

Tutorial 0 - Setup

OVERVIEW

Welcome to the FEFEditor tutorial series! Here, I will walk you through the basic of Fire Emblem Fates ROM hacking using FEFEditor as well as a couple additional tools from the community. This first lesson will simply walk you through getting your 3DS in a state to begin hack development. Afterwards, we will move on to actual lessons on using the editor.

There are a lot of different ways to go about the basic setup for ROM hacking. I'm going to detail the most barebones way for dumping and modifying your game, but more experienced users may want to look for faster methods for accomplishing this task. Please note that, due to the nature of 3DS hacking, elements of this section may break at any given time. What works on the current 3DS firmware at the time of writing (11.4) may not work on the next one.

What You Need:

- Any version of Fire Emblem Fates + a 3DS with arm9loaderhax/boot9strap **OR** a physical copy of Fire Emblem Fates + a 3DS on [firmware 11.3 or below](#).
- The homebrew starter pack and the appropriate ropbin for your firmware.
- A copy of [Braindump](#), a homebrew app for dumping 3DS titles. Make sure to grab the XML file as well!
- [Romfs Extractor](#) for getting the contents of your romfs.
- [Romfs Builder](#) for rebuilding the romfs once you've made your changes.
- The latest version of soundhax.

SD Card Setup

Before we do anything else, we need to set up our SD card. First, take the music file that comes with soundhax and place it on the root of your SD card along with the contents of the homebrew starter pack and the ropbin. You should now have a "3ds" folder on the root of your SD card. Enter it and place the files that came with Braindump inside.

Getting Homebrew Access

Currently, any 3DS on firmware 11.3 or below can install custom firmware. Custom firmware makes the ROM hacking process far simpler and allows you to do a lot of additional stuff with your 3DS. If you have a 3DS on one of those firmwares, I recommend following [this guide](#) to set up custom firmware instead of using the homebrew method detailed in this tutorial.

For custom firmware users, I suggest running your hacks through Luma instead of HANS. You can skip this section on accessing homebrew and use a CIA to boot into the homebrew launcher instead. From there, follow the tutorial up until you reach the section about running your hack. For that portion, simply set up a patch for your copy of Fire Emblem Fates using Luma. If you need help, feel free to ask in the main thread.

Anyways, boot up your 3DS and navigate to the Sound application. Open it up and play the soundhax music file. You should get a bunch of flashing colors on your screen followed by a message saying “the homebrew ropbin is ready.” Afterwards, the homebrew launcher should start up. Keep in mind that if you do not go about installing an alternative way of accessing homebrew (such as arm9loaderhax), you will have to access the homebrew launcher using this method whenever you want to run a hack.

Dumping Your Game

Note: Dumping the will game take a long time (20-30 minutes at a minimum). Also, make sure that your 3DS has at least 2 GB of memory available.

Now that we’ve got homebrew access, navigate to Braindump and select it. When prompted, select to run it with Fire Emblem Fates. On launch, Braindump should immediately start dumping your game. Find some way to entertain yourself, because this process is going to take a while.

Once Braindump is done, power off your 3DS and open up your SD card on your computer. You should see a folder named using a large string of numbers on the root of your SD card. Save the last 8 digits of this number somewhere – you’ll need them for later. Enter the folder and copy the file named “romfs.bin” to wherever you plan on storing your Fire Emblem Fates hacking materials.

Extracting the Romfs

This part’s simple – run Romfs Extractor, select open file, and select the romfs.bin from the previous section. Go ahead and extract the file to wherever you’d like. You should end up with a bunch of different folders and files. Verify that have folders for GameData, Scripts, maps, and the like before continuing. If you don’t have those folders, it’s very likely that you forgot to download

the xml file that goes with Braindump. If that is the case, download it and place it in the same directory as the .3dsx file. After that, repeat the tutorial from the “Dumping Your Game” section.

If you’ve made it this far, you’re almost done. Normally, you would begin modifying your files right now. For the sake of this tutorial, I’ll simply walk you through rebuilding the romfs and running your hack on a 3DS. Before we do anything else, **BACK UP** either the romfs or the files extracted from the romfs to a safe location. If you break anything while making edits to the romfs, you’ll want a way to restore the original files without having to go through Braindump again.

Rebuilding Your Romfs

Open up Romfs Builder and select the folder that contains the contents extracted from your romfs. Rebuild the romfs and save it wherever you like (just not the SD card, trying to build it there leads to issues). Afterwards, rename the romfs file that the builder created to the number you recorded earlier and give it a .romfs extension. Create a folder on the root of your SD card titled “hans” and transfer the newly created romfs to it.

Running Your Hack

With the rebuilt romfs now on your SD card, all that’s left to do is load the hack. Get back to the homebrew launcher using the same method described earlier. This time, select HANS in the launcher and run Fates with it.

In the configuration for HANS, make sure to set “Romfs -> SD” and “Save configuration” to yes. Then go ahead and run your hack. If everything went according to plan, you should boot into Fates like normal. You’ll need to use this method whenever you want to run your modified version of Fire Emblem Fates.

Now that you have a dumped and extracted romfs, you’ll only need to repeat the rebuilding and running steps of the tutorial whenever you want to see your changes in game. As you may have noticed, this method isn’t particularly convenient. Unfortunately, if you only have access to homebrew, this is the you’ve got unless you want to try running your hacks using an emulator like Citra (which might be better for testing). If you’d like a better method and you have no way to install boot9strap currently, I highly suggest following some of the different 3DS hacking communities. If you do, you’ll be sure to hear the moment a new method for installing boot9strap is discovered, which will allow you to access more convenient methods for loading hacks.

Useful Links

- [How to Decrypt, Extract & Rebuild 3DS/CIA/CXI Files](#) – An alternative tutorial regarding how to run hacks on your 3DS.
- [GBATemp 3DS Section](#) – A forum for the 3DS with an emphasis on hacking.
- [3DS Guide](#) – The best guide available for installing boot9strap and custom firmware. If you ever get to a point where you can install such things, make sure to do so through this guide.
- [/r/3dshacks](#) – Another excellent community to follow for 3DS hacking news. You can also consult the Q&A post there if you run into any issues regarding general 3DS hacking.
- [Citra Emulator](#) – A WIP emulator for the 3DS. Fire Emblem Fates runs on it at full speed outside of cutscenes or 3D battles, but it's still got a long way to go before it's optimal. If you don't want to go through the process of transferring your changes to your 3DS constantly, Citra might be a good way to run tests.