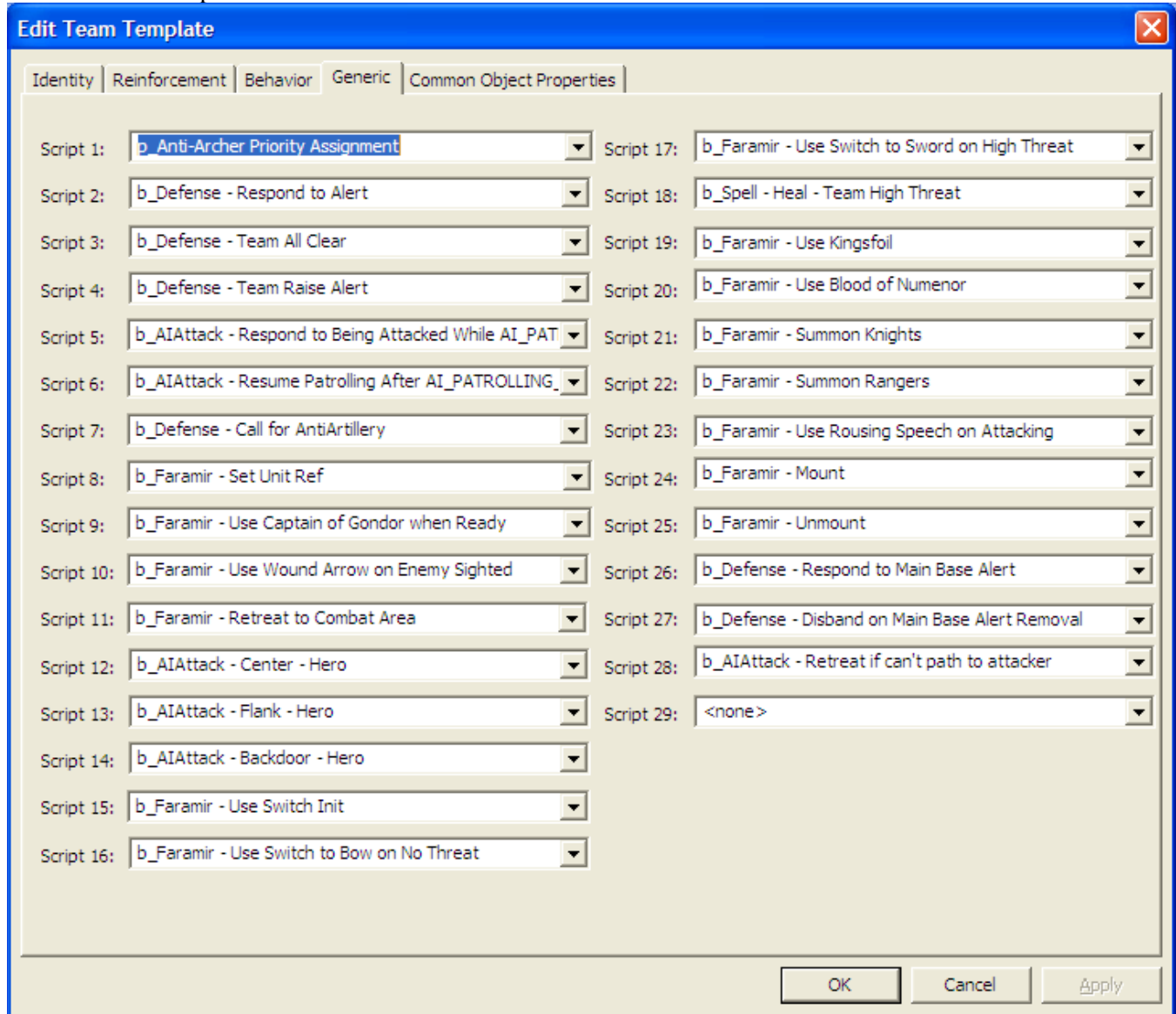
Min:	Max:	Unit Type:
1	1	GondorFaramir
0	3	GondorRangerHorde
0	4	GondorKnightHorde
0	0	<none>
0	0	<none>
0	0	<none>
0	0	<none>

Recruitment Options:  
 Automatically reinforce whenever possible  
 Team members are AI Recruitable  
 Team created once and only once.

Team Description:  
Meneldil increased Max Ranger hordes from 2 to 3. The res

OK      Cancel      Apply

Here's Faramir's updated Generic Tab.



Here's my modified version of Boromir's Identity Tab.

**Edit Team Template**

Identity | Reinforcement | Behavior | Generic | Common Object Properties

Hero - Boromir      Maximum      1

Owner: Player

Home Position: <none>

Production:  
Condition: a\_BC - Boromir  
 Execute associated actions

Priority: 95      Success Priority: 0  
Build: 183      Failure Priority Decrease: 0

Min:	Max:	Unit Type:
1	1	GondorBoromir
1	2	GondorFighterHorde
0	2	GondorTowerShieldGuardHorde
0	0	<none>
0	0	<none>
0	0	<none>
0	0	<none>

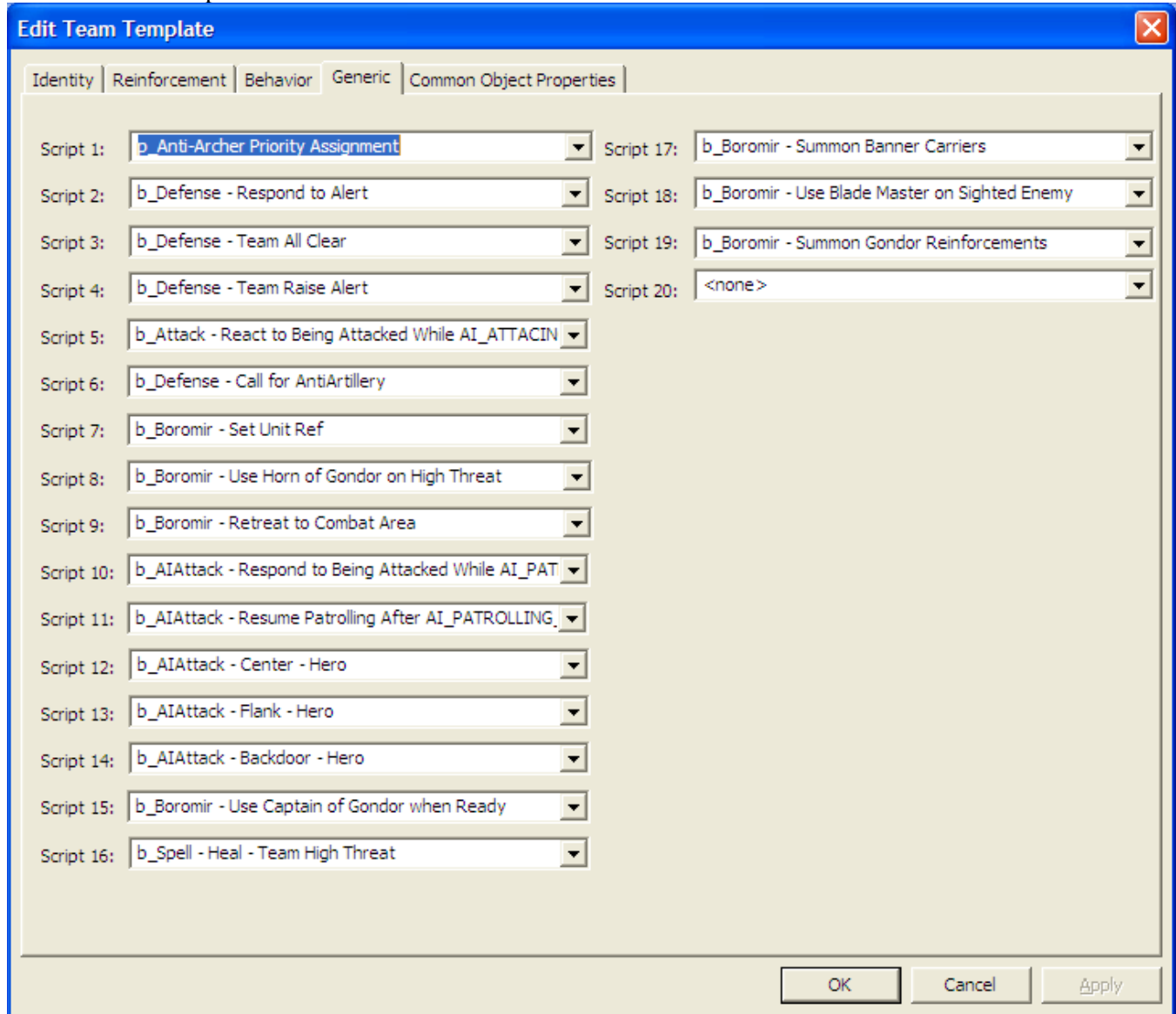
Recruitment Options:  
 Automatically reinforce whenever possible  
 Team members are AI Recruitable  
 Team created once and only once.

Team Description:  
Meneldil added banner carriers. Also, a number of scripts w

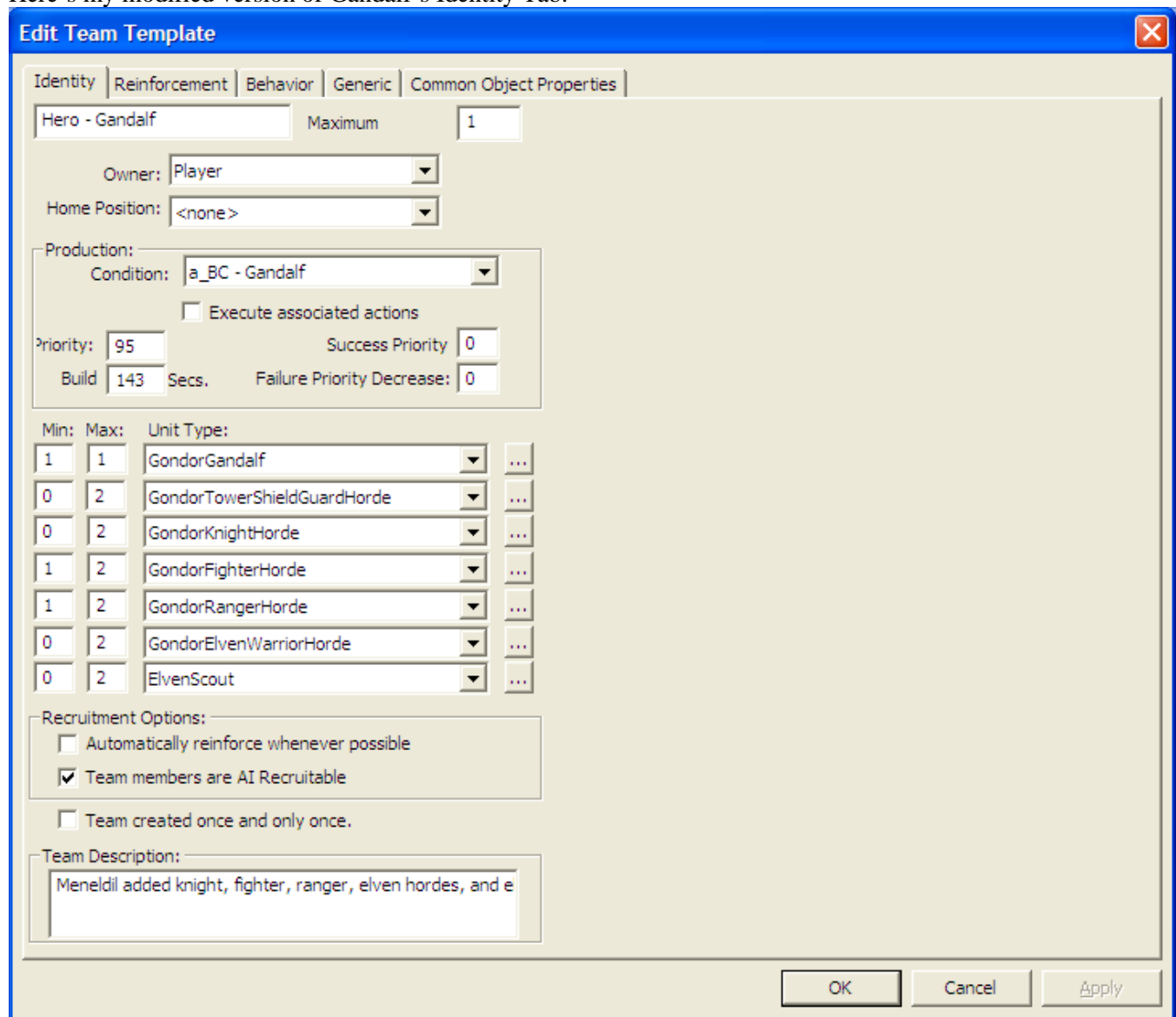
OK      Cancel      Apply



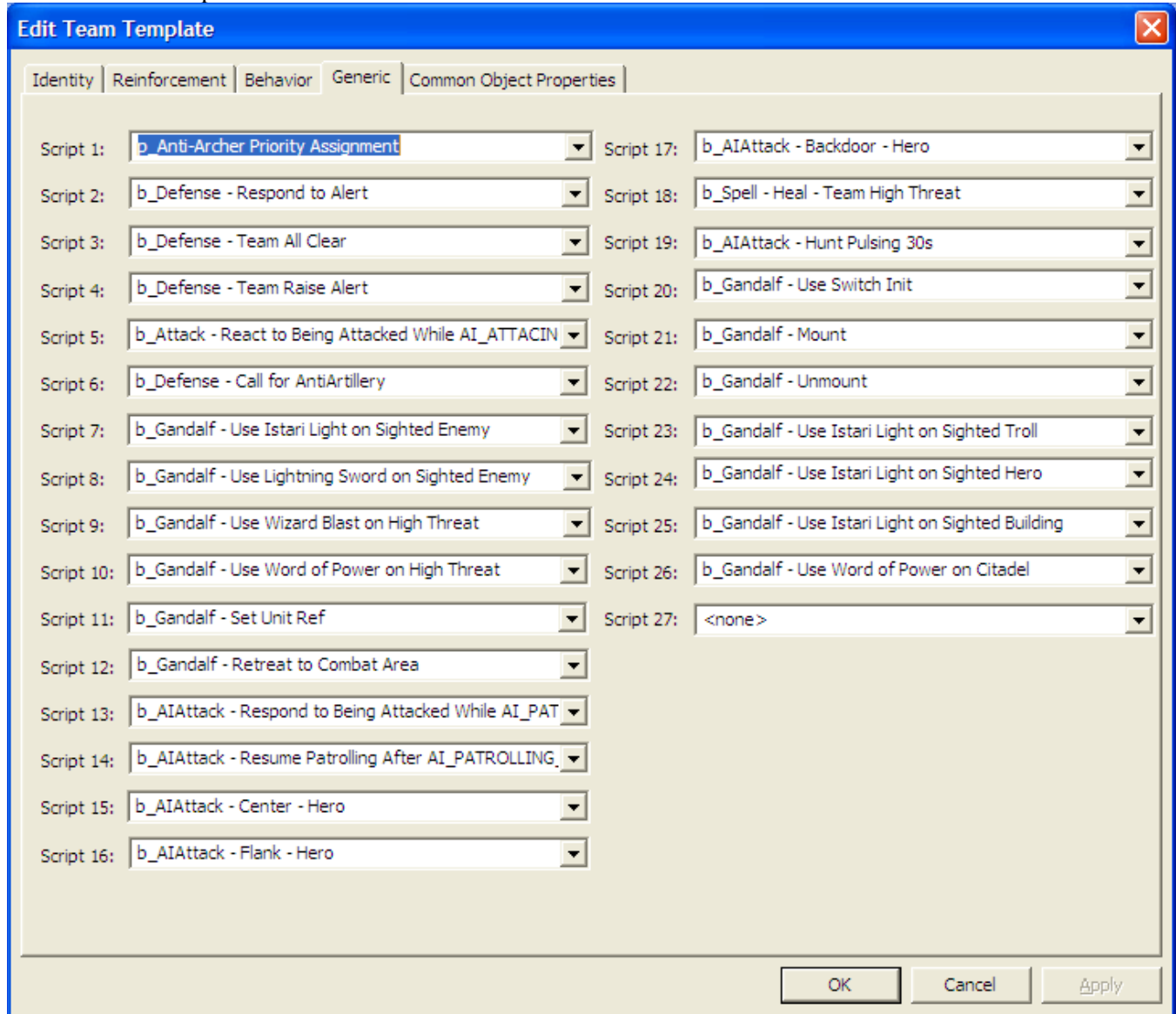
Here's Boromir's updated Generic Tab.



Here's my modified version of Gandalf's Identity Tab.



Here's Gandalf's updated Generic Tab.



I also created a team for eagles (Gwaihir) that might be summoned by Sam. Here's the "Identity" tab.

The screenshot shows the 'Edit Team Template' dialog box with the 'Identity' tab selected. The dialog has a title bar with a close button (X) in the top right corner. Below the title bar are five tabs: 'Identity', 'Reinforcement', 'Behavior', 'Generic', and 'Common Object Properties'. The 'Identity' tab is active and contains the following fields and options:

- Name:** 'Hero - Gwaihir' (text box)
- Maximum:** '1' (text box)
- Owner:** 'Player' (dropdown menu)
- Home Position:** '<none>' (dropdown menu)
- Production:**
  - Condition:** '<none>' (dropdown menu)
  - Execute associated actions
- Priority:** '70' (text box)
- Success Priority:** '0' (text box)
- Build:** '70' (text box)
- Secs.:** (text box, empty)
- Failure Priority Decrease:** '0' (text box)

Below these fields is a table for unit types:

Min:	Max:	Unit Type:	
1	5	GondorGwaihir	...
0	0	<none>	...
0	0	<none>	...
0	0	<none>	...
0	0	<none>	...
0	0	<none>	...
0	0	<none>	...

Below the table are the 'Recruitment Options' section:

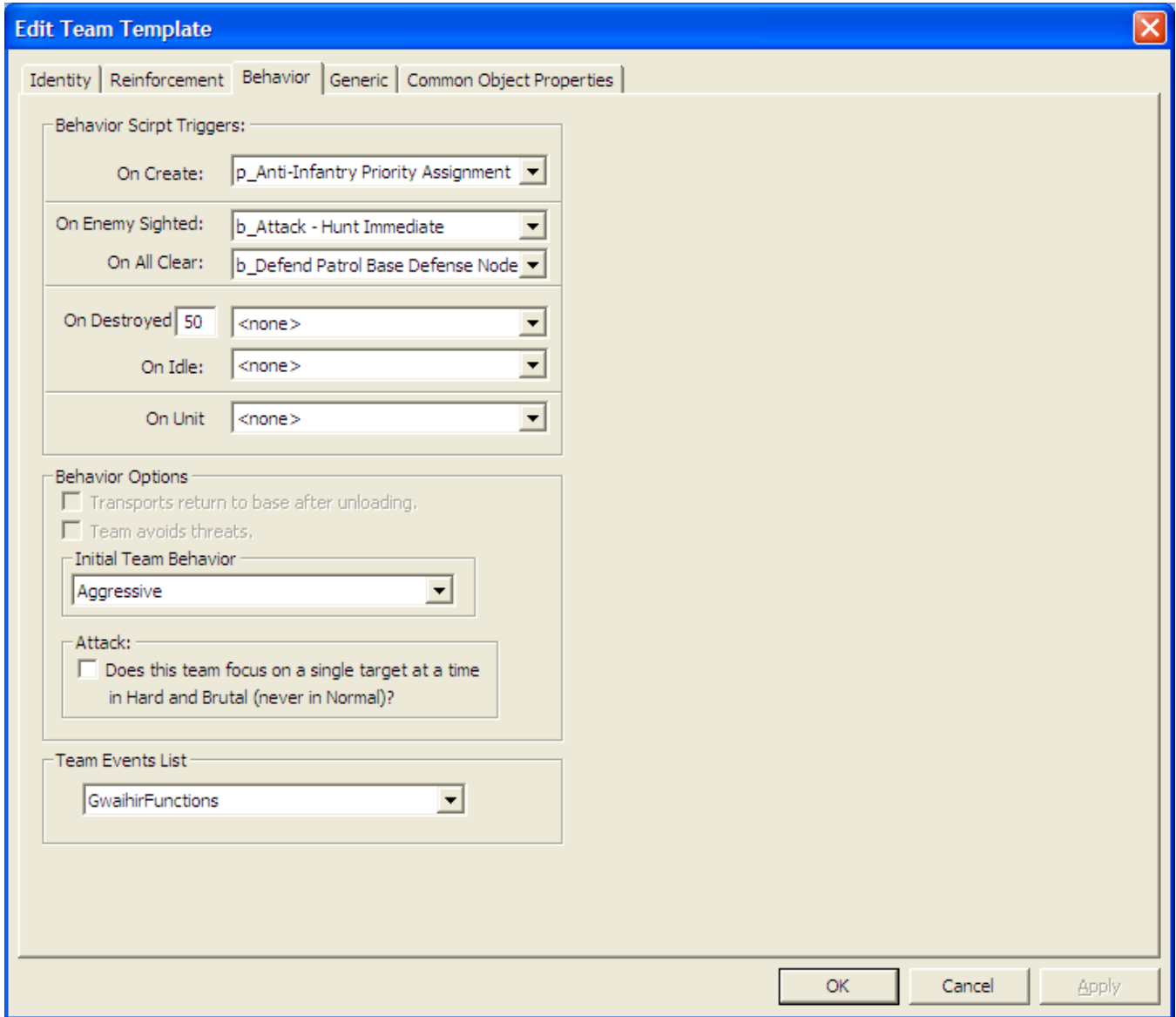
- Automatically reinforce whenever possible
- Team members are AI Recruitable
- Team created once and only once.

At the bottom is the 'Team Description' section:

Team Description: Meneldil added for eagles summoned by Sam

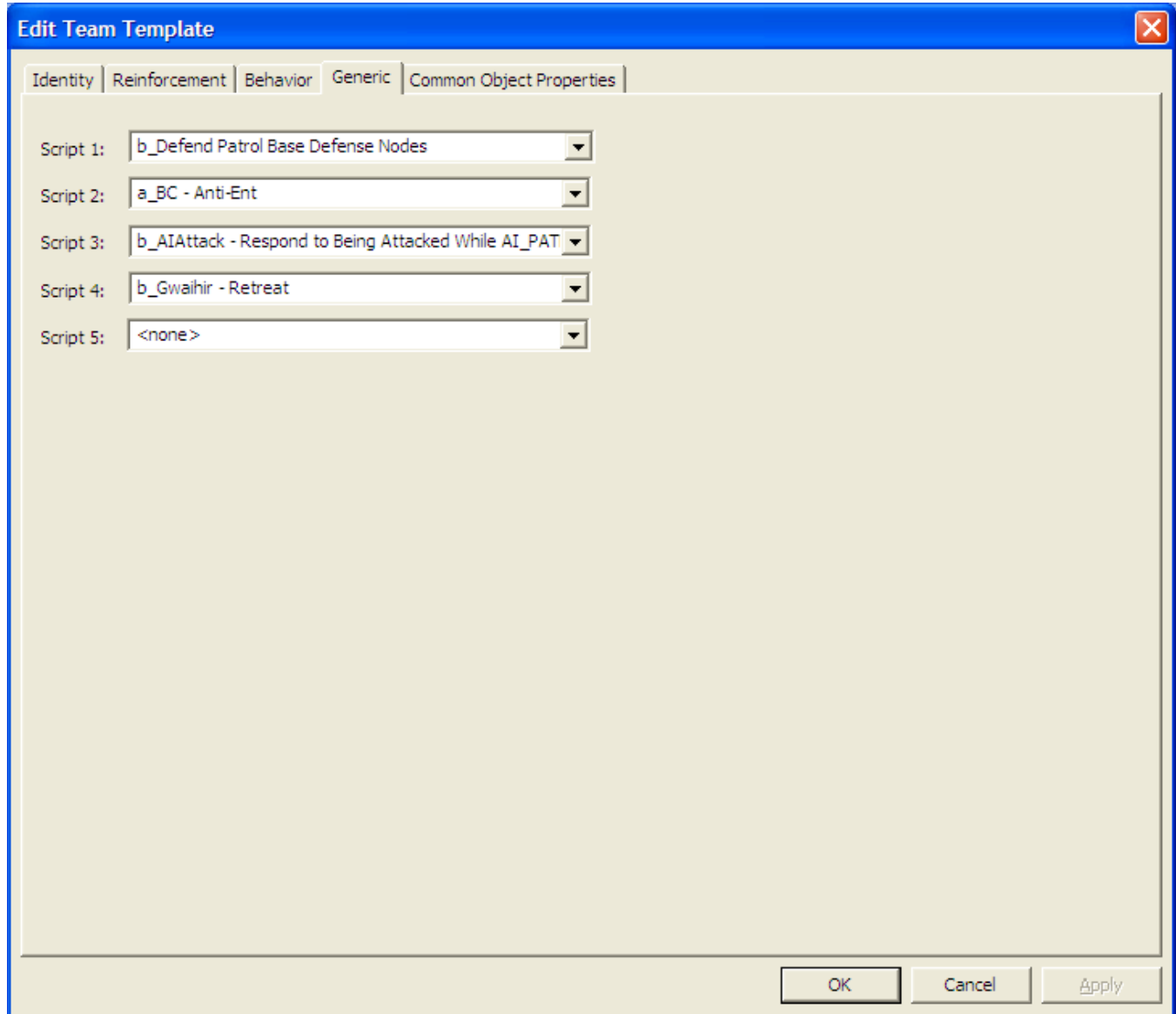
At the bottom right of the dialog are three buttons: 'OK', 'Cancel', and 'Apply'.

And here's Gwaihir's "Behavior" tab.



Feel free to adjust the script entries as you see fit. This is just one possibility.

And here's Gwaihir's "Generic" tab.

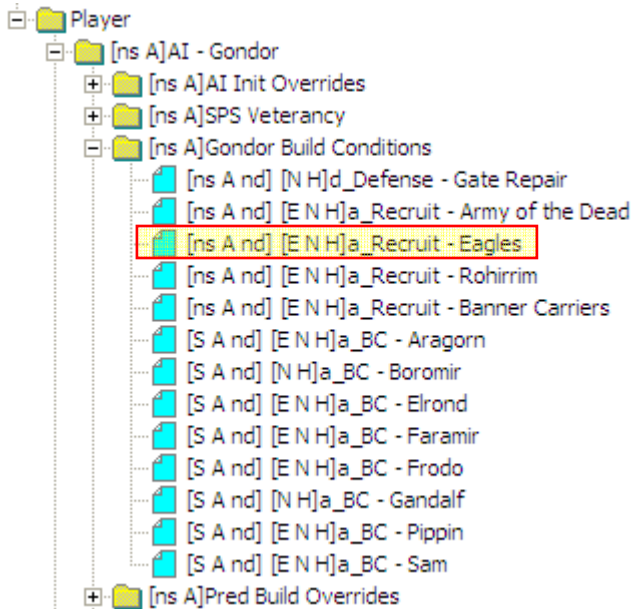


Save the file and add it to your INI as libraries\ai\_gondor\ai\_gondor.map. This will allow eagles summoned by Sam to be actively engaged.

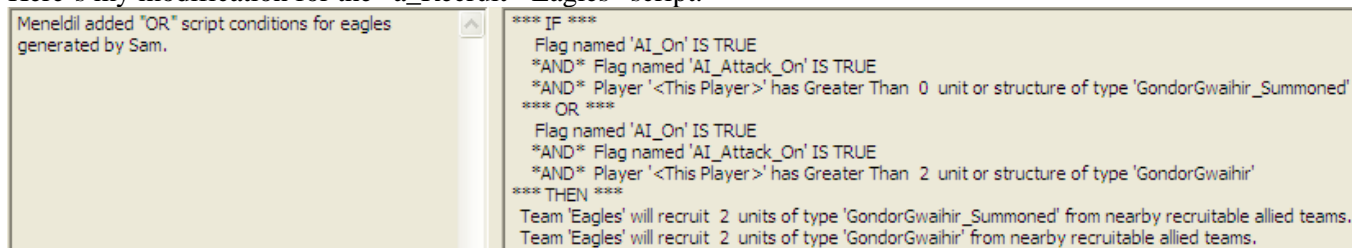
You'll notice that I created a "Retreat" script for Gwaihir. It is there in case his health gets too low. This is optional. If you wish to include it, go to your "lib\_hero\_behaviors.map" file and add a folder for Gwaihir (e.g., Hero Ability - Gwaihir) and create a script (b\_Gwaihir - Retreat) so that if the health level is below a certain amount, the "be\_Hero - Retreat to Combat Area" script will be executed. Obviously, this is only for eagles without a timer.

If you've managed this far, you'll have been able to add Elrond, Frodo, and Sam to Gondor's AI so that you can play against them. Further, you'll have also been able to tweak the AI capabilities for the other Gondor heroes, thereby making the game more interesting when playing against Gondor.

Close the Team Builder window and open the Scripts window. We previously added Elrond, Frodo, and Sam. We'll be modifying the entry for the existing eagles team, as indicated below.



Here's my modification for the "a\_Recruit - Eagles" script.



If that's too hard to read, here's a larger view of the modified script:

```

*** IF ***
Flag named 'AI_On' IS TRUE
*AND* Flag named 'AI_Attack_On' IS TRUE
*AND* Player '<This Player>' has Greater Than 0 unit or structure of type 'GondorGwaihir_Summoned'
*** OR ***
Flag named 'AI_On' IS TRUE
*AND* Flag named 'AI_Attack_On' IS TRUE
*AND* Player '<This Player>' has Greater Than 2 unit or structure of type 'GondorGwaihir'
*** THEN ***
Team 'Eagles' will recruit 2 units of type 'GondorGwaihir_Summoned' from nearby recruitable allied teams.
Team 'Eagles' will recruit 2 units of type 'GondorGwaihir' from nearby recruitable allied teams.

```

This is another way to have summoned eagles actively join in the game play. As you can see, if you have at least 3 eagles summoned by Sam (the kind without timers), then 2 of them will join the "Eagles" team and start hunting immediately. Please note that this will not happen frequently since there probably won't be 3 of these eagles at a time; reduce the quantity of "GondorGwaihir" to a smaller number if you want this script to be the primary controller for eagles summoned by Sam. Note that you can also add eagles to existing teams within the "ai\_gondor" Team Builder window. For example, I added 0 to 2 eagles in the "Attack - Basic Team Base Defender" team. Again, this helps improve the odds that summoned eagles will be actively engaged.

## Modifying the AI to Allow Banner Carriers to Automatically Combine with Level 1 Battalions

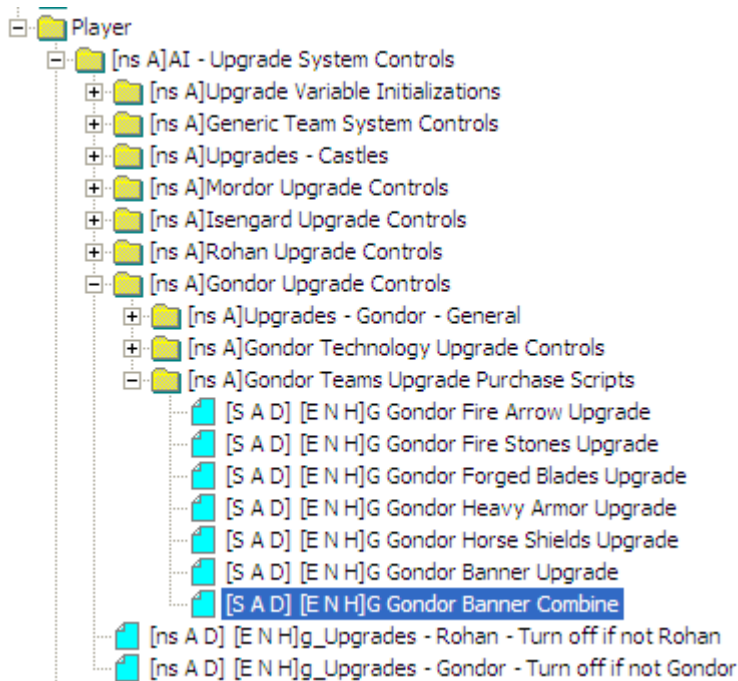
Objective: Modify the game AI so that Gondor banner carriers summoned by Boromir will automatically combine with level 1 battalions.

We previously modified the AI so that Boromir will create banner carriers. Now we need to get them to combine with level one battalions.

Be sure you have placed a copy of your INI file with the previously described banner carrier modifications in your game folder, such as C:\Program Files\EA GAMES\The Battle for Middle-earth (tm). As discussed before, place the letter “a” in front of the file name (upper or lower case) so that WorldBuilder will read it first.

Next, open WorldBuilder (close it and reopen it if it was open when you added the INI copy to the game folder). Open your copy of the “ai\_upgrade\_execution” library file. You will create a new file as indicated below (copy the existing Gondor Banner Upgrade script and then modify it).

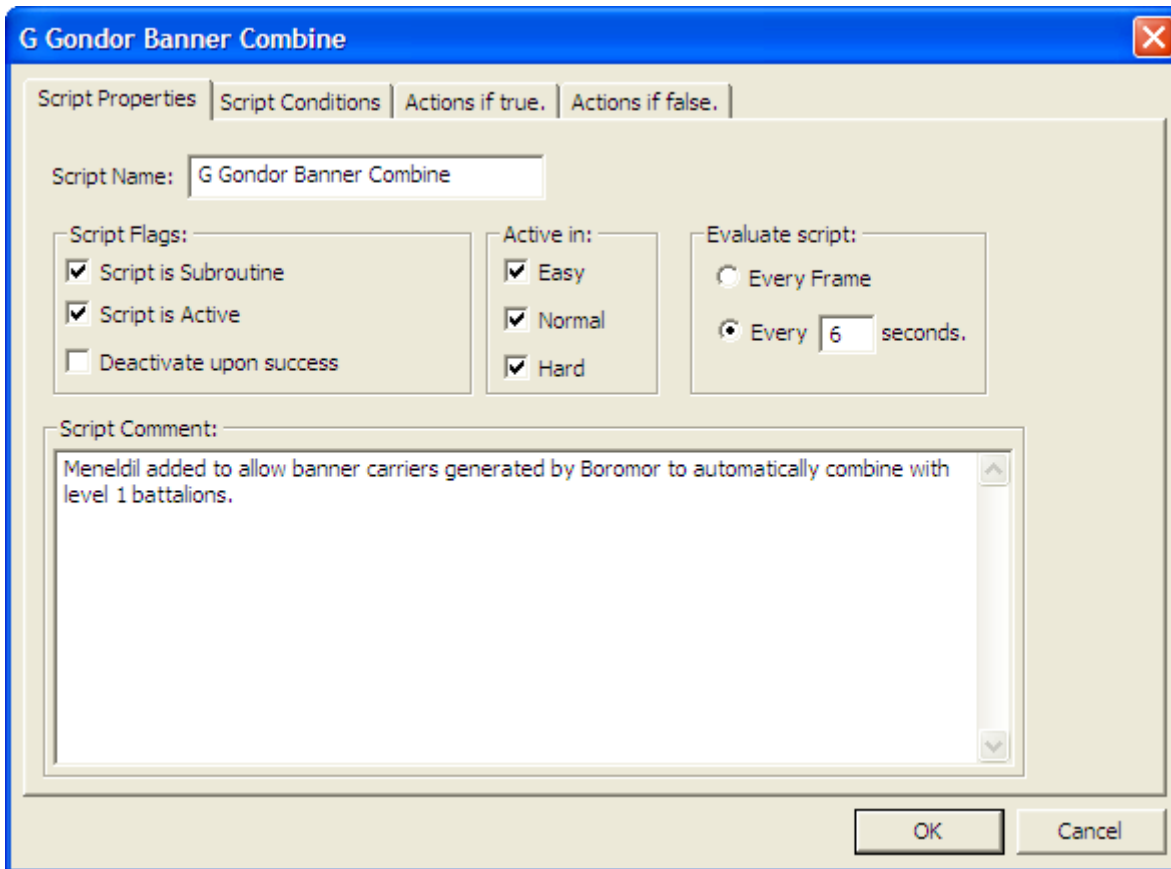
From within WorldBuilder, open the “ai\_upgrade\_execution” library script window and add a new script as indicated below. The easiest way to do this is to just copy the “Gondor Banner Upgrade” script and modify it.



Even though there is no cost for executing this new script, I placed it here in order in the purchase scripts in order to be in the same location as the normal level 2 upgrade since they are related.

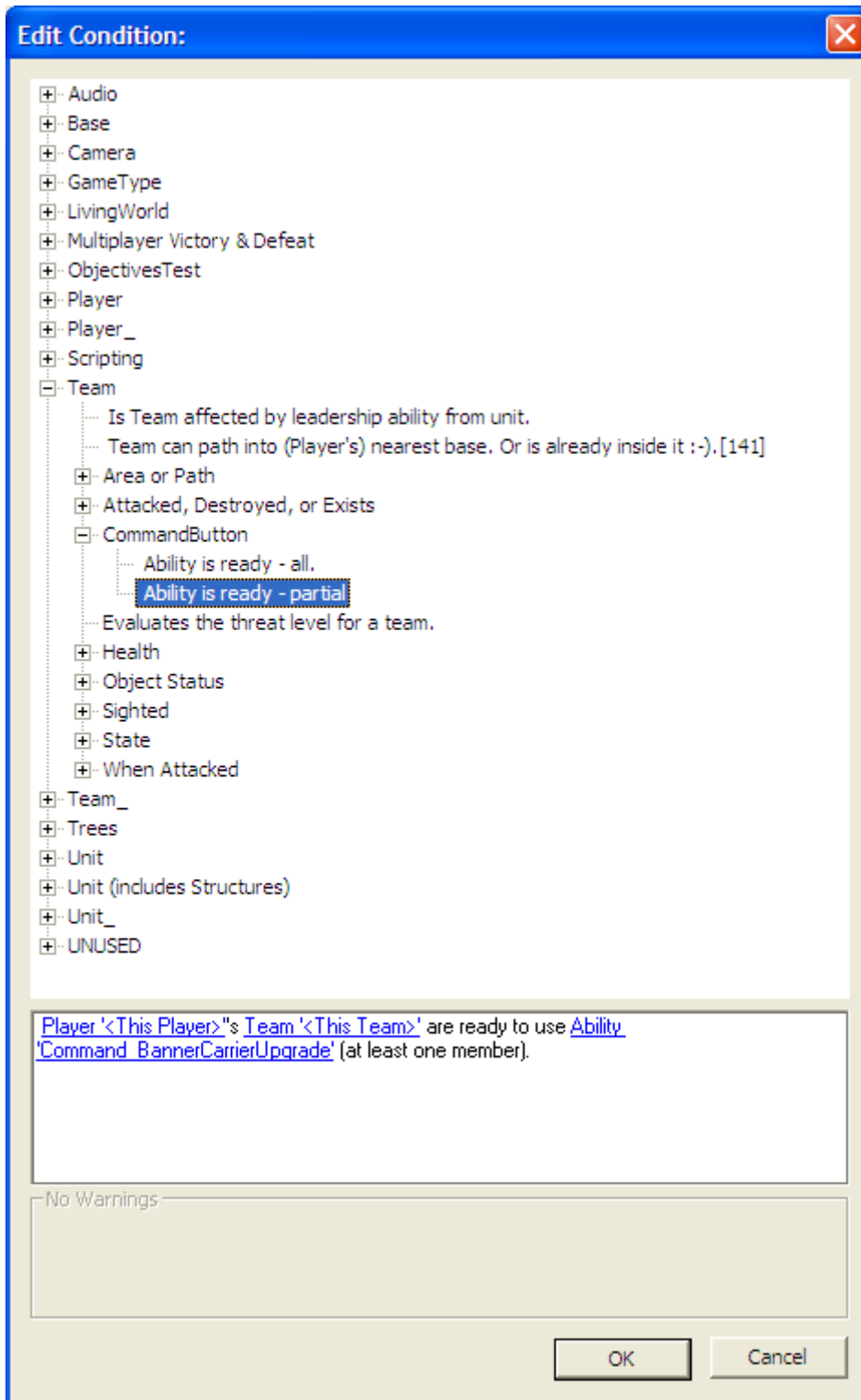


The “Script Properties” tab should look something like this.

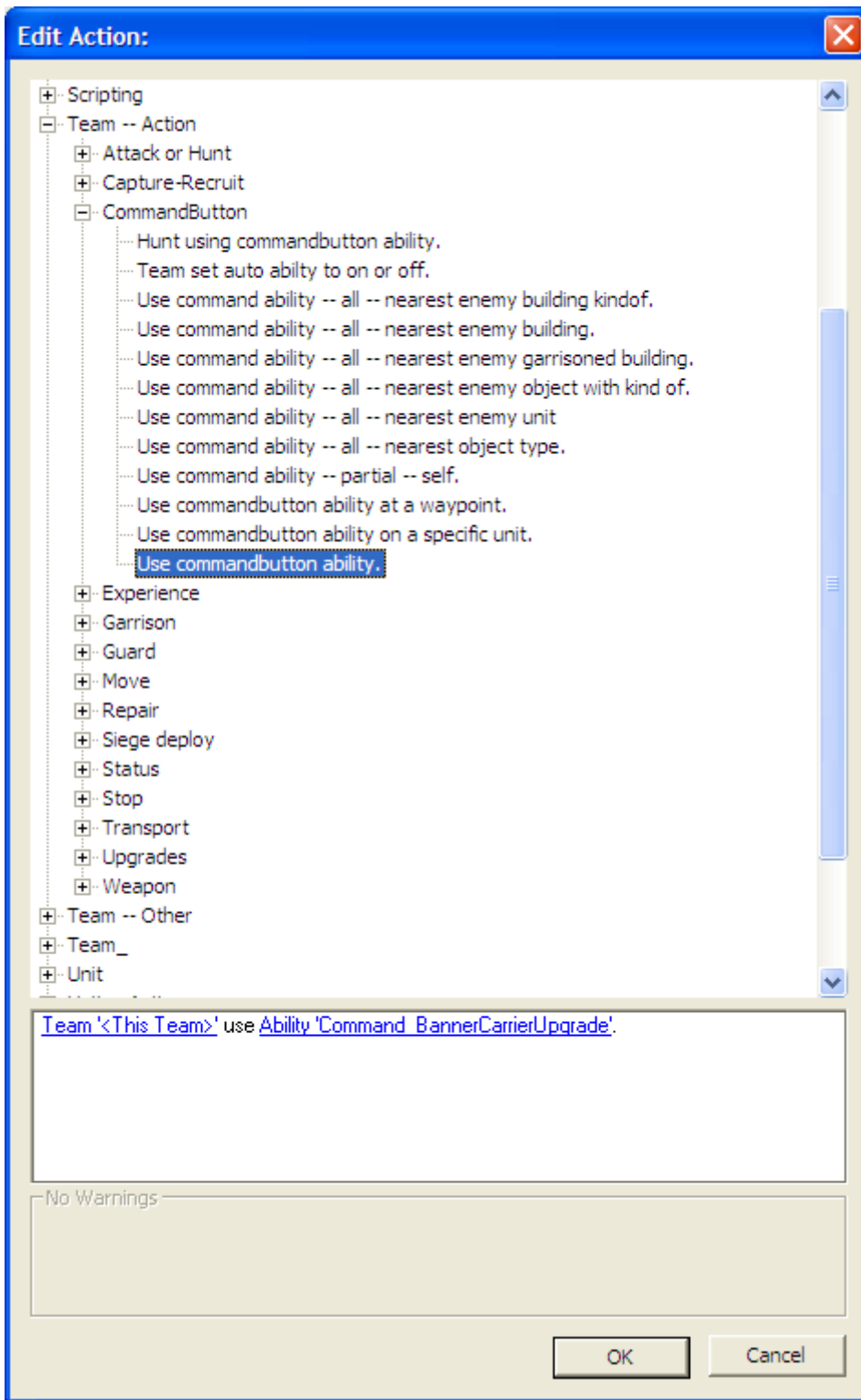


The next page will address creating the script.

Go to the “Script Conditions” tab and add the following code.



Click OK. Next, in the “Actions if True” tab, add the following command button code.



The final script should look like this:

```

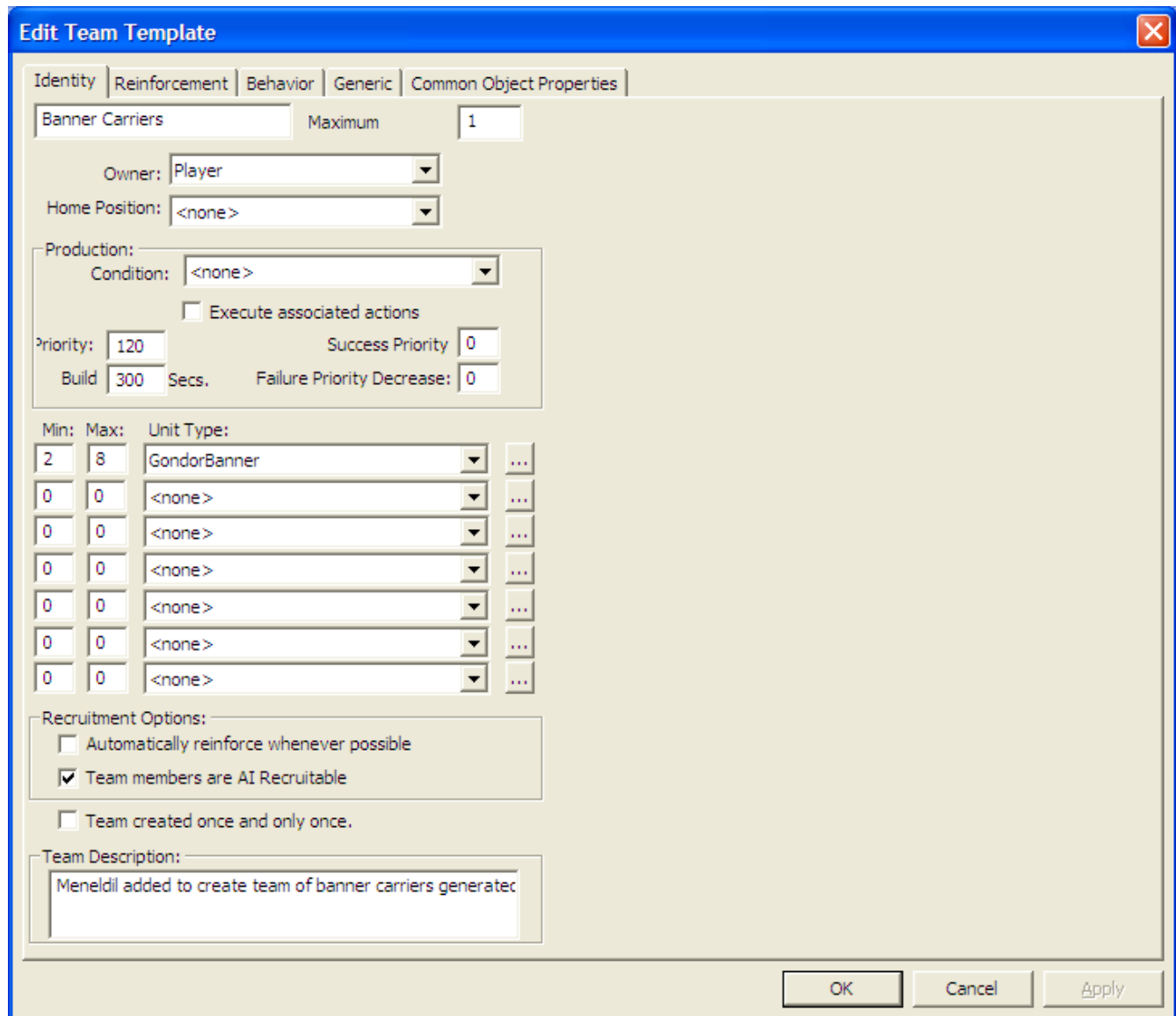
*** IF ***
  Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_BannerCarrierUpgrade' (at least
  one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_BannerCarrierUpgrade'.

```

Save the file and close WorldBuilder. Use FinalBIG to add it to your INI file. Use this file path: libraries\ai\_upgrade\_execution\ai\_upgrade\_execution.map.

Once this has been added to your INI file, add a new saved copy to your game folder, replacing the previous copy. Next, open the “ai\_gondor” library file from within WorldBuilder.

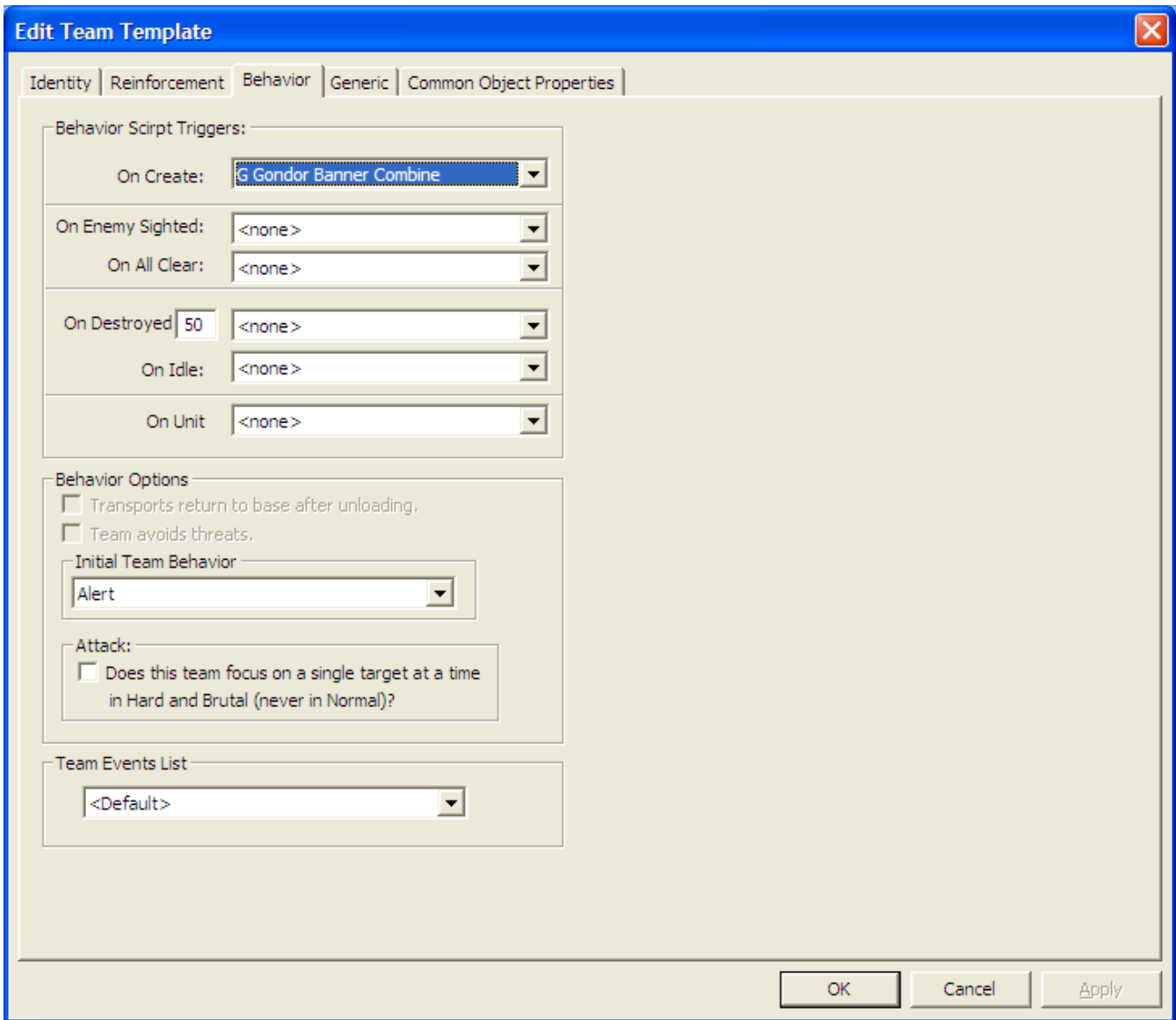
Open the Team Builder window and copy the “Rohirrim” team. Rename it to “Banner Carriers” and modify the “Identity” tab as indicated below.



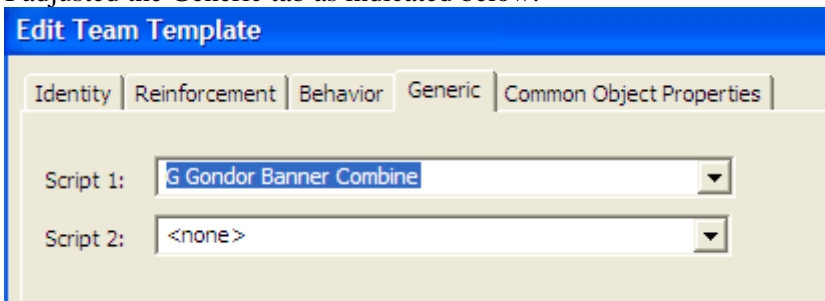
I chose the above min/max range as indicated because we previously modified the start-up team to include 2 banner carriers and because Boromir produces 4 banner carriers at a time (a maximum of 8 allows for two iterations in case there is a glitch).

Note: If Gondor doesn't have any level 1 troops available, the banner carriers will either engage the enemy as stand alone soldiers or they will wait until a level 1 battalion becomes available. Further, if a banner carrier passes by an enemy on the way to delivering an upgrade, it will stop to fight the enemy.

The “Behavior” tab should look like this:

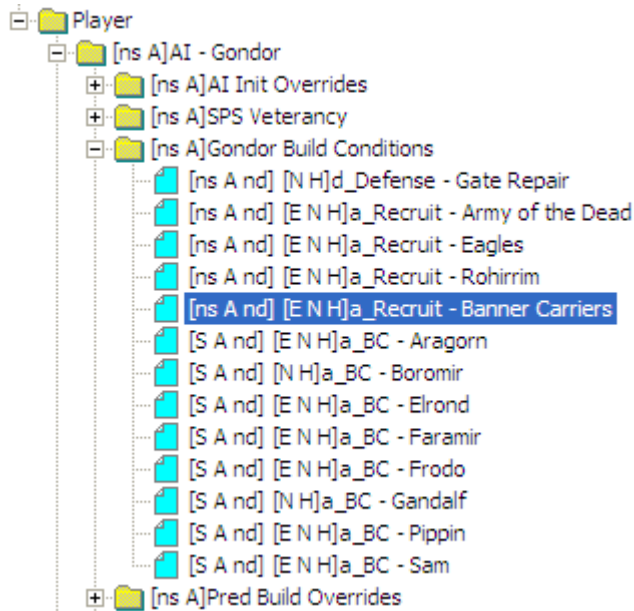


I adjusted the Generic tab as indicated below:

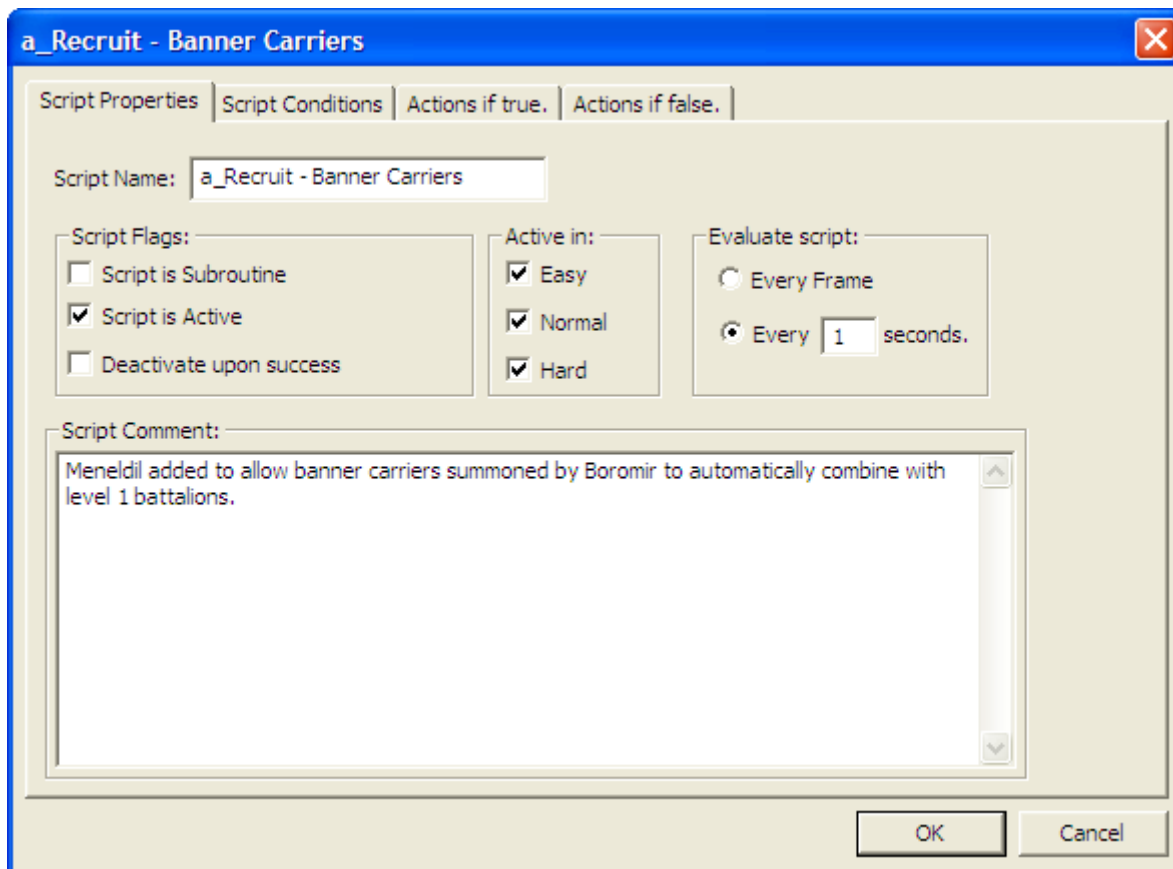


Part of the reason I did it this way is that all of the banner carriers simultaneously try and upgrade the same battalion. If one succeeds, the other ones stop. We need the remaining banner carriers to continue looking for level one battalions to combine with. Be aware that if you add additional scripts to the above team template, it will likely cause performance issues with the banner carriers.

Now open the scripts window and add a new script as indicated below (just copy the “Recruit - Rohirrim” script and modify it).



The Script Properties tab should look like this.



Go to the “Script Conditions” tab and create the following:

\*\*\* IF \*\*\*

Player '<This Player>' has Greater Than or Equal To 2 unit or structure of type 'GondorBanner'

Here is the condition reference:

- [-] Player
  - [+] Area
  - [+] Attacked or Destroyed
  - [+] CommandPoints
  - [+] Experience
  - [+] Faction and Start Position (Skirmish)
  - [+] Garrisoned
  - [-] Owns
    - ..... Player currently controls N or fewer bases.[131]
    - ..... Player has (comparison) objects with a model condition.
    - ..... Player has (comparison) units more than x distance from object.
    - ..... Player has (comparison) number of credits.
    - ..... Player has (comparison) unit type.
    - ..... Player has built an object type.
    - ..... Player has lost an object of type.
    - ..... Player owns Team.
    - ..... Player owns Unit.

Go to the “Actions if True” tab and create the following:

\*\*\* THEN \*\*\*

Team 'Banner Carriers' will recruit 2 units of type 'GondorBanner' from nearby recruitable allied teams.  
Team 'Banner Carriers' use Ability 'Command\_BannerCarrierUpgrade'.

Here are the action references:

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>[-] Team -- Action<ul style="list-style-type: none"><li>[+] Attack or Hunt</li><li>[-] Capture-Recruit<ul style="list-style-type: none"><li>..... Capture unowned faction unit -- nearest.</li><li>..... Team recruits combo units from another specific team.</li><li>..... Team recruits from another specific team.</li><li>..... Team recruits from same player and nearby allied AI teams.</li></ul></li><li>[+] CommandButton</li></ul></li></ul> | <ul style="list-style-type: none"><li>[-] Team -- Action<ul style="list-style-type: none"><li>[+] Attack or Hunt</li><li>[+] Capture-Recruit</li><li>[-] CommandButton<ul style="list-style-type: none"><li>..... Hunt using commandbutton ability.</li><li>..... Team set auto ability to on or off.</li><li>..... Use command ability -- all -- nearest enemy building kindof.</li><li>..... Use command ability -- all -- nearest enemy building.</li><li>..... Use command ability -- all -- nearest enemy garrisoned building.</li><li>..... Use command ability -- all -- nearest enemy object with kind of.</li><li>..... Use command ability -- all -- nearest enemy unit</li><li>..... Use command ability -- all -- nearest object type.</li><li>..... Use command ability -- partial -- self.</li><li>..... Use commandbutton ability at a waypoint.</li><li>..... Use commandbutton ability on a specific unit.</li><li>..... Use commandbutton ability.</li></ul></li></ul></li></ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The final script should look like this:

```
*** IF ***
  Player '<This Player>' has Greater Than or Equal To 2 unit or structure of type 'GondorBanner'
*** THEN ***
  Team 'Banner Carriers' will recruit 2 units of type 'GondorBanner' from nearby recruitable allied teams.
  Team 'Banner Carriers' use Ability 'Command_BannerCarrierUpgrade'.
```

The reason I used the number 2 is because we previously modified the game such that Gondor starts with 2 banner carriers. Save your “ai\_gondor” library file and add it to your INI file with this path:  
libraries\ai\_gondor\ai\_gondor.map

To make the game more challenging when playing against Gondor, you could have Boromor create banner carriers every 4 minutes instead of every 6 minutes as we previously specified. To do this, open the “lib\_hero\_behaviors” library file. From within the Scripts window, go to the “Actions if True” tab and create a new script using Unit (includes Structures) -- Action > Special Power > Countdown timer -- set so that your final script looks like this.

```
*** IF ***
  Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpawnGondorBannerCarriers' (at least one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpawnGondorBannerCarriers'.
  Set Unit 'AI_HERO_BOROMIR's Special power 'SuperweaponSpawnGondorBannerCarriers' to 240 seconds.
```

Now Boromir will create banner carriers every 4 minutes instead of 6. Being able to adjust the timer for special powers can definitely make the game more challenging.

Save your file and add it to your INI with this path: libraries\lib\_hero\_behaviors\ lib\_hero\_behaviors.map

Be sure to remove your mod copy from the game folder when you are done.

Start a game and play against Gondor. The two banner carriers that are present when the game starts should combine with the two starting fighter battalions. When Boromir generates additional banner carriers, they should automatically seek out level one battalions to combine with. If you cannot easily see what’s going on, add the “Map View” capability discussed further on in this document.



## **Adding Additional Gondor Teams to the Game AI**

We've added a number of new summoned units and hordes. We should create teams for them so that they can be recruited and effectively used. Remember that it's not enough to summon units or hordes. Unless the game AI knows what to do with them, they'll just stand there and do nothing unless maybe you come to them.

We've already created teams for summoned eagles and banner carriers. Here is a summary of other potential Gondor teams.

### **Boromir Reinforcements**

GondorKnightHorde\_Summoned (2)  
GondorTowerShieldGuardHorde\_Summoned (2)  
Trebuchet\_Summoned (2)

### **Elrond's Death Tower**

GondorElvenWarriorHorde (1)  
ElvenScout (2)

### **Faramir Knights**

GondorCavalry\_Summoned (12)

### **Faramir Rangers**

GondorRangerHorde\_Summoned (2)

### **Last Alliance**

LAElvenWarrior\_Summoned (5)  
LAGondorArcher\_Summoned (5)  
LAGondorBanner\_Summoned (5)  
LAGondorFighter\_Summoned (5)  
Isildur\_Summoned (1)

### **Pippin Gondor Soldiers**

GondorFighterTriangleHorde\_Summoned (1)  
GondorFighterSquareHorde\_Summoned (1)  
GondorFighterPentagonHorde\_Summoned (1)

### **Pippin Ents**

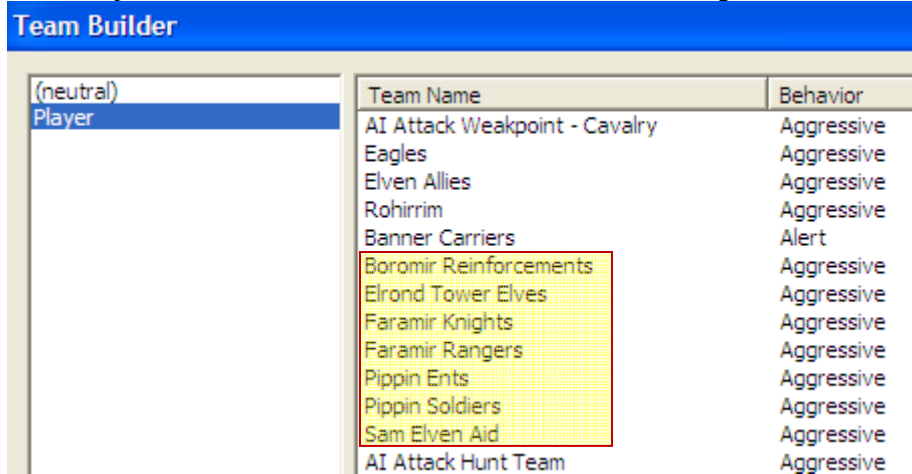
RohanEntFir\_Summoned (2)  
RohanEntBirch\_Summoned (1)  
RohanEntBirch (1)

### **Sam Elven Aid**

SingleElvenWarrior\_Summoned (5)  
RohanElvenWarriorHorde\_Summoned (1)  
ElrondElvenWarriorSwordHorde\_Summoned (2)

We'll add these teams to the "ai\_gondor.map" library from within the Team Builder window.

Here's a partial section of the Team Builder window showing the new teams.

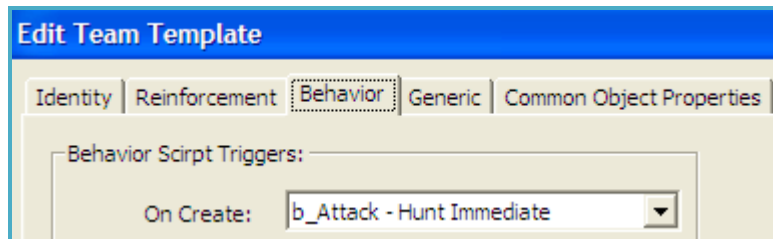


Team Name	Behavior
AI Attack Weakpoint - Cavalry	Aggressive
Eagles	Aggressive
Elven Allies	Aggressive
Rohirrim	Aggressive
Banner Carriers	Alert
Boromir Reinforcements	Aggressive
Elrond Tower Elves	Aggressive
Faramir Knights	Aggressive
Faramir Rangers	Aggressive
Pippin Ents	Aggressive
Pippin Soldiers	Aggressive
Sam Elven Aid	Aggressive
AI Attack Hunt Team	Aggressive

Please note that there is no team for the “Last Alliance” because I’ve included those summoned units with the “Elven Allies” team. There will be more on that later when we add the “Last Alliance” to the AI. Search for “Adding Last Alliance Power to the Gondor Faction AI” further below.

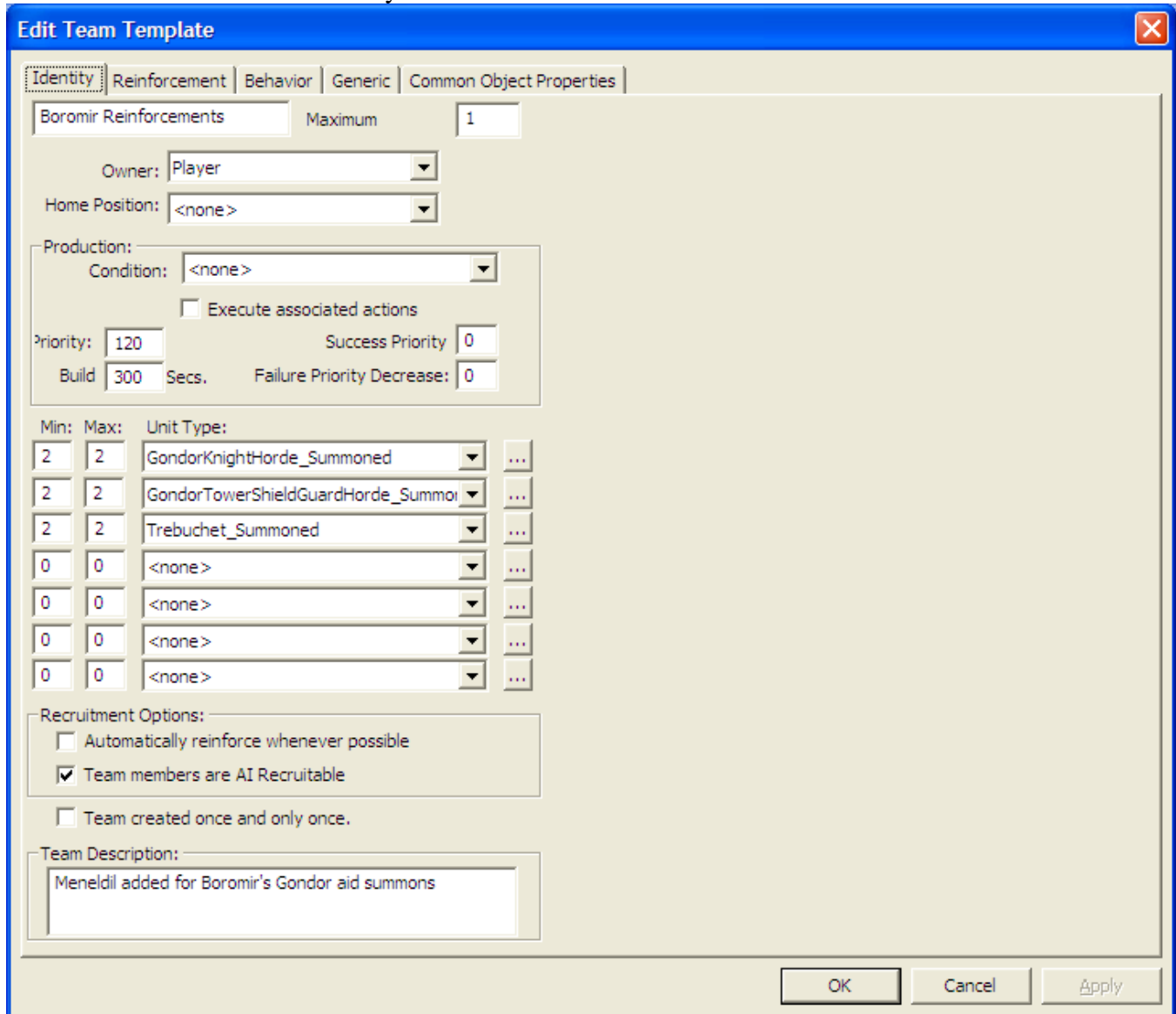
I will show an example for Boromir’s Reinforcements. I will leave it to you to create the other teams based on this example.

Boromir Reinforcements – Behavior tab (partial window capture)



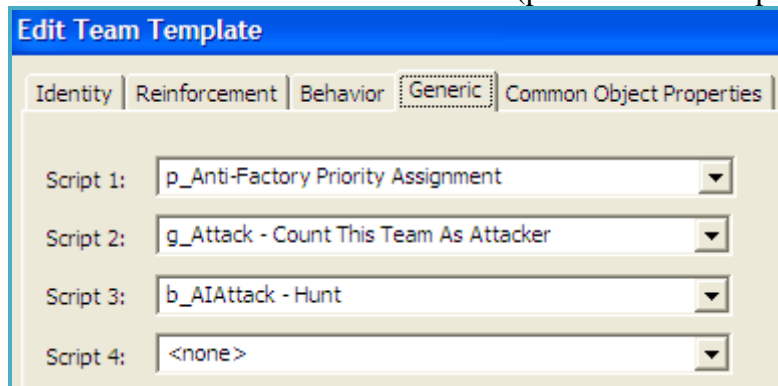
Note: I made this the same for all of the new teams referenced in the above list because we want the summoned units & hordes to start attacking as soon as possible. Also, all of the behaviors are set to “Aggressive.”

## Boromir Reinforcements – Identity tab



Note that I simply listed the names and quantities of the summoned objects from the OCL.

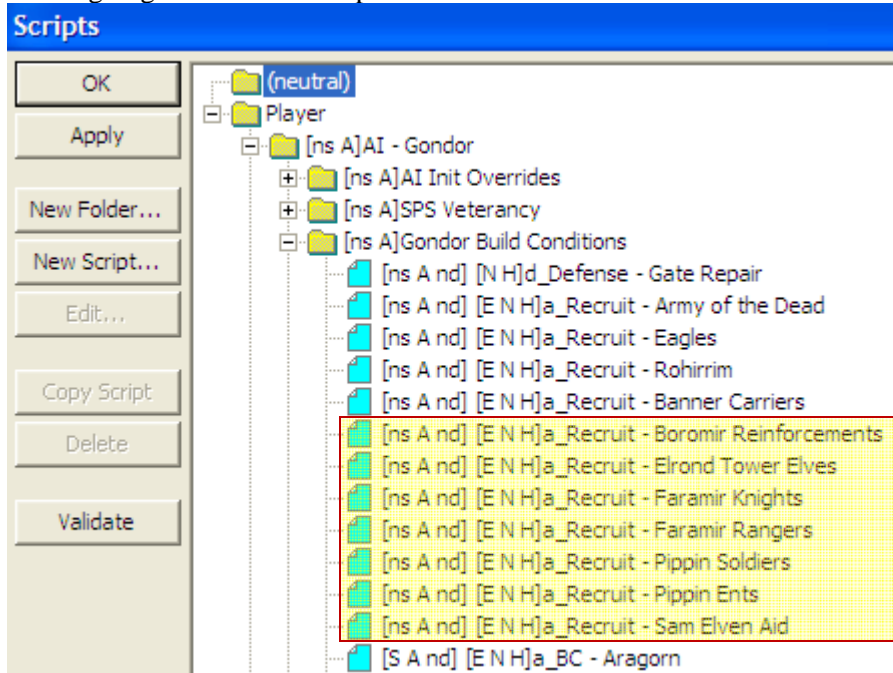
## Boromir Reinforcements – Generic tab (partial window capture)



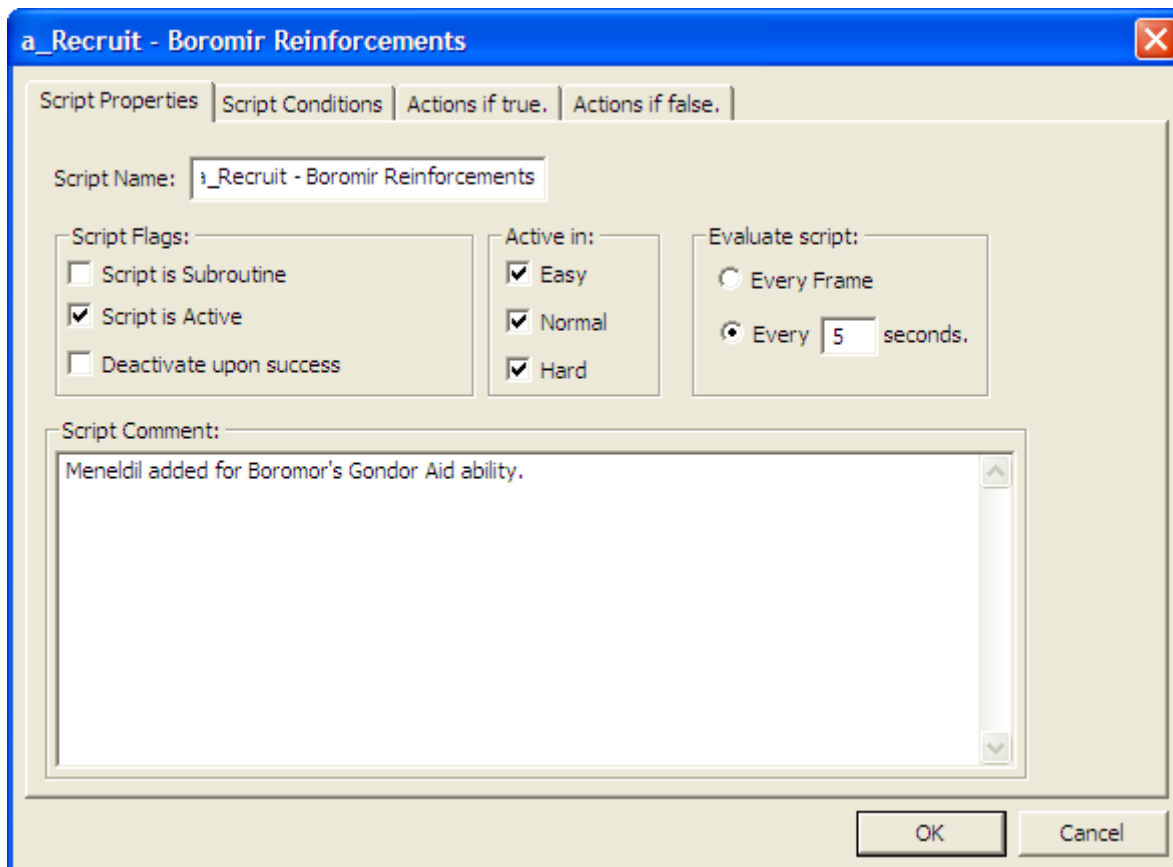
Note: I recommend keeping the number of scripts to a minimum. However, feel free to adjust as you see fit. For example, instead of “p\_Anti-Factory Priority Assignment” you can use “p\_Anti-Infantry Priority Assignment” or “p\_Anti-Cavalry Priority Assignment” for some of the teams.

Now that the teams are in place, we need to create recruitment scripts. Close the “Team Builder” window by clicking the “OK” button (don’t hit the escape key or you’ll lose your work!). Now open the “Scripts” window.

We’re going to create the scripts shown below.



All of the “Script Properties” tabs will look similar to this.



Here's Boromir's Gondor Aid recruitment script (example 1).

```
*** IF ***
  Player '<This Player>' has Greater Than 0 unit or structure of type 'GondorKnightHorde_Summoned'
  *AND* Player '<This Player>' has Greater Than 0 unit or structure of type
'GondorTowerShieldGuardHorde_Summoned'
  *AND* Player '<This Player>' has Greater Than 0 unit or structure of type 'Trebuchet_Summoned'
*** THEN ***
  Team 'Boromir Reinforcements' will recruit 2 units of type 'GondorKnightHorde_Summoned' from nearby
recruitable allied teams.
  Team 'Boromir Reinforcements' will recruit 2 units of type 'GondorTowerShieldGuardHorde_Summoned' from
nearby recruitable allied teams.
  Team 'Boromir Reinforcements' will recruit 2 units of type 'Trebuchet_Summoned' from nearby recruitable allied
teams.
```

As you can see, this is just a summary of what's called for in the Object Creation List for this particular ability. Repeat this method for the other build condition scripts.

Here's Elrond's Tower Elves recruitment script (example 2).

```
*** IF ***
  Player '<This Player>' has Greater Than 0 unit or structure of type 'GondorElvenWarriorHorde'
  *AND* Player '<This Player>' has Greater Than 2 unit or structure of type 'ElvenScout'
*** THEN ***
  Team 'Elrond Tower Elves' will recruit 1 units of type 'GondorElvenWarriorHorde' from nearby recruitable allied
teams.
  Team 'Elrond Tower Elves' will recruit 2 units of type 'ElvenScout' from nearby recruitable allied teams.
```

Note that the script checks to see if there are more than 2 Elven Scouts because we made it so that the game starts with 2 of them. We want those to join another team.

Remember you can find the appropriate script commands under the following conditions.

- Player > Owns > Player has (comparison) unit type.
- Team -- Action > Capture-Recruit > Team recruits from same player and nearby allied AI teams.

Note: These new teams may not work properly until we've updated the "lib\_object\_lists.map" library file. More on that later.

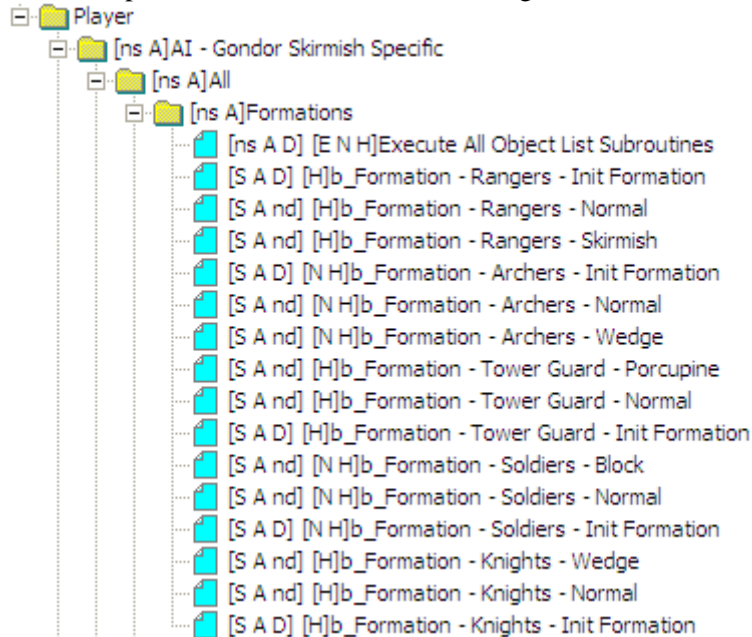
First, though, we're going to address the new single horde formations that we previously added.

## Adding New Gondor Horde Formations to the Game AI

As you know, we previously added some new single horde formations for Gondor. As mentioned before, the game AI doesn't know how to deal with this. Assuming you want to incorporate additional formations in your mod, this shows you one way to do it.

You may think you should modify the "lib\_formation\_behaviors" library file since it has the name "formation" in it. That's true, but for Gondor skirmish formation behaviors, however, you need to go to the "ai\_gondorskirmish" library file. We'll still need to address the "lib\_formation\_behaviors" library file, but we'll get to that later.

In the scripts window, look for the following:



These are all of the formation scripts for the various Gondor hordes. One simple approach for dealing with the extra formations is to add extra formation toggle commands to the scripts. This would need to be done for the "Normal" script formations since they were originally intended to take the horde from a special formation to a normal line formation. Here is what the codes would look like.

### b\_Formation - Rangers - Normal

```
*** IF ***
  Team '<This Team>' has Greater Than threat level 10.00 within radius 100.00
  *AND* Team '<This Team>' has the custom state 'AI_RANGER_FRM_2'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationRanger'.
  Team '<This Team>' use Ability 'Command_ToggleFormationRanger'.
  Team '<This Team>' set custom state 'AI_RANGER_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_RANGER_FRM_2' to FALSE
  Play Sound 'RangerVoiceLineFormation' as though it was a 2D sound (NOT RECOMMENDED for 3D sounds).
```

Note that I added an extra formation toggle command as well as a voice sound for feedback.

### b\_Formation - Archers - Normal

```
*** IF ***
  Team '<This Team>' has Greater Than threat level 10.00 within radius 100.00
  *AND* Team '<This Team>' has the custom state 'AI_GONDOR_ARCHERS_FRM_2'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorArcher'.
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorArcher'.
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_2' to FALSE
  Play Sound 'YeomanArcherVoiceLineFormation' as though it was a 2D sound (NOT RECOMMENDED for 3D sounds).
```

Note that I added an extra formation toggle command as well as a voice sound for feedback.

### b\_Formation - Tower Guard - Normal

```
*** IF ***
  Team '<This Team>' has Less Than or Equal threat level 0.00 within radius 300.00
  *AND* Team '<This Team>' has the custom state 'AI_TOWER_GUARD_FRM_2'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationTowerGuard'.
  Team '<This Team>' use Ability 'Command_ToggleFormationTowerGuard'.
  Team '<This Team>' use Ability 'Command_ToggleFormationTowerGuard'.
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_2' to FALSE
  Play Sound 'TowerGuardVoiceLineFormation' as though it was a 2D sound (NOT RECOMMENDED for 3D sounds).
```

Note that I added two extra formation toggle commands as well as a voice sound for feedback.

### b\_Formation - Soldiers - Normal

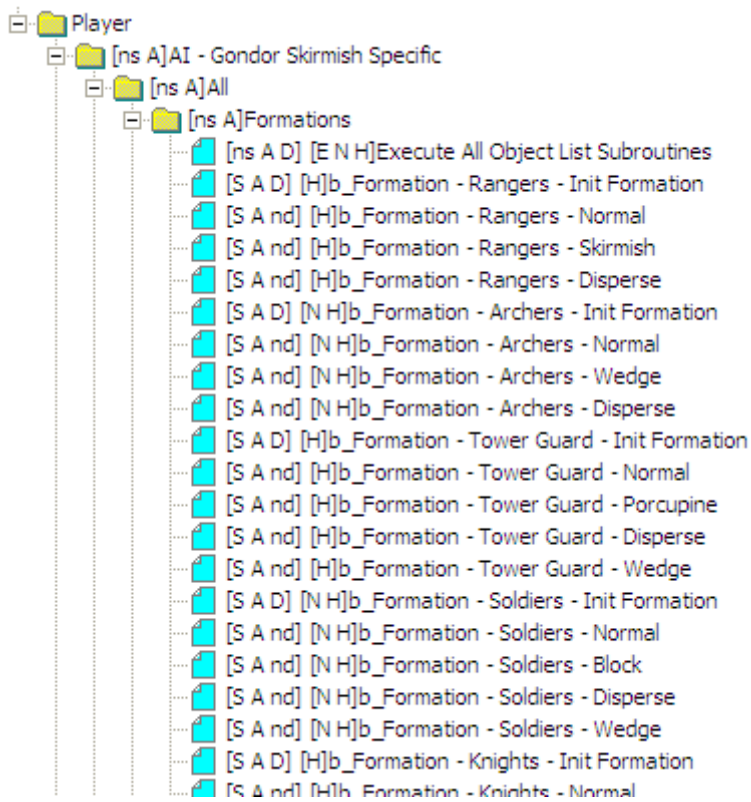
```
*** IF ***
  Team '<This Team>' has Less Than or Equal threat level 0.00 within radius 100.00
  *AND* Team '<This Team>' has the custom state 'AI_SOLDIER_FRM_2'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorFighter'.
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorFighter'.
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorFighter'.
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_2' to FALSE
  Play Sound 'GondorSoldierVoiceLineFormation' as though it was a 2D sound (NOT RECOMMENDED for 3D sounds).
```

Note that I added two extra formation toggle commands as well as a voice sound for feedback.

If you choose to implement these scripts while playing against Gondor in skirmish mode, you will find that they are partially working. That is, you will hear the voices that were added above (and it quickly gets annoying). However, the desired effect (particularly not having any hordes in the Disperse formation) does not work nearly as well as I would like. I'm not sure why. We could try a sequential script to provide a pause between toggle commands in order to improve our chances of making this work. However, I've decided to embrace all of the new formations instead of trying to suppress them. The following pages provide an example of what the new scripts would look like.

Note that there is an inherent assumption that the horde is first created in the normal formation. That does not always appear to be the case. If that happens, then the following scripts will not be very effective.

I'll start with a picture (see the next page) of the scripts. Note that a number of new ones have been created. I also rearranged their order a bit to make it easier for me to manage.



### b\_Formation - Rangers - Init Formation

```

*** IF ***
  True.
*** THEN ***
  Team '<This Team>' set custom state 'AI_RANGER_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_RANGER_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_RANGER_FRM_3' to FALSE

```

The formations are for Normal, Skirmish, and Disperse, respectively.

### b\_Formation - Rangers - Normal

```

*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 10.00 within radius 100.00
  *AND* Team '<This Team>' has the custom state 'AI_RANGER_FRM_3'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationRanger'.
  Team '<This Team>' set custom state 'AI_RANGER_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_RANGER_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_RANGER_FRM_3' to FALSE

```

Rangers are in Disperse Formation and will move to Normal Formation. I changed the custom state reference number from 2 to 3. There is redundancy in the custom state in order to help prevent an error.

### b\_Formation - Rangers - Skirmish

```

*** IF ***
  Team '<This Team>' has Less Than threat level 5.00 within radius 100.00
  *AND* Check if Team Team '<This Team>' has health Greater Than or Equal To to 80 percent
  *AND* Team '<This Team>' has the custom state 'AI_RANGER_FRM_1'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationRanger'.
  Team '<This Team>' set custom state 'AI_RANGER_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_RANGER_FRM_2' to TRUE
  Team '<This Team>' set custom state 'AI_RANGER_FRM_3' to FALSE

```



Rangers are in Normal Formation and will move to Skirmish Formation. I added a high-level health check. It won't matter when the horde is first produced, but it could later on.

#### b\_Formation - Rangers - Disperse

```
*** IF ***
  Team '<This Team>' has been attacked by a(n) 'Infantry_All'
  *AND* Team '<This Team>' has the custom state 'AI_RANGER_FRM_2'
*** OR ***
  Team '<This Team>' has been attacked by a(n) 'Base_Active_Defenses'
  *AND* Team '<This Team>' has the custom state 'AI_RANGER_FRM_2'
*** OR ***
  Team '<This Team>' has been attacked by a(n) 'Cavalry_Units'
  *AND* Team '<This Team>' has the custom state 'AI_RANGER_FRM_2'
*** OR ***
  Team '<This Team>' has been attacked by a(n) 'Hero_Units'
  *AND* Team '<This Team>' has the custom state 'AI_RANGER_FRM_2'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationRanger'.
  Team '<This Team>' set custom state 'AI_RANGER_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_RANGER_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_RANGER_FRM_3' to TRUE
```

Rangers are in Skirmish Formation and will move to Disperse Formation. I only want to go to Disperse formation if I'm being attacked since Ranger Skirmish armor is very weak.

#### b\_Formation - Archers - Init Formation

```
*** IF ***
  True.
*** THEN ***
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_3' to FALSE
```

The formations are Normal, Wedge, and Disperse, respectively.

#### b\_Formation - Archers - Normal

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 10.00 within radius 100.00
  *AND* Team '<This Team>' has the custom state 'AI_GONDOR_ARCHERS_FRM_3'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorArcher'.
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_3' to FALSE
```

Archers are in Disperse Formation and will move to Normal Formation. I changed the custom state reference number from 2 to 3.

#### b\_Formation - Archers - Wedge

```
*** IF ***
  Team '<This Team>' has Less Than threat level 5.00 within radius 100.00
  *AND* Check if Team Team '<This Team>' has health Greater Than or Equal To to 80 percent
  *AND* Team '<This Team>' has the custom state 'AI_GONDOR_ARCHERS_FRM_1'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorArcher'.
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_2' to TRUE
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_3' to FALSE
```

Archers are in Normal Formation and will move to Wedge Formation. I added a high-level health check. It won't matter when the horde is first produced, but it could later on. I also changed the threat concentration from 0/100 to 5/100.

#### b\_Formation - Archers - Disperse

```
*** IF ***
  Team '<This Team>' has been attacked by a(n) 'Infantry_All'
  *AND* Team '<This Team>' has the custom state 'AI_GONDOR_ARCHERS_FRM_2'
*** OR ***
  Team '<This Team>' has been attacked by a(n) 'Base_Active_Defenses'
  *AND* Team '<This Team>' has the custom state 'AI_GONDOR_ARCHERS_FRM_2'
*** OR ***
  Team '<This Team>' has been attacked by a(n) 'Cavalry_Units'
  *AND* Team '<This Team>' has the custom state 'AI_GONDOR_ARCHERS_FRM_2'
*** OR ***
  Team '<This Team>' has been attacked by a(n) 'Hero_Units'
  *AND* Team '<This Team>' has the custom state 'AI_GONDOR_ARCHERS_FRM_2'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorArcher'.
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_GONDOR_ARCHERS_FRM_3' to TRUE
```

Archers are in Wedge Formation and will move to Disperse Formation. I only want to go to Disperse formation if I'm being attacked since Archer Wedge armor is weak.

#### b\_Formation - Tower Guard - Init Formation

```
*** IF ***
  True.
*** THEN ***
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_3' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_4' to FALSE
```

I added a third and fourth formation (for Disperse and Wedge).

#### b\_Formation - Tower Guard - Normal

```
*** IF ***
  Team '<This Team>' has Less Than or Equal threat level 5.00 within radius 300.00
  *AND* Team '<This Team>' has the custom state 'AI_TOWER_GUARD_FRM_4'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationTowerGuard'.
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_3' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_4' to FALSE
```

Guards are in Wedge Formation and will move to Normal Formation. I changed the custom state reference number from 2 to 4.

### b\_Formation - Tower Guard - Porcupine

```
*** IF ***
  Team '<This Team>' has Greater Than or Equal To threat level 5.00 within radius 50.00
  *AND* Team '<This Team>' has the custom state 'AI_TOWER_GUARD_FRM_1'
  *** OR ***
  Team '<This Team>' has Object Status is 'IS_ATTACKING'
  *AND* Team '<This Team>' has the custom state 'AI_TOWER_GUARD_FRM_1'
  *** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationTowerGuard'.
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_2' to TRUE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_3' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_4' to FALSE
```

Guards are in Normal Formation and will move to Porcupine Formation. I changed the threat concentration from 5/300 to 5/50 and added a check to see if the guards are attacking.

### b\_Formation - Tower Guard - Disperse

```
*** IF ***
  Team '<This Team>' has Equal To threat level 0.00 within radius 300.00
  *AND* Check if Team Team '<This Team>' has health Greater Than or Equal To to 60 percent
  *AND* Team '<This Team>' has the custom state 'AI_TOWER_GUARD_FRM_2'
  *** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationTowerGuard'.
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_3' to TRUE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_4' to FALSE
```

Guards are in Porcupine Formation and will move to Disperse Formation. I don't want to go to Disperse formation unless I'm relatively safe and healthy.

### b\_Formation - Tower Guard - Wedge

```
*** IF ***
  Team '<This Team>' has the custom state 'AI_TOWER_GUARD_FRM_3'
  *** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationTowerGuard'.
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_3' to FALSE
  Team '<This Team>' set custom state 'AI_TOWER_GUARD_FRM_4' to TRUE
```

Guards are in Disperse Formation and will move to Wedge Formation. I want to get out of Disperse formation as quickly as possible.

### b\_Formation - Soldiers - Init Formation

```
*** IF ***
  True.
  *** THEN ***
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_3' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_4' to FALSE
```

I added a third and fourth formation (for Disperse and Wedge).

### b\_Formation - Soldiers - Normal

```
*** IF ***
  Team '<This Team>' has Less Than or Equal threat level 5.00 within radius 100.00
  *AND* Team '<This Team>' has the custom state 'AI_SOLDIER_FRM_4'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorFighter'.
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_1' to TRUE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_3' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_4' to FALSE
```

Soldiers are in Wedge Formation and will move to Normal Formation. I changed the custom state reference number from 2 to 4.

### b\_Formation - Soldiers - Block

```
*** IF ***
  Team '<This Team>' has Object Status is 'IS_ATTACKING'
  *AND* Team '<This Team>' has the custom state 'AI_SOLDIER_FRM_1'
*** OR ***
  Team '<This Team>' has Greater Than or Equal To threat level 10.00 within radius 100.00
  *AND* Team '<This Team>' has the custom state 'AI_SOLDIER_FRM_1'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorFighter'.
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_2' to TRUE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_3' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_4' to FALSE
```

Soldiers are in Normal Formation and will move to Block Formation. I added a check to see if the soldiers are attacking.

### b\_Formation - Soldiers - Disperse

```
*** IF ***
  Team '<This Team>' has Equal To threat level 0.00 within radius 300.00
  *AND* Check if Team Team '<This Team>' has health Greater Than or Equal To to 60 percent
  *AND* Team '<This Team>' has the custom state 'AI_SOLDIER_FRM_2'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorFighter'.
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_3' to TRUE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_4' to FALSE
```

Soldiers are in Block Formation and will move to Disperse Formation. I don't want to go to Disperse formation unless I'm relatively safe and healthy.

### b\_Formation - Soldiers - Wedge

```
*** IF ***
  Team '<This Team>' has the custom state 'AI_SOLDIER_FRM_3'
*** THEN ***
  Team '<This Team>' use Ability 'Command_ToggleFormationGondorFighter'.
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_1' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_2' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_3' to FALSE
  Team '<This Team>' set custom state 'AI_SOLDIER_FRM_4' to TRUE
```

Soldiers are in Disperse Formation and will move to Wedge Formation. I want to get out of Disperse formation as quickly as possible.

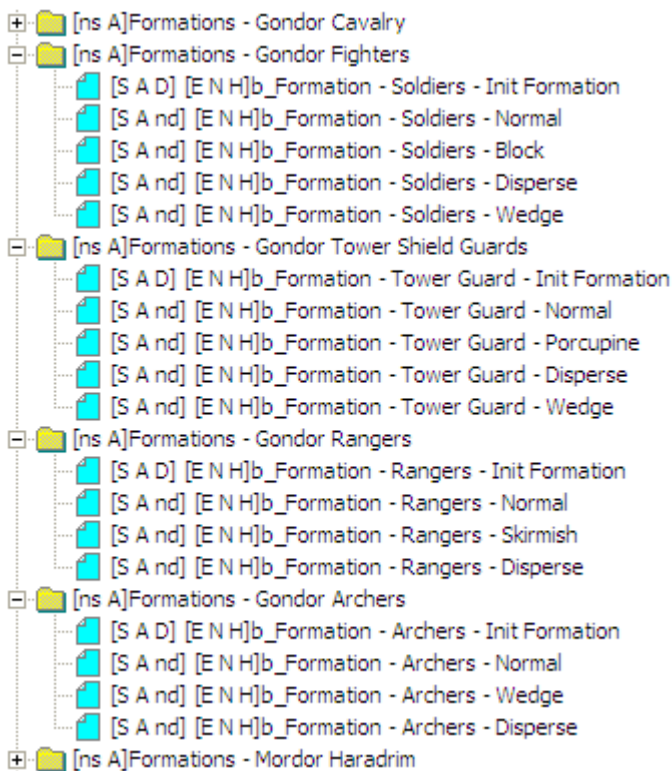
Even with all of these changes, the scripts are not fool-proof. You will still see some hordes lingering in the Disperse formation or bouncing between formations, but it's still a lot better than if no change had been made at

all. If this doesn't work as you would like, see if you can improve on the scripts or simply keep just the original formations. If you have an improvement suggestion, I would be interested to hear it.

Save the file and add it to your INI file as `libraries\ai_gondorskirmish\ai_gondorskirmish.map` (do you see the naming convention?).

Now that we've created these scripts, we have to make them accessible to the various teams located in the "ai\_gondor" library file. However, these new scripts are not accessible in the "ai\_gondor" generic tab unless they are first replicated in the "lib\_formation\_behaviors" file. In case you are not aware, you can have two copies of WorldBuilder running at the same time. Therefore, you can have the "ai\_gondorskirmish" and "lib\_formation\_behaviors" files open at the same time. It can help with the process of copying your scripts.

The following image shows the final scripts in the "lib\_formation\_behaviors" library script window. Again, these are exact copies of the scripts that were added to the "ai\_gondorskirmish" library file above.



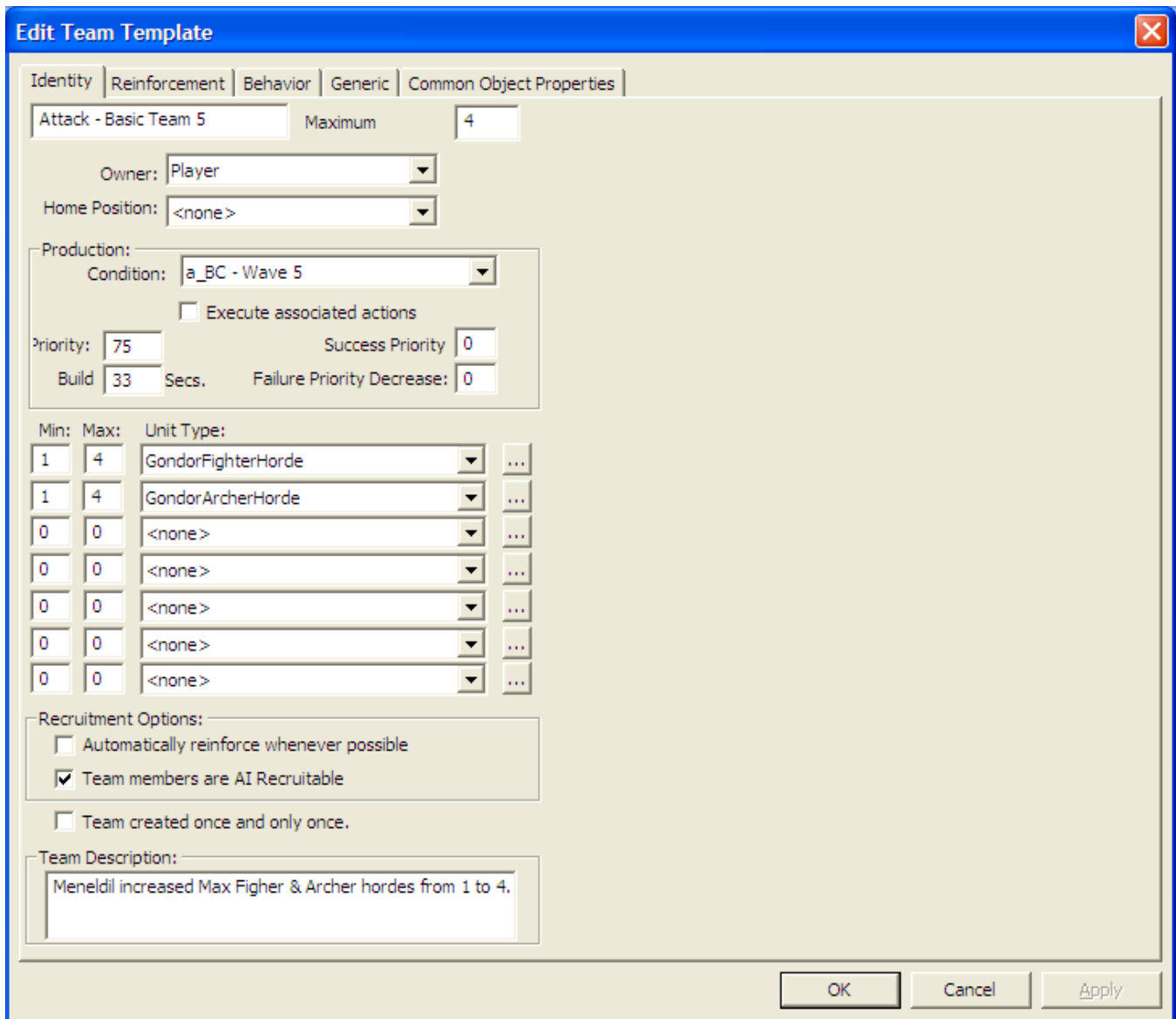
Once you have completed modifying the "lib\_formation\_behaviors" library file, save it and add it to your INI file as `libraries\lib_formation_behaviors\lib_formation_behaviors.map`. Close WorldBuilder if it is still open. As before, place an updated copy of your INI file (with a letter "a" at the beginning of the name) in the game folder. Open WorldBuilder and then open your "ai\_gondor" library file. Next, open the Team Builder window.

Unfortunately, the next part is a bit tedious. For each of the teams (except heroes and imported teams), we need to add the new formation scripts. However, we only need to add the ones that go with the team members. For example, we don't need to add ranger formations to a team that has no rangers. This seems obvious, I know, but I want to be clear.

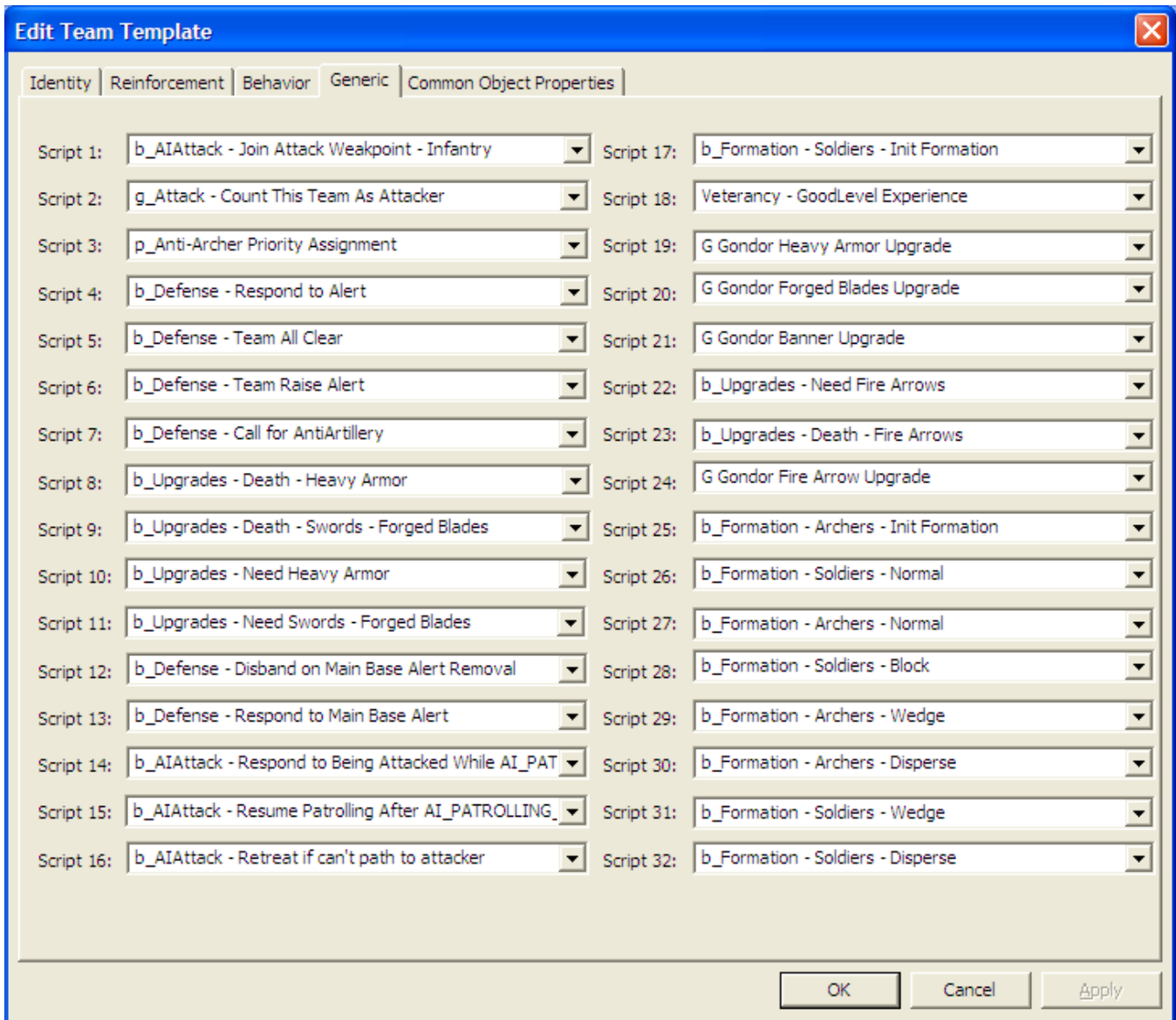
Tip: While you're doing this, take advantage of the opportunity to add appropriate upgrade scripts to your teams. That is, one or more of the following (some may already be in place): G Gondor Banner Upgrade, G Gondor Heavy Armor Upgrade, G Gondor Fire Arrow Upgrade, G Gondor Forged Blades Upgrade, G Gondor Horse Shields Upgrade, and G Gondor Fire Stones Upgrade.

Tip: Since we've significantly increased the original number of command points, feel free to increase the maximum number of unit types as well as the maximum number of teams in order to make better use of all the troops.

Here's an example for "Attack - Basic Team 5." Note that the maximum number of units are shown on the left side while the maximum number of teams that can be generated is shown in the upper right hand corner.



Here's an example of the "Generic" tab for "Attack - Basic Team 5." Note the new formation and upgrade scripts.



Note that I did not address the Disperse formation for combo-hordes. I may address that in a future version of this document.

As I indicated previously, this AI modification is not perfect. If you have improvement suggestions, I would be interested to hear them. I'm still learning, too.

I need to point out that we're still not done. This is because we have to add new units & hordes to the object list so that the game AI knows that they exist.

## Adding New Units and Hordes to the Object List

We have finished adding some new teams and formations. However, we're not done yet. In order for the AI to effectively use any new unit or horde, we need to add them to the Object List. If you don't, there's a good chance that even though they are created, the AI won't do anything with them. However, they will usually interact if you actively engage them even if they are not in the object list. That is, they don't actively seek out enemies, but they will engage enemies that come to them. If you're not planning to have the AI control a new object, then you don't need to include it in the list. For example, we won't be adding the summoned Gondor porter at this time in our AI modifications. Therefore, we don't need to include "WorkshopPorter\_Summoned" in our list. Also, objects like Elrond's Death Tower function when enemies approach, so the "DeathTower" doesn't need to be added to the object list, either.

From within WorldBuilder, open a copy of "lib\_object\_lists.map" that you plan to use for your mod. Take a moment to glance through the various scripts. As you can see, it's simply a list of all of the objects used by the game. It's not very exciting, I admit, but you should include any of your new units, hordes, and structures that you want the AI to do something with. This also includes new horde formations. I admit there are some that may not need to be included, such as the banner carrier, but I prefer to include an object that may not be needed rather than not include one that is needed.

Here are the scripts that we are going to update.

- g\_Init - Offensive Unit List
- g\_Init - Good Units List
- g\_Init - Hero Lists
- g\_Init - Artillery Lists
- g\_Init - Cavalry Lists
- g\_Init - Infantry Lists
- g\_Init - Archer Lists
- g\_Init - Gondor Lists

And here's what we will be adding to add to them. Recall that we added Elrond, Frodo, and Sam previously. Also, you need to stay consistent with all of the entry types. For example, in the Offensive Units List, there are both Offensive\_Units and Horde\_Units entries that you will need to create for your new hordes.

### g\_Init - Offensive Unit List

GondorElvenWarriorHorde  
GondorElvenWarriorSwordHorde  
GondorTowerFighterComboHorde

### g\_Init - Good Units List

ElvenElrond  
ElvenGondorBanner  
ElvenScout  
GondorBanner  
GondorCavalry\_Summoned  
GondorElvenWarrior  
GondorElvenWarrior  
GondorFighter\_Summoned  
GondorRanger\_Summoned  
GondorTowerShieldGuard\_Summoned  
Isildur\_Summoned  
LAElvenWarrior\_Summoned  
LAGondorArcher\_Summoned  
LAGondorBanner\_Summoned  
LAGondorFighter\_Summoned  
RohanEntBirch\_Summoned  
RohanEntFir\_Summoned  
SingleElvenWarrior\_Summoned  
Trebuchet\_Summoned



### g Init - Hero Lists

ElvenElrond  
Isildur\_Summoned

### g Init - Artillery Lists

Trebuchet\_Summoned

### g Init - Cavalry Lists

GondorCavalry\_Summoned  
GondorKnightHorde\_Summoned

### g Init - Infantry Lists

ElrondElvenWarriorSwordHorde\_Summoned  
GondorElvenWarriorSwordHorde  
GondorFighterHordeDispersed  
GondorFighterHordePhalanx  
GondorFighterPentagonHorde\_Summoned  
GondorFighterSquareHorde\_Summoned  
GondorFighterTriangleHorde\_Summoned  
GondorTowerFighterComboHorde  
GondorTowerShieldGuardHorde  
GondorTowerShieldGuardHorde\_Summoned  
GondorTowerShieldGuardHordeDispersed  
GondorTowerShieldGuardHordePhalanx  
GondorTowerShieldGuardHordeWallFormation  
LAGondorBanner\_Summoned  
LAGondorFighter\_Summoned

Note: I relocated the Tower Shield Guard Horde formation entries from the Archer List to the Infantry List.

### g Init - Archer Lists

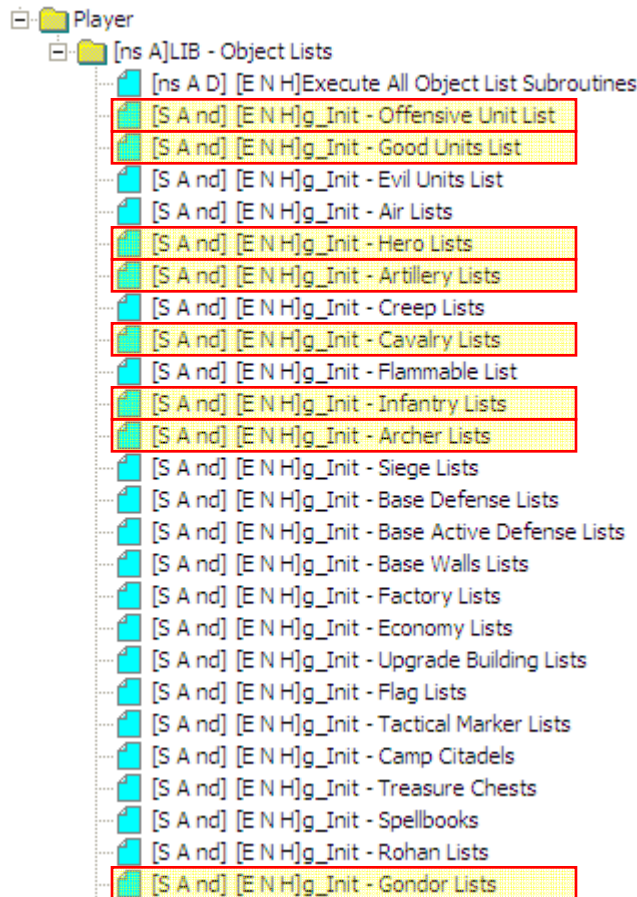
GondorArcherHordeDispersed  
GondorElvenWarriorHorde  
GondorRangerHorde\_Summoned  
GondorRangerHordeDispersed  
LAElvenWarrior\_Summoned  
LAGondorArcher\_Summoned  
SingleElvenWarrior\_Summoned

### g Init - Gondor Lists

ElrondElvenWarriorSwordHorde\_Summoned  
ElvenElrond  
ElvenGondorBanner  
ElvenScout  
GondorArcherHordeDispersed  
GondorBanner  
GondorCavalry\_Summoned  
GondorElvenWarriorHorde  
GondorElvenWarriorSwordHorde  
GondorFighterHordeDispersed  
GondorFighterHordePhalanx  
GondorFighterPentagonHorde\_Summoned  
GondorFighterSquareHorde\_Summoned  
GondorFighterTriangleHorde\_Summoned  
GondorKnightHorde\_Summoned  
GondorRangerHorde\_Summoned  
GondorRangerHordeDispersed  
GondorTowerFighterComboHorde  
GondorTowerShieldGuardHorde\_Summoned  
GondorTowerShieldGuardHordeDispersed  
GondorTowerShieldGuardHordePhalanx

**Isildur\_Summoned**  
**LAElvenWarrior\_Summoned**  
**LAGondorBanner\_Summoned**  
**LAGondorFighter\_Summoned**  
**RohanFrodo**  
**RohanSam**  
**SingleElvenWarrior\_Summoned**  
**Trebuchet\_Summoned**

From with WorldBuilder, open your previously modified “lib\_object\_lists.map” file and then open the Scripts window. We’ll be modifying the indicated scripts below. Don’t forget that some are in the Rohan Object Parameter list as well as the Gondor Object Parameter list.



When you’re done, save your file and add it to your mod. Below is an example of what was added to the Offensive Unit List.

```

'Offensive_Units' : add 'GondorElvenWarriorHorde'
'Horde_Units' : add 'GondorElvenWarriorHorde'
'Offensive_Units' : add 'GondorElvenWarriorSwordHorde'
'Horde_Units' : add 'GondorElvenWarriorSwordHorde'
'Offensive_Units' : add 'GondorTowerFighterComboHorde'
'Horde_Units' : add 'GondorTowerFighterComboHorde'

```

## Adding Last Alliance Power to the Gondor Faction AI

Objective: Have the game AI use the “Last Alliance” spell instead of the “Elven Allies” spell when playing against Gondor.

This assumes that you have already have the ability to use the “Last Alliance” spell in place of the “Elven Allies” spell when playing as Gondor. Refer to “Altering an Existing Spell Book Power: Elven Allies” above if you need to do this.

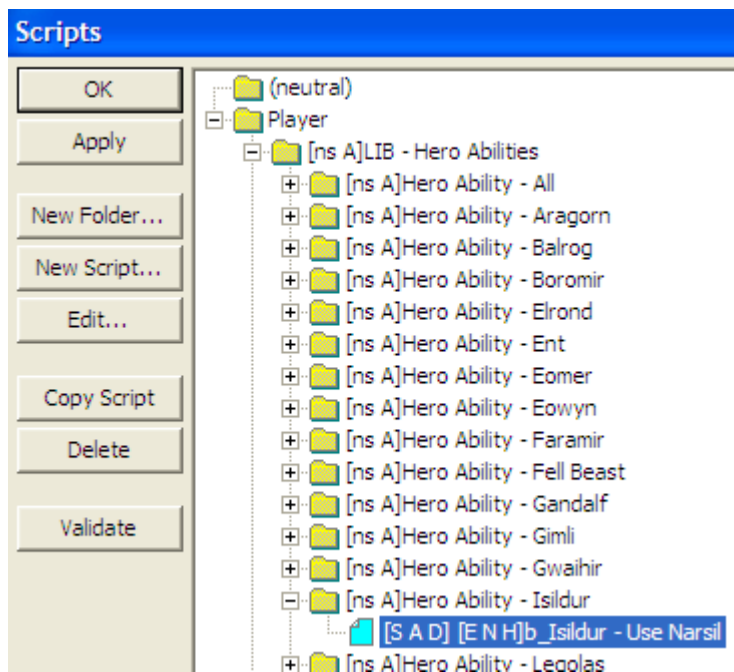
Before continuing, be sure you have placed a copy of your mod in your game folder and that you have placed the letter “A” in front of the file name.

We are going to modify three library files:

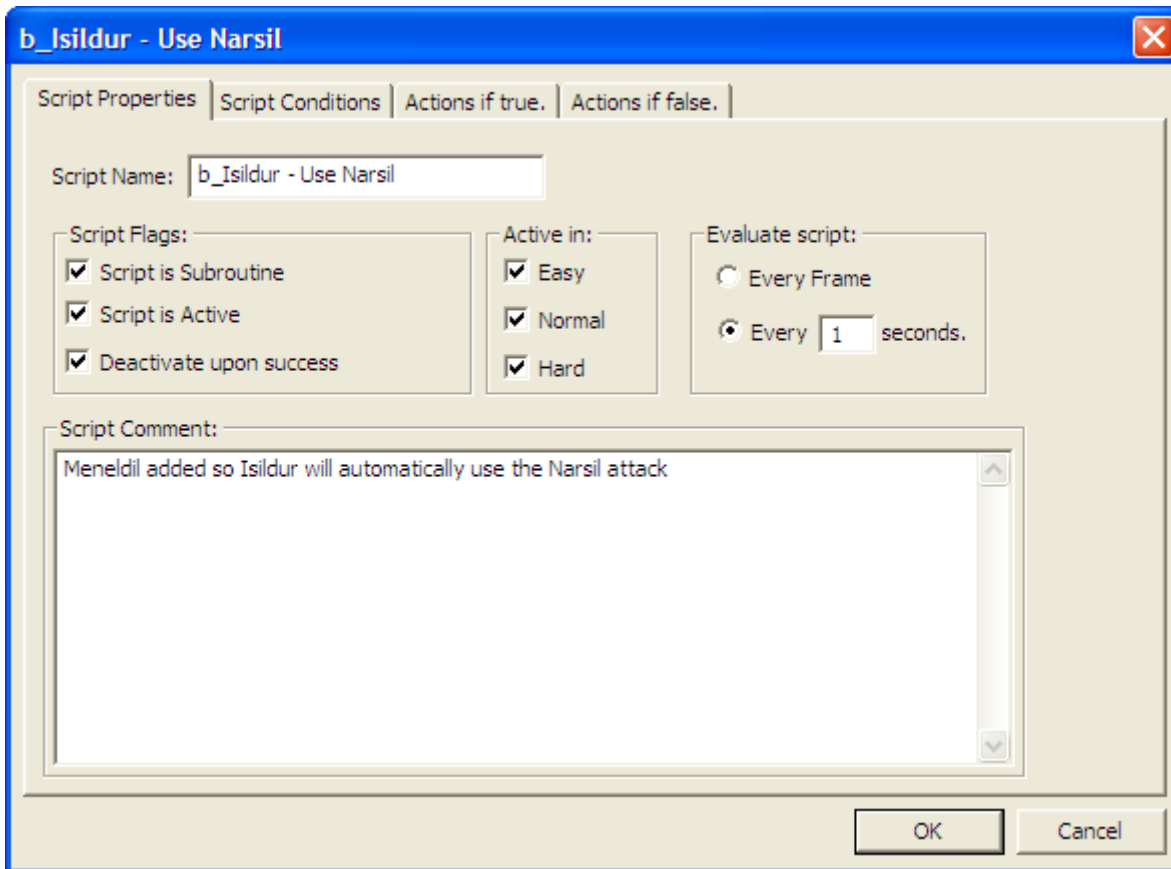
- lib\_hero\_behaviors.map
- ai\_gondor.map
- ai\_spell\_execution.map

The only reason we’re opening the hero behaviors file is to provide Isildur the ability to use the Narsil sword command. It’s not required, but it does provide a nice touch.

From within WorldBuilder, open your copy of the “lib\_hero\_behaviors.map” file. Open the scripts window and create a folder & script for Isildur, as indicated below.



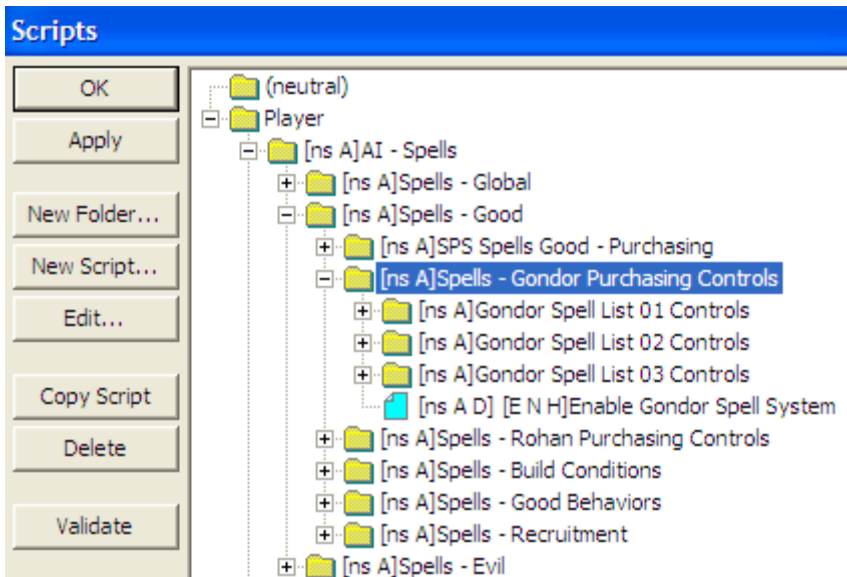
Here's what the new Script Properties tab looks like.



And here's the script.

```
*** IF ***
  Player '<This Player>'s Team '<This Team>' are ready to use Ability 'Command_SpecialAbilityNarsilAttack' (at least
one member).
*** THEN ***
  Team '<This Team>' use Ability 'Command_SpecialAbilityNarsilAttack'.
```

Save and close the file. Next, open your copy of the "ai\_spell\_execution" library file. Then open the scripts window. We will modify some of the scripts in the "Spells - Gondor Purchasing Controls" folder indicated below.



Since we're not planning to use the "Elven Allies" spell for Gondor, we can make use of existing "Elven Allies" scripts. Specifically, we're going to replace "SCIENCE\_ElvenAllies" with "SCIENCE\_LastAlliance" in both the "Script Conditions" and the "Actions if True" tabs for the "Purchase Elven Allies" scripts within each of the following folders:

- Gondor Spell List 01 - Normal
- Gondor Spell List 01 - Hard
- Gondor Spell List 02 - Normal
- Gondor Spell List 02 - Hard
- Gondor Spell List 03 - Normal
- Gondor Spell List 03 - Hard

Note: The game AI only calls for the "Elven Allies" spell when playing against Gondor or Rohan in Normal or Hard mode (not Easy mode).

From within the "Gondor Spell List 01 Controls" folder:

Gondor Spell List 01 - Normal

Gondor Spell List 01 - Norm - Purchase Elven Allies

```

*** IF ***
  Counter 'Gondor Spell List Choice' IS Equal To 1
  *AND* Flag named 'Elven Wood Spell Purchased' IS TRUE
  *AND* Player Player '<This Player>' can purchase Science 'SCIENCE_LastAlliance'.
*** THEN ***
  Player '<This Player>' attempts to purchase Science Science 'SCIENCE_LastAlliance'.
  Set Flag named 'Elven Allies Spell Purchased' to TRUE
  Enable Script 'Gondor Spell List 01 - Norm - Purchase Rohan Allies'.

```

## Gondor Spell List 01 - Hard

### Gondor Spell List 01 - Hard - Purchase Elven Allies

```
*** IF ***
Counter 'Gondor Spell List Choice' IS Equal To 1
*AND* Flag named 'Heal Spell Purchased' IS TRUE
*AND* Player Player '<This Player>' can purchase Science 'SCIENCE_LastAlliance'.
*** THEN ***
Player '<This Player>' attempts to purchase Science Science 'SCIENCE_LastAlliance'.
Set Flag named 'Elven Allies Spell Purchased' to TRUE
Enable Script 'Gondor Spell List 01 - Hard - Purchase Cloud Break'.
```

From within the “Gondor Spell List 02 Controls” folder:

## Gondor Spell List 02 - Normal

### Gondor Spell List 02 - Norm - Purchase Elven Allies

```
*** IF ***
Counter 'Gondor Spell List Choice' IS Equal To 2
*AND* Flag named 'Rohan Allies Spell Purchased' IS TRUE
*AND* Player Player '<This Player>' can purchase Science 'SCIENCE_LastAlliance'.
*** THEN ***
Player '<This Player>' attempts to purchase Science Science 'SCIENCE_LastAlliance'.
Set Flag named 'Elven Allies Spell Purchased' to TRUE
Enable Script 'Gondor Spell List 02 - Norm - Purchase Eagle Allies'.
```

## Gondor Spell List 02 - Hard

### Gondor Spell List 02 - Hard - Purchase Elven Allies

```
*** IF ***
Counter 'Gondor Spell List Choice' IS Equal To 2
*AND* Flag named 'Rohan Allies Spell Purchased' IS TRUE
*AND* Player Player '<This Player>' can purchase Science 'SCIENCE_LastAlliance'.
*** THEN ***
Player '<This Player>' attempts to purchase Science Science 'SCIENCE_LastAlliance'.
Set Flag named 'Elven Allies Spell Purchased' to TRUE
Enable Script 'Gondor Spell List 02 - Hard - Purchase Eagle Allies'.
```

From within the “Gondor Spell List 03 Controls” folder:

## Gondor Spell List 03 - Normal

### Gondor Spell List 03 - Norm - Purchase Elven Allies

```
*** IF ***
Counter 'Gondor Spell List Choice' IS Equal To 3
*AND* Flag named 'Gandalf Spell Purchased' IS TRUE
*AND* Player Player '<This Player>' can purchase Science 'SCIENCE_LastAlliance'.
*** THEN ***
Player '<This Player>' attempts to purchase Science Science 'SCIENCE_LastAlliance'.
Set Flag named 'Elven Allies Spell Purchased' to TRUE
Enable Script 'Gondor Spell List 03 - Norm - Purchase Cloud Break'.
```

## Gondor Spell List 03 - Hard

### Gondor Spell List 03 - Hard - Purchase Elven Allies

```
*** IF ***
  Counter 'Gondor Spell List Choice' IS Equal To 3
  *AND* Flag named 'AoD Spell Purchased' IS TRUE
  *AND* Player Player '<This Player>' can purchase Science 'SCIENCE_LastAlliance'.
*** THEN ***
  Player '<This Player>' attempts to purchase Science Science 'SCIENCE_LastAlliance'.
  Set Flag named 'Elven Allies Spell Purchased' to TRUE
  Enable Script 'Gondor Spell List 03 - Hard - Purchase Eagle Allies'.
```

Do not modify the “Spells - Rohan Purchasing Controls” folder unless you also want Rohan to use the “Last Alliance” spell instead of the “Elven Allies” spell.

Next, open the “Spells - Good Behaviors” folder. As you can see, these are the spell references for the good campaign. This assumes you want the campaign to still use the original “Elven Allies” spell. If so, copy the “b\_Spell - Elven Allies - When Attacking” script and rename it “b\_Spell - Last Alliance - When Attacking.”

*Note: I have not played the Evil Campaign to verify what I said above. I am making an assumption. However, I have verified that Rohan will still make use of its “Elven Allies” spell.*

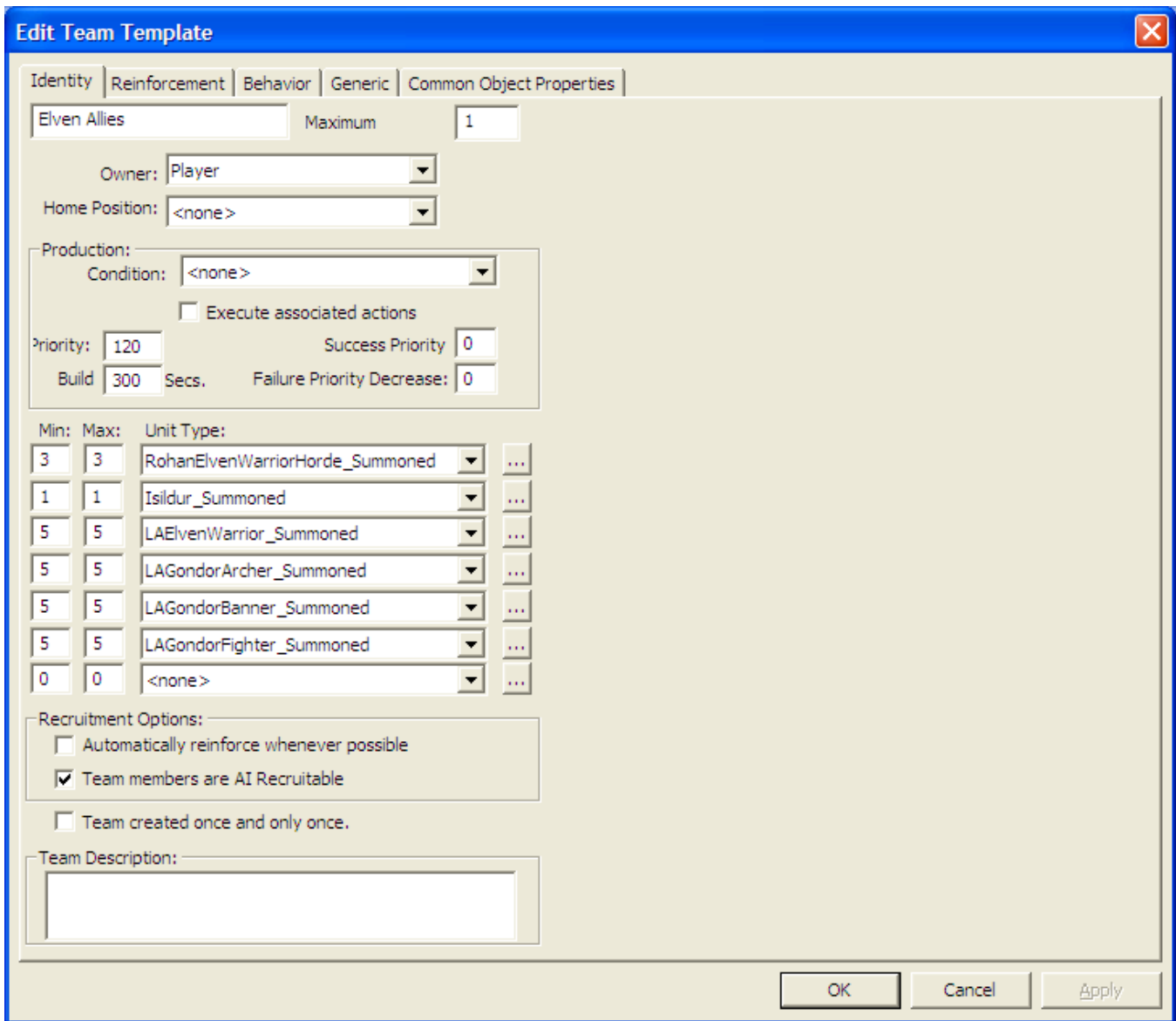
Now replace “SpellBookElvenAllies” with “SpellBookLastAlliance” in both the “Script Conditions” and the “Actions if True” tabs. Your script should look like this.

```
*** IF ***
  Flag named 'AI_On' IS TRUE
  *AND* Flag named 'AI_Spells_On' IS TRUE
  *AND* Player '<This Player>' is ready to fire Special power 'SpellBookLastAlliance'.
  *AND* Team '<This Team>' has Object Status is 'IS_ATTACKING'
*** THEN ***
  Player '<This Player>' fire Special power 'SpellBookLastAlliance' on nearest object of 'CombatAreas' to Team '<This Team>'
  Set timer 'Recruit Elven Allies' to expire in 6.00 seconds.
  Enable Script 'Recruit Elven Allies'.
```

Tip: The timer is set to six seconds to allow time for the team members to be found and recruited. If you like, experiment with shortening this time for your computer so that the team responds faster. I have it set to 3 seconds in my mod. I showed it as 6 seconds here because that is the game’s typical number. Note that you can do this for other teams, such as the “Elven Allies”

Save and close your spell execution file. Close WorldBuilder. From within FinalBIG, add both your modified spell execution and hero behaviors files. Save your mod and place a fresh copy in your game folder. Remember to put the letter “A” in front of the mod’s file name.

Open WorldBuilder and then open your copy of the “ai\_gondor.map” file. Open the “Team Builder” window and then open the existing “Elven Allies” team template. It’s important that we modify this because after the “Last Alliance” is summoned, the units have to be recruited and deployed; otherwise, they just stand there until their timer ends. All we’re going to do is add the new units, as indicated below.



It's important to leave the existing horde so that Rohan can use it. In the "Generic" tab, add "b\_Isildur - Use Narsil" to the list of scripts.

A weak point to this method of adding the "Last Alliance" spell is that it will not be used unless it is called for in a team's "Generic" tab. As a result, you need to open a number of teams and add "b\_Spell - Last Alliance - When Attacking" to the "Generic" tab. Here's a suggestion of teams for which to add this script.

Attack - Basic Team Base Defender	Attack - Archer Team 5	Attack - Infantry Team Base	Hero - Faramir
Attack - Basic Team Base	Attack - Cavalry Team 4	Attack - Infantry Team 4	Hero - Gandalf
Attack - Basic Team 4	Attack - Cavalry Team 5	Attack - Infantry Team 5	Hero - Pippin
Attack - Archer Team Base	Attack - Tower Guard Team 4	Hero - Boromir	Hero - Frodo
Attack - Archer Team 4	Attack - Tower Guard Team 5	Hero - Elrond	Hero - Sam

This will virtually guarantee that the "Last Alliance" spell will be used once the right number of power points have been obtained. If Elrond has the "Elven Allies" reference in his "Generic" tab, remove it.

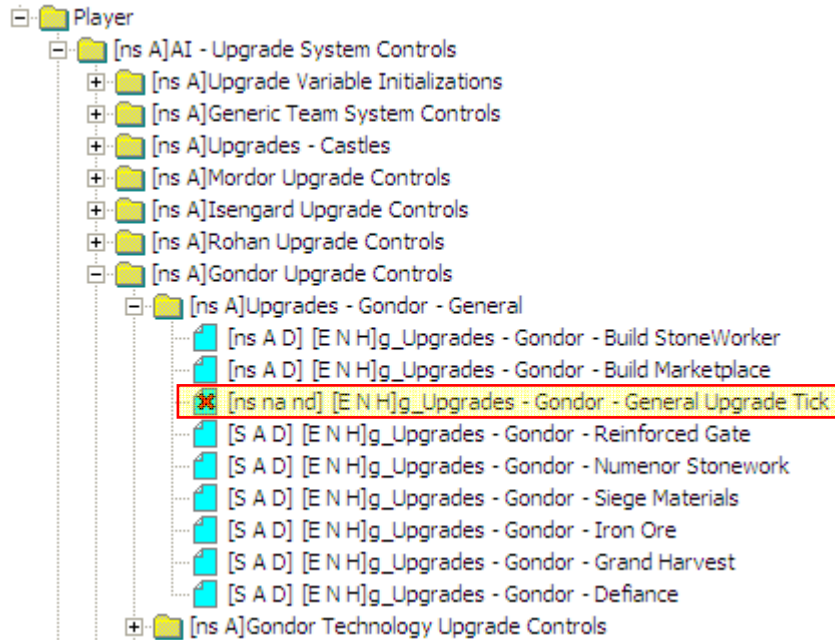
Now save your "ai\_gondor.map" file. Close WorldBuilder and add it to your mod. Remove your mod copy from the game folder. Start a game against Gondor to verify this works.



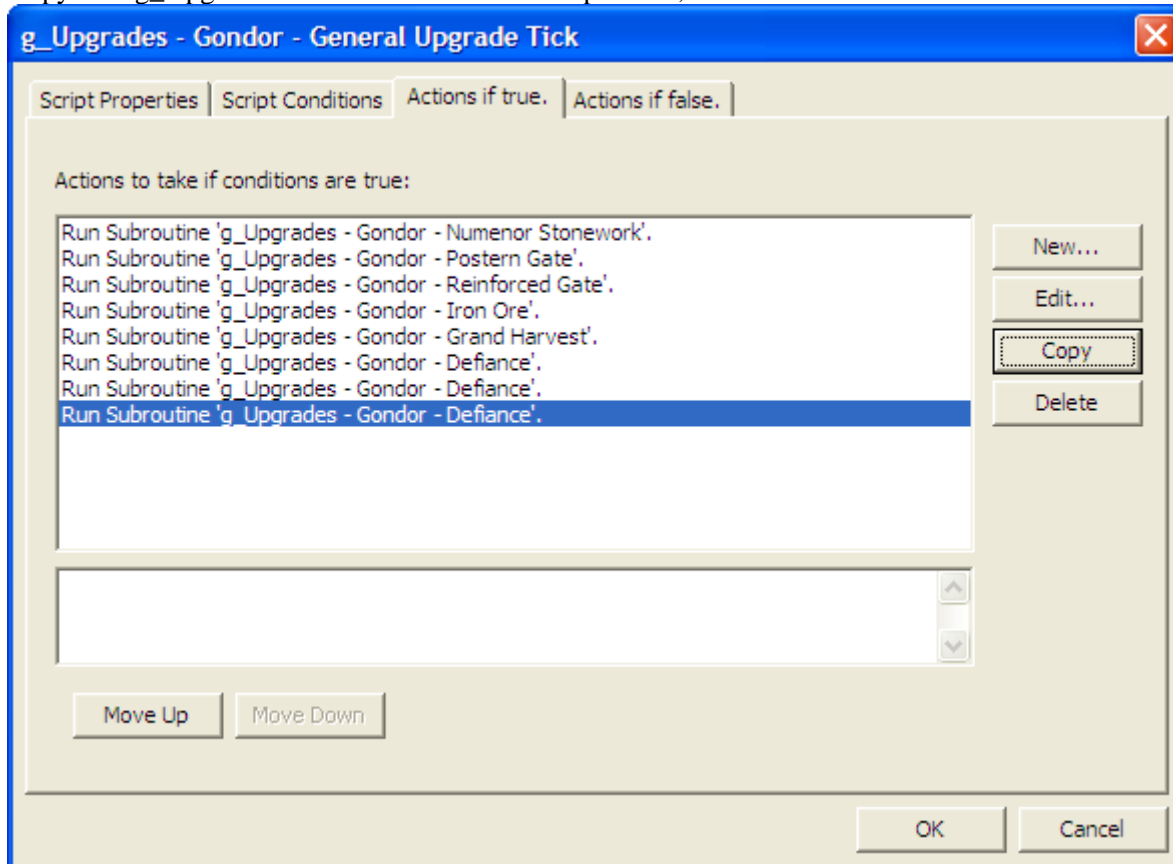
## Force Gondor Marketplace and Stonemaker to Execute Upgrades

Objective: After creation of the marketplace and stonemaker structures, create code to force them to execute some of their upgrades at no cost. This increases the effective difficulty level. Note that there is an error with the existing Stonemaker code that doesn't allow the battle tower and keep archer upgrade to occur.

Use WorldBuilder to open the "ai\_upgrade\_execution" library. Open the "General Upgrade Tick" as indicated below.



Copy the "g\_Upgrades - Gondor - Defiance" script twice, as indicated in the next window.

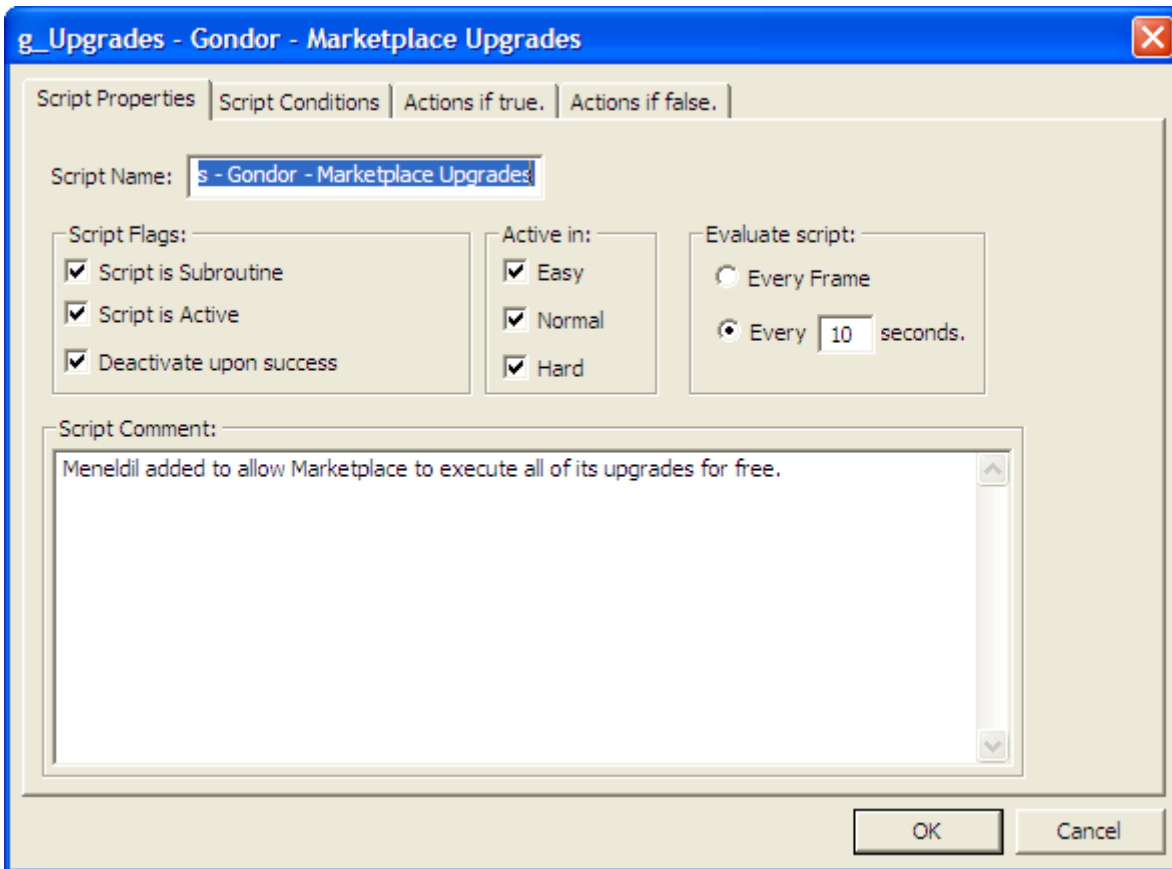


Name one of the copies “g\_Upgrades - Gondor - Marketplace Upgrades” and the other copy “g\_Upgrades - Gondor - Stoneworker Tower Upgrade” (call them whatever you want – you get the idea). You will have to manually enter your descriptions. Ignore the error that they don’t exist. Close the window.

Now copy the “g\_Upgrades - Gondor - Defiance” script twice (from within the Upgrades - Gondor - General folder) and rename them to something similar to what’s shown below. However, be sure you use the same names you used above.



Edit the “g\_Upgrades - Gondor - Marketplace Upgrades” to look like something like this:

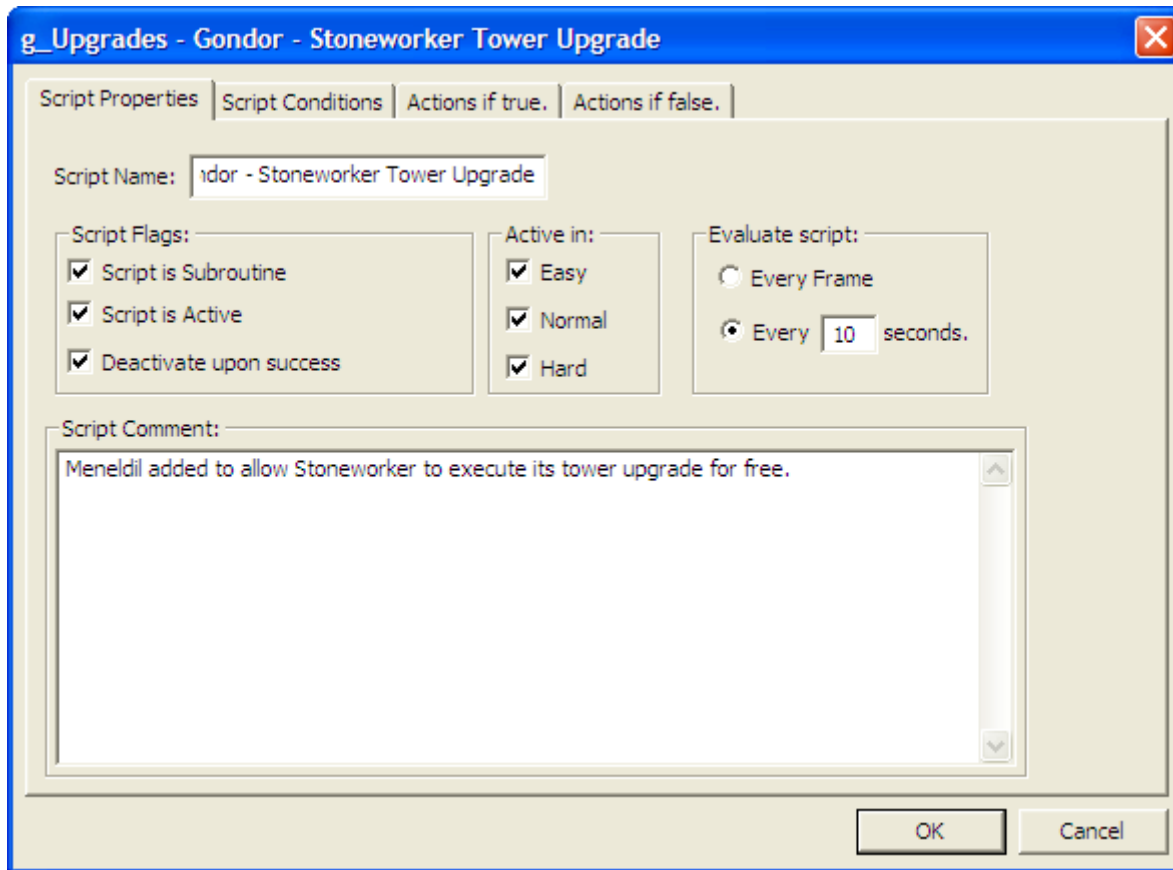


Note: You will add this to your modified INI file as “libraries\ai\_upgrade\_execution\ai\_upgrade\_execution.map” when you’re done.

Modify the script code to look like this:

```
*** IF ***
  Player '<This Player>' has Greater Than 0 unit or structure of type 'GondorMarketPlace'
*** THEN ***
  Give Player '<This Player>' this upgrade: Upgrade 'Upgrade_MarketplaceUpgradeDefiance'
  Give Player '<This Player>' this upgrade: Upgrade 'Upgrade_MarketplaceUpgradeGrandHarvest'
  Give Player '<This Player>' this upgrade: Upgrade 'Upgrade_MarketplaceUpgradeIronOre'
  Play Sound 'GondorMarketSelect' as though it was a 2D sound (NOT RECOMMENDED for 3D sounds).
  'LoadingRing' plays in the palantir window.
```

Next, edit the “g\_Upgrades - Gondor - Stoneworker Tower Upgrade” to look like like this:



Modify the code to look like this:

```
*** IF ***
  Player '<This Player>' has Greater Than 0 unit or structure of type 'GondorStoneMaker'
*** THEN ***
  Give Player '<This Player>' this upgrade: Upgrade 'Upgrade_BattleTowersToUseFireArrows'
  Play Sound 'GondorStoneMakerSelect' as though it was a 2D sound (NOT RECOMMENDED for 3D sounds).
  'LoadingRing' plays in the palantir window.
```

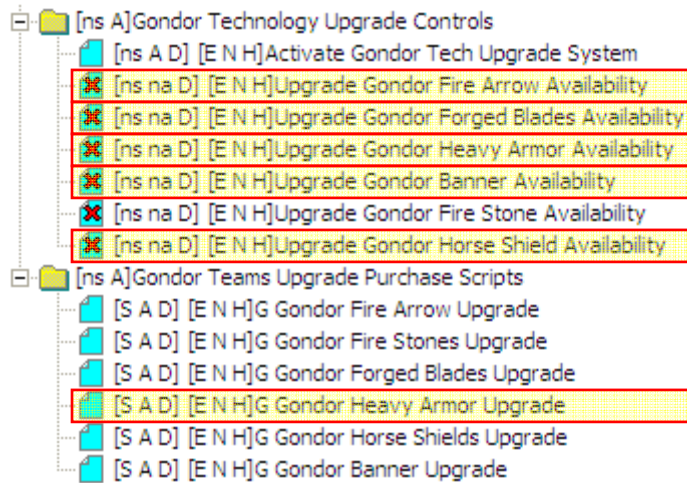
The sound effects and Palantir videos are optional. I added them for feedback (they will play in your Palantir window). Look under Audio > Sound Effect > Play 2D sound effect and Interface > Palantir > Play a movie in the palantir.

You can also make it such that it costs money to do this if you like (look at Player > Money). I didn't do this because it makes for a greater challenge when playing against Gondor.

## Improve Rate of Upgrades

Objective: Improve rate by which fire arrow, heavy armor, forged blades, and horse armor upgrades are added.

Use WorldBuilder to open the “ai\_upgrade\_execution” library. Look for the script section indicated below. The highlighted areas will be modified.



Upgrade Gondor Fire Arrow Availability (remove red colored script)

```
*** IF ***
  Counter 'g_Economy_Current_Money' IS Greater Than or Equal To 1600
  *AND* Player Player '<This Player>' has object of type 'Economy_Buildings_Non_Flag' with rank level Greater Than or Equal To 2
  *AND* Player Player '<This Player>' has object of type 'GondorArcherRange' with rank level Greater Than or Equal To 2
*** THEN ***
  Have AI Player '<This Player>' build this upgrade: Upgrade 'Upgrade_TechnologyGondorFireArrows'
  Set Flag named 'Gondor Fire Arrows Available' to TRUE
```

Upgrade Gondor Forged Blades Availability (remove red colored script)

```
*** IF ***
  Counter 'g_Economy_Current_Money' IS Greater Than or Equal To 1600
  *AND* Player Player '<This Player>' has object of type 'GondorForge' with rank level Greater Than or Equal To 2
  *AND* Flag named 'Gondor Fire Arrows Available' IS TRUE
*** THEN ***
  Have AI Player '<This Player>' build this upgrade: Upgrade 'Upgrade_TechnologyGondorForgedBlades'
  Set Flag named 'Gondor Forged Blades Available' to TRUE
```

Upgrade Gondor Heavy Armor Availability (remove red colored script)

```
*** IF ***
  Counter 'g_Economy_Current_Money' IS Greater Than or Equal To 1600
  *AND* Player Player '<This Player>' has object of type 'GondorForge' with rank level Greater Than or Equal To 2
  *AND* Flag named 'Gondor Fire Arrows Available' IS TRUE
  *AND* Flag named 'Gondor Forged Blades Available' IS TRUE
*** THEN ***
  Have AI Player '<This Player>' build this upgrade: Upgrade 'Upgrade_TechnologyGondorHeavyArmor'
  Set Flag named 'Gondor Heavy Armor Available' to TRUE
```

### Upgrade Gondor Banner Availability (remove red colored script)

```
*** IF ***
  Counter 'g_Economy_Current_Money' IS Greater Than or Equal To 1600
  *AND* Player Player '<This Player>' has object of type 'GondorForge' with rank level Greater Than or Equal To to
  2
  *AND* Flag named 'Gondor Fire Arrows Available' IS TRUE
  *AND* Flag named 'Gondor Forged Blades Available' IS TRUE
  *AND* Flag named 'Gondor Heavy Armor Available' IS TRUE
*** THEN ***
  Have AI Player '<This Player>' build this upgrade: Upgrade 'Upgrade_TechnologyGondorBasicTraining'
  Set Flag named 'Gondor Banner Available' to TRUE
```

### Upgrade Gondor Horse Shield Availability (remove red colored script)

```
*** IF ***
  Counter 'g_Economy_Current_Money' IS Greater Than or Equal To 1600
  *AND* Player Player '<This Player>' has object of type 'GondorStable' with rank level Greater Than or Equal To to
  2
  *AND* Player '<This Player>' has Greater Than or Equal To 2 unit or structure of type 'Cavalry_Units'
  *AND* Player '<This Player's Enemies>' has Greater Than or Equal To 3 unit or structure of type 'Archer_Units'
*** THEN ***
  Have AI Player '<This Player>' build this upgrade: Upgrade 'Upgrade_TechnologyGondorKnightShield'
  Set Flag named 'Gondor Horse Shields Available' to TRUE
```

### G Gondor Heavy Armor Upgrade

Change  $\geq 3$  Hero\_Units to  $\geq 2$ ; Change  $\geq 5$  Archer\_Units to  $\geq 3$ ; Change  $\geq 3$  Siege\_Units to  $\geq 1$ .

```
*** IF ***
  Flag named 'Gondor Heavy Armor Available' IS TRUE
  *AND* Counter 'g_Economy_Current_Money' IS Greater Than or Equal To 400
  *AND* Counter 'g_Upgrades_Armor_Needed' IS Greater Than or Equal To 1
  *AND* Player '<This Player's Enemies>' has Greater Than or Equal To 3 unit or structure of type 'Hero_Units'
*** OR ***
  Flag named 'Gondor Heavy Armor Available' IS TRUE
  *AND* Counter 'g_Economy_Current_Money' IS Greater Than or Equal To 400
  *AND* Counter 'g_Upgrades_Armor_Needed' IS Greater Than or Equal To 1
  *AND* Player '<This Player's Enemies>' has Greater Than or Equal To 5 unit or structure of type 'Archer_Units'
*** OR ***
  Flag named 'Gondor Heavy Armor Available' IS TRUE
  *AND* Counter 'g_Economy_Current_Money' IS Greater Than or Equal To 800
  *AND* Counter 'g_Upgrades_Armor_Needed' IS Greater Than or Equal To 1
  *AND* Player '<This Player's Enemies>' has Greater Than or Equal To 3 unit or structure of type 'Siege_Units'
*** THEN ***
  Team '<This Team>' use Ability 'Command_PurchaseUpgradeGondorHeavyArmor'.
  Subtract 1 from counter 'g_Upgrades_Armor_Needed'
```

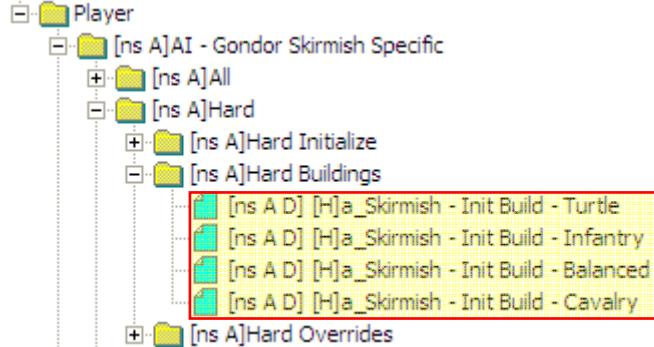
Note: Save your modified file such that you know it is for your mod. Regardless of what you call it, add this to your modified INI file as “libraries\ai\_upgrade\_execution\ai\_upgrade\_execution.map.”

In addition, within your ai\_gondor.map “Team Builder” window, add upgrade commands for your various teams if they are not present. For example, the first team is “Attack - Basic Team Base Defender” and has both fighter and archer hordes. Therefore, you would want to be sure that “G Gondor Banner Upgrade,” “G Gondor Heavy Armor Upgrade,” “G Gondor Fire Arrow Upgrade,” and “G Gondor Forged Blades Upgrade” are present in the Generic Tab. For cavalry and artillery teams, you would want to be sure that “G Gondor Horse Shields Upgrade” and “G Gondor Fire Stones Upgrade” are present, respectively. The various team members will determine which upgrades make the most the sense.

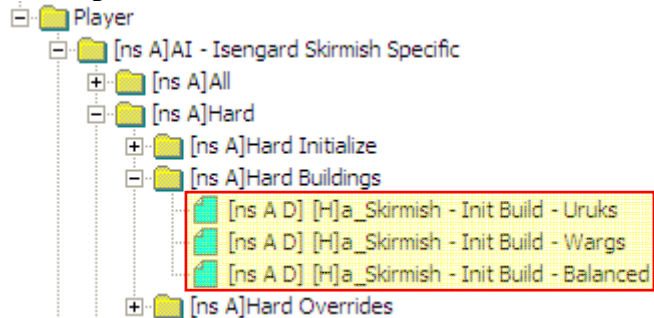
## Increasing Initial Money for Enemy Factions

To make the game more challenging, you can adjust the AI such that it provides a greater starting money amount to the enemy factions. A simple approach is to modify the “ai\_gondorskirmish,” “ai\_isengardskirmish,” “ai\_mordorskirmish,” and the “ai\_rohanskirmish” map files for the “Hard Buildings” settings. Add some additional money (e.g., 3000) to each of the highlighted sections and then place the files in your mod (e.g., libraries\ ai\_gondorskirmish\ ai\_gondorskirmish.map).

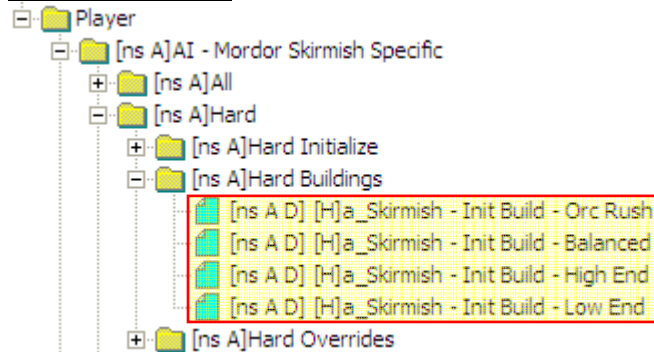
### ai\_gondorskirmish



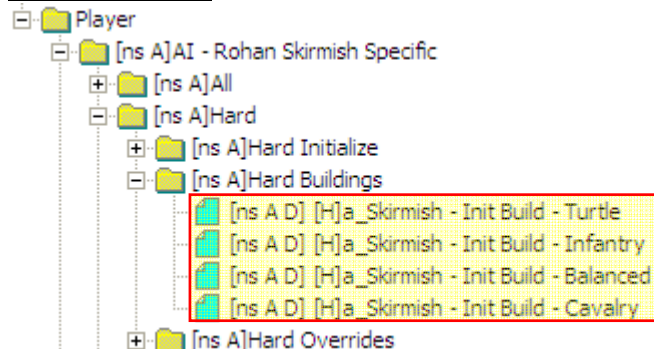
### ai\_isengardskirmish



### ai\_mordorskirmish



### ai\_rohanskirmish





This completes the Gondor AI tutorials for this guide. I already believe I spent too much time on AI modifications, yet there is still so much to cover. Plus, I'm still learning.

I suggest you check out the AI discussion forum <http://forums.revora.net/topic/40881-ai-q-a/> at the 3<sup>rd</sup> Age web site for additional ideas and tips.

Since we've been covering some ways to make the game more challenging, here's one other method you can use to increase the difficulty level. There are no AI modifications for this. The changes will be done directly in your mod with the FinalBIG editor.

## **Changing the Multipliers for Easy, Medium, and Hard Difficulty Settings**

Objective: Increase the game difficulty by changing the damage, experience, and/or production multipliers.

To do this, simply go to the attribute modifier section and adjust according to your preferences. I've shown an example below. I've also noted what the original settings are.

### **data\ini\attributemodifier.ini**

```
ModifierList EasyAISinglePlayer_Bonus; Easy difficulty campaign
```

```
    Category = LEVEL
```

```
    Modifier = DAMAGE_MULT EASY_AI_SINGLE_PLAYER_DAMAGE_MULT; 25% of normal
```

```
damage to enemy factions
```

```
    Duration = 0
```

```
End
```

```
ModifierList MediumAISinglePlayer_Bonus; Medium difficulty campaign
```

```
    Category = LEVEL
```

```
    Modifier = DAMAGE_MULT MEDIUM_AI_SINGLE_PLAYER_DAMAGE_MULT; 100% of normal
```

```
damage to enemy factions
```

```
    Duration = 0
```

```
End
```

```
ModifierList HardAISinglePlayer_Bonus; Hard difficulty campaign
```

```
    Category = LEVEL
```

```
    Modifier = DAMAGE_MULT HARD_AI_SINGLE_PLAYER_DAMAGE_MULT; 120% of normal
```

```
damage to enemy factions
```

```
    Modifier = EXPERIENCE 120%; Meneldil added 20% faster experience rate to
```

```
enemy factions
```

```
    Modifier = PRODUCTION 200%; Meneldil added 100% faster production rate to
```

```
enemy factions
```

```
    Duration = 0
```

```
End
```

```
ModifierList EasyAIMultiPlayer_Bonus; Easy difficulty skirmish
```

```
    Category = LEVEL
```

```
    Modifier = DAMAGE_MULT EASY_AI_MULTI_PLAYER_DAMAGE_MULT; 100% of normal
```

```
damage to enemy factions
```

```
    Modifier = EXPERIENCE 10% ; 1/10 normal experience rate to enemy factions
```

```
    Duration = 0
```

```
End
```

```
ModifierList MediumAIMultiPlayer_Bonus; Medium difficulty skirmish
```

```
    Category = LEVEL
```

```
    Modifier = DAMAGE_MULT MEDIUM_AI_MULTI_PLAYER_DAMAGE_MULT; 100% of normal
```

```
damage to enemy factions
```

```
    Modifier = DAMAGE_MULT 110%; Meneldil added 10% more damage to enemy factions
```

```
    Modifier = EXPERIENCE 110% ; Meneldil added 10% faster experience rate to
```

```
enemy factions
```

```
    Modifier = PRODUCTION 140% ; Meneldil added 40% faster production rate to  
enemy factions  
    Duration = 0  
End
```

```
ModifierList HardAIMultiPlayer_Bonus; Hard difficulty skirmish  
    Category = LEVEL  
;    Modifier = DAMAGE_MULT HARD_AI_MULTI_PLAYER_DAMAGE_MULT; 100% of normal  
damage  
    Modifier = DAMAGE_MULT 120%; Meneldil added 20% more damage to enemy factions  
    Modifier = EXPERIENCE 120% ; Meneldil added +20% experience rate to enemy  
factions  
    Modifier = PRODUCTION 200% ; Meneldil added 100% production rate to enemy  
factions  
    Duration = 0  
End
```



**data\ini\attributemodifier.ini**

ModifierList ElvenWoodPositiveSpell

```

    Category = LEADERSHIP
    Modifier = ARMOR 40%; Meneldil changed original 35% ; 50%; Additive. Sum of
these are subtracted from all entries in Armor.ini
    Duration = 2500 ; Matches RefreshRate of giving module
    FX = FX_ElvenWoodAura; added by Meneldil
;    FX = FX_GenericLeadershipLvl1
;    FX2 = FX_GenericLeadershipLvl2
;    FX3 = FX_GenericLeadershipLvl3
;    MultiLevelFX = Yes
End

```

*Note: I changed the armor to 40% to match what is provided in the lotr.str text description.*

ModifierList SpellBookCloudBreak

```

    Category = LEADERSHIP
    Modifier = SPEED 50% ; Meneldil changed original 70%; Multiplicative
    Modifier = ARMOR -50% ; Additive. Sum of these are subtracted from all
entries in Armor.ini
    Duration = 30000 ; Meneldil changed original 35000 ; 15000
    ModelCondition = EMOTION_AFRAID
End

```

**data\ini\commandbutton.ini**

Under “SpellBookRohanAllies” I replaced the “SBGood\_RohanAllies” button image with “BRStables\_Rohirrimpike” and under the “PurchaseSpellRohanAllies” I replaced the “SBGood\_RohanAllies” button image with “UPRohan\_Army” simply because I don’t like the existing low resolution images.

*Note: This is a way to change spell book images. Notice that you have to allow for the purchase of the spell and the use of the spell. You need not use the same image or even text descriptions for both.*

**data\ini\commandset.ini**

Note: The Gondor Soldier – Ranger Battalion command set does not provide a level 2 purchase command, so I modified the command set as follows.

CommandSet GondorFighterRangerComboHordeCommandSet

```

    1 = Command_Guard
    2 = Command_PurchaseUpgradeGondorForgedBlades
    3 = Command_PurchaseUpgradeGondorHeavyArmor
    4 = Command_PurchaseUpgradeGondorFireArrows
    5 = Command_PurchaseUpgradeGondorBasicTraining; added by Meneldil
    13 = Command_AttackMove
    14 = Command_Stop
    15 = Command_Guard

```

End

CommandButton Command\_SpecialAbilityPhialOfGaladrielSam

```

    Command = SPECIAL_POWER
    SpecialPower = SpecialAbilityPhialOfGaladriel
;    Options =
    TextLabel = CONTROLBAR:PhialofGaladriel
    ButtonImage = HSFrodoPhialOfGaladriel
    ButtonBorderStyle = ACTION
    DescriptLabel = CONTROLBAR:ToolTipPhialOfGaladriel
    AutoAbility = Yes
    PresetRange = 50.0
    UnitSpecificSound = SamVoiceUsePhial; uncommented by Meneldil
    InPalantir = Yes

```

End

Note: I also enabled Sam's voice when using the phial.

### data\ini\default\object.ini

```
InheritableModule
    ; This will farm out any experience we gain to nearby units.
    Behavior = ShareExperienceBehavior ModuleTag_DefaultShareExp
        Radius = 200; Meneldil changed original 100.0
        ObjectFilter = ANY +HERO
        DropOff = 1.0; Must be one or zero.
    End
End
```

Note: This allows heroes to receive experience points from over a wider range.

### data\ini\object\civilian\gondorbuildings.ini

Under "Object GondorCastleBridge", allow structure to automatically repair:

```
; These are bunched-up together on purpose
BuildCost = 0 ; for free, since this serves no purpose
CommandSet = GenericSelfRepairCommandSet ;
Behavior = GettingBuiltBehavior ModuleTag_GettingBuilt
    SelfBuildingLoop = BuildingConstructionLoop ; Only played if we DON'T
spawn a worker
    SelfRepairFromDamageLoop = NoSound ; This doesn't cause an
animation, so don't bother playing a sound
    SelfRepairFromRubbleLoop = BuildingConstructionLoop
;SpawnTimer = -1.0 ; Negative means no 'autoheal'; Meneldil disabled
SpawnTimer = 60 ; Meneldil added to provide automatic repair
    RebuildTimeSeconds = 15 ; nice and fast, so we don't visually
block the gateway
End
```

Under "Object GondorCastleElevator", allow structure to automatically repair:

```
Behavior = GettingBuiltBehavior ModuleTag_GettingBuilt
    SelfBuildingLoop = BuildingConstructionLoop ; Only played if we DON'T
spawn a worker
    SelfRepairFromDamageLoop = NoSound ; This doesn't cause an
animation, so don't bother playing a sound
    SelfRepairFromRubbleLoop = BuildingConstructionLoop
;SpawnTimer = -1.0 ; Negative means no 'autoheal'; Meneldil disabled
SpawnTimer = 60 ; Meneldil added to provide automatic repair
    RebuildTimeSeconds = CASTLE_WALL_REBUILD_TIME; value is 180 (3 minutes)
End
```

Under "Object GondorCastleWall", allow structure to automatically repair:

```
Behavior = GettingBuiltBehavior ModuleTag_GettingBuilt
    SelfBuildingLoop = BuildingConstructionLoop ; Only played if we DON'T
spawn a worker
    SelfRepairFromDamageLoop = NoSound ; This doesn't cause an
animation, so don't bother playing a sound
    SelfRepairFromRubbleLoop = BuildingConstructionLoop
;SpawnTimer = -1.0 ; Negative means no 'autoheal'; Meneldil disabled
SpawnTimer = 60 ; Meneldil added to provide automatic repair
    RebuildTimeSeconds = CASTLE_WALL_REBUILD_TIME; value is 180 (3 minutes)
End
```

Note: If the structure is completely destroyed, it will not automatically be rebuilt.

### data\ini\object\goodfaction\goodfactionbuildings.ini

Under “Object GBCampWall” engineering parameters allow camp walls to self repair, as shown below.

```
; Meneldil added so that camp walls will automatically repair
Behavior = GettingBuiltBehavior ModuleTag_GettingBuilt
  SelfBuildingLoop = BuildingConstructionLoop
  SelfRepairFromDamageLoop = NoSound
  SelfRepairFromRubbleLoop = BuildingConstructionLoop
  SpawnTimer = 60
  RebuildTimeSeconds = 120
End
```

Under “Object GondorWell” allow Ents to heal, as shown below

```
Behavior = PassiveAreaEffectBehavior ModuleTag_SplashOfHealingWater_Ahh
  EffectRadius = 200 ; please update the decal size in
experience lvl INI if you change this... the value there is about 2.2x the value
here
  PingDelay = 2000;msec
  HealPercentPerSecond = 3%
  AllowFilter = ANY +INFANTRY +CAVALRY -MACHINE -IMMOBILE
+RohanEntFir +RohanEntBirch; Meneldil added Ents
End
```

### data\ini\object\goodfaction\hordes\gondor\gondorhordes.ini

Under “Object GondorRangerHorde”, adjust the join voice, as shown below.

;Meneldil note: There is a RangerVoiceJoinAnybody option that's available. I've replaced the Archer voice with it when joining.

```
; Normal formations
ComboHorde = Target:GondorFighterHorde
Result:GondorFighterRangerComboHorde
InitiateVoice:RangerVoiceJoinAnybody
  ComboHorde = Target:GondorTowerShieldGuardHorde
Result:GondorTowerRangerComboHorde
InitiateVoice:RangerVoiceJoinAnybody

; Alternate formations
ComboHorde = Target:GondorFighterHordeBlock
Result:GondorFighterRangerComboHorde
InitiateVoice:RangerVoiceJoinAnybody
  ComboHorde = Target:GondorTowerShieldGuardHordeWallFormation
Result:GondorTowerRangerComboHorde
InitiateVoice:RangerVoiceJoinAnybody
  MeleeAttackLeashDistance = 25; How far the hordes can move from the
center of the horde when melee attacking.
```

Under “Object GondorRangerHordeAmbushFormation”, adjust the join voice, as shown below.

;Meneldil note: There is a RangerVoiceJoinAnybody option that's available. I've replaced the Archer voice with it when joining.

```
; Normal formations
ComboHorde = Target:GondorFighterHorde
Result:GondorFighterRangerComboHorde
InitiateVoice:RangerVoiceJoinAnybody
  ComboHorde = Target:GondorTowerShieldGuardHorde
Result:GondorTowerRangerComboHorde
InitiateVoice:RangerVoiceJoinAnybody

; Alternate formations
ComboHorde = Target:GondorFighterHordeBlock
Result:GondorFighterRangerComboHorde
InitiateVoice:RangerVoiceJoinAnybody
```

```
ComboHorde = Target:GondorTowerShieldGuardHordeWallFormation
Result:GondorTowerRangerComboHorde
InitiateVoice:RangerVoiceJoinAnybody
```

### data\ini\object\goodfaction\units\gondor\gondorinfantry.ini

Under “Object GondorBanner” you can change the ArmorSet from “NoArmor” to “SoldierHeavyArmor” if you would like the banner carrier to have better protection. Similarly, you can do this under “Object LAGondorBanner” for the Last Alliance spell.

### data\ini\voice.ini

#### AudioEvent FrodoVoiceSalute

```
Sounds = GUFrodo_voisalc GUFrodo_voisala GUFrodo_voisalb; Meneldil restored the last 2 clips
```

```
Volume = UNIT_RESPONSE_VOLUME
MinVolume = UNIT_RESPONSE_MINVOLUME
Limit = 1
Type = world player voice
SubmixSlider = voice
```

End

#### AudioEvent BoromirVoiceSalute

```
Sounds = GUBorom_voisald GUBorom_voisala GUBorom_voisalb GUBorom_voisalc; last 3 restored by Meneldil
```

```
Volume = UNIT_RESPONSE_VOLUME
MinVolume = UNIT_RESPONSE_MINVOLUME
Limit = 1
Type = world player voice
SubmixSlider = voice
```

End

#### AudioEvent FaramirRangerVoiceSalute

```
Sounds = GUFarRa_voisalc; GUFarRa_voisala GUFarRa_voisalb
Volume = UNIT_RESPONSE_VOLUME
MinVolume = UNIT_RESPONSE_MINVOLUME
Limit = 1
Type = world player voice
SubmixSlider = voice
```

End

#### AudioEvent FaramirKnightVoiceRespawn

```
Sounds = GUFarKn_voiresa GUFarKn_voiresc GUFarKn_voiresb; Meneldil restored the last sound file
```

```
Volume = UNIT_RESPONSE_VOLUME
MinVolume = UNIT_RESPONSE_MINVOLUME
Type = world player voice
SubmixSlider = voice
```

End

#### AudioEvent TrebuchetVoiceSalute

```
Sounds = GUTrebu_voisalc GUTrebu_voisala GUTrebu_voisalb GUTrebu_voisald; Meneldil enabled last 3 clips
```

```
Volume = UNIT_RESPONSE_VOLUME
MinVolume = UNIT_RESPONSE_MINVOLUME
Limit = 1
Type = world player voice
SubmixSlider = voice
```

End

#### AudioEvent TowerGuardVoiceSalute

```
Sounds = GUTower_voisalc GUTower_voisald;GUTower_voisala GUTower_voisalb; Meneldil restored GUTower_voisald
```

```
Volume          = UNIT_RESPONSE_VOLUME
MinVolume       = UNIT_RESPONSE_MINVOLUME
Limit = 1
Type            = world player voice
SubmixSlider = voice
End
```

```
AudioEvent GondorArcherVoicesalute
Sounds          = GUArchg_voisala GUArchg_voisalb GUArchg_voisalc GUArchg_voisald;
Meneldil restored last 3 clips
Volume          = UNIT_RESPONSE_VOLUME
MinVolume       = UNIT_RESPONSE_MINVOLUME
Limit = 1
Type            = world player voice
SubmixSlider = voice
End
```

```
AudioEvent GondorKnightVoicesalute
Sounds          = GUKnigh_voisalc GUKnigh_voisala GUKnigh_voisalb; Meneldil
restored last 2 clips
Volume          = UNIT_RESPONSE_VOLUME
MinVolume       = UNIT_RESPONSE_MINVOLUME
Limit = 1
Type            = world player voice
SubmixSlider = voice
End
```

```
AudioEvent GondorSoldierVoicesalute
Sounds = GUSoldg_voisalb GUSoldg_voisala GUSoldg_voisalc; Meneldil restored last
2 clips
Volume          = UNIT_RESPONSE_VOLUME
MinVolume       = UNIT_RESPONSE_MINVOLUME
Limit = 1
Type            = world player voice
SubmixSlider = voice
End
```

```
AudioEvent CampSoldierCompleteGondorArcheryRange
Sounds          = GCBuild_gonarcb GCBuild_gonarca GCBuild_gonarcc; Meneldil
restored 2nd & 3rd clips; GCBuild_gonarcd
Volume          = 110
MinVolume       = 100
Type            = world player voice
SubmixSlider = voice
End
```

```
AudioEvent CampSoldierCompleteGondorBarracks
Sounds          = GCBuild_gonbara GCBuild_gonbarb; Meneldil restored the 2nd clip;
GCBuild_gonbarc GCBuild_gonbard
Volume          = 110
MinVolume       = 100
Type            = world player voice
SubmixSlider = voice
End
```

*Note: This is a personal preference. The intent here is to make you aware that there are a number of voice files that are not used. Adjust them if you wish to provide some additional variation to your game.*

### data\ini\weapon.ini

```
-----
Weapon GandalfWordOfPower ; Big Blue Ring Blast
```

```

IdleAfterFiringDelay = 0
AttackRange          = GANDALF_WORD_OF_POWER_RANGE; value is 120
MinimumAttackRange  = 0.8
WeaponSpeed          = 401; dist/sec
MinWeaponSpeed       = 241
MaxWeaponSpeed       = 601; dist/sec Upper limit on scaling, when attacking
past nominal "max" range
ScaleWeaponSpeed     = Yes; Used for lob weapons, scales speed proportional
to range
RadiusDamageAffects = ENEMIES NOT SIMILAR
DelayBetweenShots    = 5000; time between shots, msec
PreAttackDelay       = 2600
PreAttackType        = PER_ATTACK; Do the delay each time we attack a new
target
PreAttackFX          = FX_GandalfPreAttackBlast
FireFX               = FX_GandalfBlast
FiringDuration       = 1400

DamageNugget         ; A basic Nugget that just does damage
  Damage             = GANDALF_WORD_OF_POWER_DAMAGE; value is 240
  DamageScalar       = 23% ANY +CAVALRY ;
  Radius             = 250.0
  DamageType         = MAGIC
  DamageFXType       = MAGIC
  DeathType          = EXPLODED
  DamageSpeed        = 700.0 ; must match the ShockWaveSpeed below
  DamageScalar       = 10000% NONE +STRUCTURE +MACHINE +RohanCastleDoor
+RohanBattleTower +GBMGateDoor +GondorBattleTower; Meneldil added
End

DamageNugget ; Meneldil added this code block
  Damage             = 500
  Radius             = 250
  DelayTime          = 500
  DamageType         = FLAME
  DamageFXType       = FLAME
  DeathType          = BURNED
  DamageScalar       = 15000% NONE +STRUCTURE +MACHINE +RohanEntFir
+RohanEntBirch +RohanTreeBerd +MONSTER
End

MetaImpactNugget    ; A Nugget that throws things back with force
  HeroResist         = 0.75
  ShockWaveAmount    = 70.0
  ShockWaveRadius    = 500.0
  ShockWaveTaperOff  = 1.0
  ShockWaveZMult     = 1.000
  ShockWaveSpeed     = 700.0
End
End

```

*Note: This allows Gandalf's WOP spell to inflict structural damage as well as damage to ents and monsters.*

```

;-----
Weapon GandalfLightningSwordBlastWeapon ; BALANCE GandalfStaffWeapon
AttackRange          = GANDALF_LIGHTNING_RANGE ;600
WeaponSpeed          = 801 ; dist/sec
HitPercentage        = 100 ; When this weapon is used it will
hit exactly 100% of the time.
DelayBetweenShots    = 2000 ; time between shots, msec
PreAttackDelay       = 400

```

```

    PreAttackType          = PER_SHOT ; Do the delay each time we attack
a new target
    FireFX                 = FX_GandalfLightningSwordBlastWeapon

    FiringDuration         = 1100
    AntiAirborneVehicle    = Yes
    AntiAirborneMonster    = Yes

    RadiusDamageAffects = ENEMIES NOT_SIMILAR

    DamageNugget           ; A basic Nugget that just does damage
    Damage                 = GANDALF_LIGHTNING_DAMAGE_FLAME
    DamageType             = FLAME
    DamageFXType           = ELECTRIC
    DeathType              = BURNED
    End

    DamageNugget           ; A basic Nugget that just does damage
    Damage                 = GANDALF_LIGHTNING_DAMAGE
    DamageType             = MAGIC
    DamageFXType           = ELECTRIC
    DeathType              = BURNED
    DamageScalar           = 1% ANY +BLOCKING_GATE ;
    DamageScalar           = 500% NONE +MordorBalrog; added by Meneldil
    End
End

```

*Note: This allows Gandalf's Lightning Sword to inflict significant damage to the Balrog.*

### **data\lotr.str**

```

CONTROLBAR:ToolTipGondorBuildStatue
"Leadership bonus to nearby troops \n Price of Heroes is reduced \n +50% Armor,
+100% Damage, +100% Combat Experience"
END

```

*Note: Changed existing description.*

```

CONTROLBAR:ToolTipCloudBreak
"Sun breaks through Rain or Darkness \n Stuns enemy units, reducing their armor and
speed by 50% for half a minute \n Left click to activate"
END

```

*Note: Changed existing description.*

```

CONTROLBAR:TheOneRing
"&The One Ring"
END

```

*Note: Added the ampersand so that there is a hot key.*

```

CONTROLBAR:ToolTipSummonRohanAllies
"Summons Rohirrim loyal to Gondor \n Left click then right click on target"
END

```

*Note: Added "loyal to Gondor" since you may be playing against Rohan.*

```

SCRIPT:MGMObjective04
"Use Gandalf's Lightning Sword to defeat the Balrog."
END

```

*Note: Changed existing text so you know exactly what Gandalf's "Special Power" is.*

```

Map:MAPMPMtDoom/Desc
"In this volcano, the One Ring was forged by Sauron"
END

```

*Note: "Sauron" was not properly spelled.*





11 = Command\_SpellBookFreezingRain  
12 = Command\_SpellBookBalrogAlly  
13 = Command\_SpellBookMapView; added by Meneldil

End

CommandSet RohanSpellBookCommandSet

1 = Command\_SpellBookHeal  
2 = Command\_SpellBookDraft  
3 = Command\_SpellBookAnduril  
4 = Command\_SpellBookElvenAllies  
5 = Command\_SpellBookElvenWood\_Rohan  
6 = Command\_SpellBookCloudBreak\_MP  
7 = Command\_SpellBookEntAllies  
8 = Command\_SpellBookArmyoftheDead  
9 = Command\_SpellBookMapView; added by Meneldil

End

CommandSet GondorSpellBookCommandSet

1 = Command\_SpellBookHeal  
2 = Command\_SpellBookElvenWood  
3 = Command\_SpellBookGandalftheWhite  
4 = Command\_SpellBookElvenAllies  
5 = Command\_SpellBookRohanAllies  
6 = Command\_SpellBookCloudBreak\_MP  
7 = Command\_SpellBookEagleAllies  
8 = Command\_SpellBookArmyoftheDead  
9 = Command\_SpellBookMapView; added by Meneldil

End

CommandSet MordorSpellBookCommandSet

1 = Command\_SpellBookTaint  
2 = Command\_SpellBookEyeofSauron  
3 = Command\_SpellBookIndustry  
4 = Command\_SpellBookScavenger  
5 = Command\_SpellBookDevastation  
6 = Command\_SpellBookDarkness  
7 = Command\_SpellBookCalltheHorde  
8 = Command\_SpellBookBalrogAlly  
9 = Command\_SpellBookMapView; added by Meneldil

End

CommandSet IsengardSpellBookCommandSet

1 = Command\_SpellBookWarChant  
2 = Command\_SpellBookPalantirVision  
3 = Command\_SpellBookIndustry  
4 = Command\_SpellBookTaint\_Isengard  
5 = Command\_SpellBookDevastation  
6 = Command\_SpellBookFreezingRain  
7 = Command\_SpellBookFueltheFires  
8 = Command\_SpellBookBalrogAlly  
9 = Command\_SpellBookMapView; added by Meneldil

End

For the TEA/TEACE Mod:

CommandSet ElvenSpellBookCommandSet

1 = Command\_SpellBookHeal  
2 = Command\_ElvenSpellBookElvenGifts  
3 = Command\_SpellBookCloudBreak\_Elven  
4 = Command\_SpellBookAvariAllies  
5 = Command\_SpellBookElvenWood\_Elven  
6 = Command\_SpellBookEagleAllies

```

7 = Command_SpellBookEntAllies_Elven
8 = Command_SpellBookElvenMist
9 = Command_SpellBookMapView; added by Meneldil
End

```

### data\ini\mappedimages\aptimages\myimages.ini

```

MappedImage Spyglass
Texture = observermode.tga
TextureWidth = 256
TextureHeight = 256
Coords = Left:0 Top:0 Right:256 Bottom:256
Status = NONE
End

```

For TEA/TEACE, you can add this to data\ini\mappedimages\aptimages\aptimages.ini

### data\ini\object\system\system.ini

```

Behavior = OCLSpecialPower
ModuleTag_PalantirVision
SpecialPowerTemplate = SpellBookPalantirVision
AttributeModifier = PalantirVision ;
AttributeModifierRange = 100 ;
AttributeModifierAffects= ANY +CAVALRY +MACHINE +HERO
+IsengardUrukCrossbowHorde +IsengardUrukCrossbowHordeWedgeFormation
+IsengardUrukCrossbow +IsengardFighterCrossbowComboHorde
+IsengardCrossbowPikemanComboHorde -STRUCTURE -BASE_FOUNDATION ; +HORDE +URUK
OCL = SpecialPowerPalantirVision
CreateLocation = CREATE_AT_LOCATION
AvailableAtStart = No
End

```

```

Behavior = OCLSpecialPower ModuleTag_MapView; added by Meneldil
SpecialPowerTemplate = SpellBookMapView
OCL = OCL_SpawnMapViewPing
CreateLocation = CREATE_AT_LOCATION
AvailableAtStart = Yes
End

```

Further down in the code...

```

Behavior = OCLSpecialPower ModuleTag_SummonDead
SpecialPowerTemplate = SpellBookArmyoftheDead
OCL = OCL_GondorArmyofTheDeadEgg
;OCL_SpawnArmyOfTheDead
TriggerFX = FX_SummonAOD
CreateLocation = CREATE_AT_LOCATION
AvailableAtStart = No
End

```

```

Behavior = OCLSpecialPower ModuleTag_MapView; added by Meneldil
SpecialPowerTemplate = SpellBookMapView
OCL = OCL_SpawnMapViewPing
CreateLocation = CREATE_AT_LOCATION
AvailableAtStart = Yes
End

```

**Note:** The existing “PalantirVision” and “SummonDead” codes are included for reference. The new codes are placed below them.

Further down in the code...

```
;----- Map View Vision Ping -----  
;Map View added by Meneldil  
  
Object MapViewPing  
  
    Draw = W3DScriptedModelDraw ModuleTag_Draw  
        DefaultModelState  
            Model = None  
        End  
    End  
  
    EvaEnemyUnitSightedEvent = None ; Not a real unit  
  
    ; ***DESIGN parameters ***  
    VisionRange      = 9999999  
    EditorSorting    = SYSTEM  
    KindOf = NO_COLLIDE IMMOBILE UNATTACKABLE IGNORE_FOR_VICTORY  
    IGNORE_FOR_EVA_SPEECH_POSITION MOVE_ONLY  
    ThreatLevel = 0  
  
    ; *** ENGINEERING Parameters ***  
    Body = ActiveBody ModuleTag_01  
        MaxHealth = 999999  
        InitialHealth = 999999  
    End  
  
    Behavior = LifetimeUpdate ModuleTag_LifetimeUpdate  
        MinLifetime      = 600000; 10 minute duration  
        MaxLifetime      = 600000  
    End  
  
    ; Detects other stealth units  
    Behavior = StealthDetectorUpdate StealthDetectorUpdateModuleTag  
        DetectionRate = 500; how often to rescan for stealthed things in my  
    sight (msec)  
    End  
End
```

Note: I placed this at the end of the file.

### data\ini\objectcreationlist.ini

```
;-----  
-----  
; Map View added by Meneldil  
ObjectCreationList OCL_SpawnMapViewPing  
    CreateObject  
        ObjectNames = MapViewPing  
        Count = 1  
    End  
End
```

Note: I placed this at the end of the file.

### data\ini\playertemplate.ini

Under each of the intrinsic multiplier sciences, make the following changes

```
IntrinsicSciencesMP = SCIENCE_ROHAN SCIENCE_MapView; Map View added by Meneldil  
IntrinsicSciencesMP = SCIENCE_GONDOR SCIENCE_MapView; Map View added by Meneldil  
IntrinsicSciencesMP = SCIENCE_ISENGARD SCIENCE_MapView; Map View added by Meneldil
```

IntrinsicSciencesMP = SCIENCE\_MORDOR SCIENCE\_MapView; Map View added by Meneldil

For TEA/TEACE, modify

IntrinsicSciencesMP = SCIENCE\_ELVEN SCIENCE\_MapView; Map View added by Meneldil

### data\ini\science.ini

Science SCIENCE\_MapView ; added by Meneldil

```
PrerequisiteSciences = SCIENCE_GONDOR SCIENCE_ISENGARD SCIENCE_MORDOR
SCIENCE_ROHAN
SciencePurchasePointCost = 0
SciencePurchasePointCostMP = 0
IsGrantable = No
End
```

For TEA/TEACE, add "SCIENCE\_ELVEN" to prerequisite sciences.

Note: I placed this at the end of the file.

### data\ini\specialpower.ini

```
; -----
; Map View added by Meneldil
SpecialPower SpellBookMapView
Enum = SPECIAL_REVEAL_MAP_AREA
ReloadTime = 600000
PublicTimer = Yes
RequiredScience = SCIENCE_MapView
RadiusCursorRadius = 50
InitiateAtLocationSound = SpellCloudBreakStereo
End
```

Note: I placed this at the end of the file.

### data\lotr.str

```
CONTROLBAR:MapView
"Spy Glass"
END
```

```
CONTROLBAR:ToolTipMapView
"View the entire map for 10 minutes \n Left click to begin then right click to
activate"
END
```

Note: I placed this at the end of the file.