

How To Mod a 3DS

Information and images from [3ds.hacks.guide](#), [Alvaro Trigo's Blog](#) & [WikiHow](#). The 3DS obviously belongs to Nintendo.

DISCLAIMER: By modding any console, you risk bricking it. This guide has been tested and does work, but we are not responsible for what happens to your 3DS.

This guide will do the following:

- Install boot9strap via the Steelhax exploit
- Install Luma3DS (which removes region lock)
- Install random homebrew such as an app store, save manager and package installer
- Create critical backups that avoid bricks and recover data

Uses for a homebrewed 3DS include:

- Running homebrew apps
- Porting games not on the 3DS via an emulator
- ROM hacks
- Playing games for free
- Region lock bypass
- Save editing
- Custom home menu themes
- Dumping your cartridges to play digitally

Important information (READ FIRST):

Make sure that your 3DS is connected to power at all times while hacking to avoid unwanted bricks.

What you need:

1. SD card (or microSD card)
2. A computer (Chromebook will work, you just need an SD reader)
3. Make sure your 3DS is on firmware version 11.17.0. If not, update it
4. 3DS connected to WiFi

3DS compatibility:

You can use this guide for every 3DS model (3DS, 3DS XL, 2DS, New 3DS, New 3DS XL, New 2DS XL) regardless of region.



Computer compatibility:

You can use any computer as long as you can download files online to an SD card.



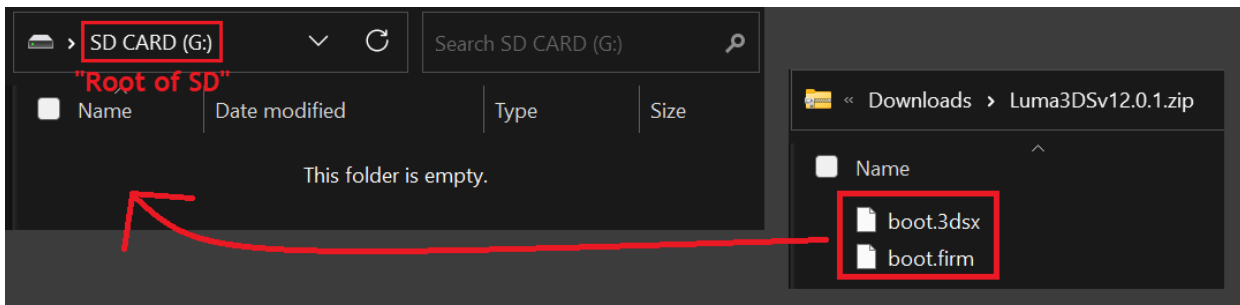
SD Card info:

Different systems use different SD cards. For example, the 2DS uses a full SD card whereas the New 2DS uses a microSD card. See the above image for more information. A 3DS can natively read up to a 32gb, but this guide will remove that limitation. You must format the card to FAT32 before continuing. SD cards over 128gb are not recommended because of issues with graphics and themes.

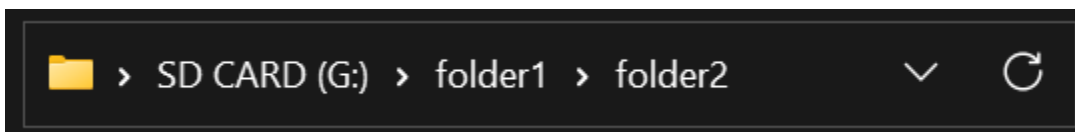
Terminology:

File placement

It's important to put your files in the correct places so the 3DS can properly read it. You'll quite frequently see the phrase "SD root" or "SD card root". The directory that opens when you open the SD card is the root.



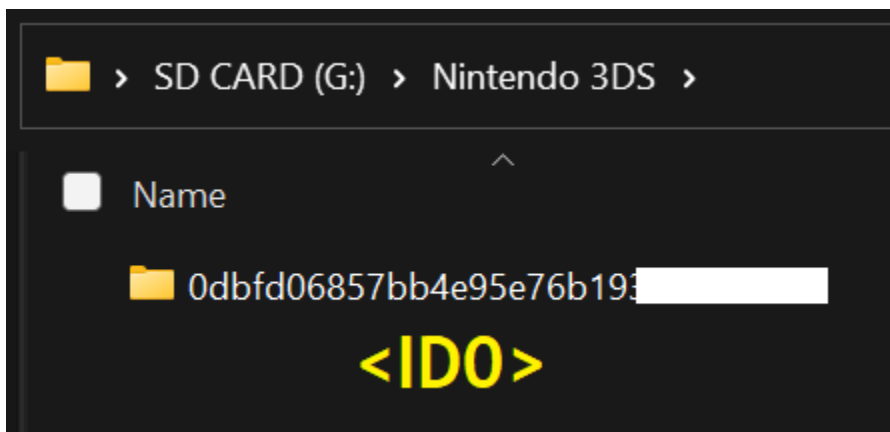
You will also see folders written like /this/. The /slashes/ are used to tell you that this is the name of the folder. E.g. /folder1/ would be in the SD as folder1. There also may be a slash in between two folders such as /folder1/folder2/. This refers to /folder2/ being inside of /folder1/. The slashes are not in the name of the folder.



CFW

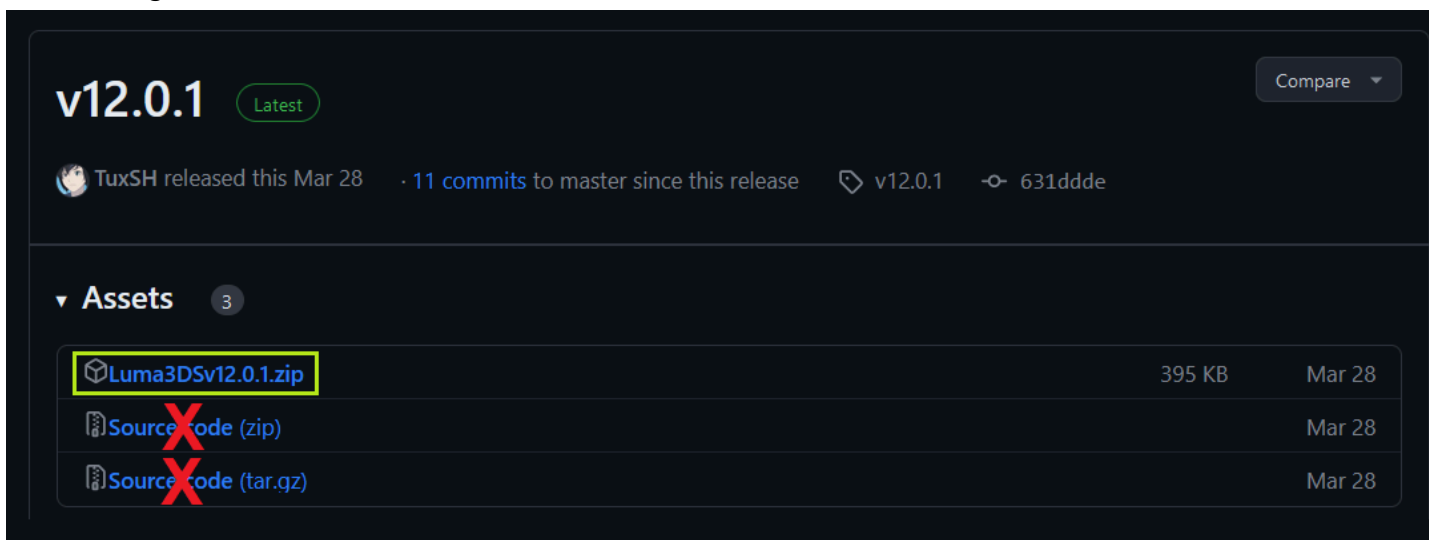
CFW stands for custom firmware.

You may also see text inside of angle brackets (<like this>). The brackets refer to system-specific identifiers in folders such as. For example, <ID0> refers to a specific identifier in the Nintendo 3DS folder.



Again, you'll see text in lines like |this|. This is a file and the file itself does not have the lines.

Downloading GitHub files



You'll soon copy files to the SD card. Most of these files come from GitHub. When you download files from GitHub, you shouldn't download the source code.

Unzipping and extracting files

You'll have to download files with the .zip extension. You must unzip them or else the 3DS can't read the files, and when that happens, you can either double-click on the file or right-click then click "Unzip" or "Extract all". If you cannot do this, you can install a tool such as [7-zip](#).

File extensions

If you use Windows, file extensions may be turned off by default. You can enable them using [these instructions](#).

Help

If you need help, go to [Nintendo Homebrew Discord](#).

Getting Started

Step 1 - Firmware Check

Before you start, reboot your console and hold the (Select) button while it powers on.

If your console boots right into the 3DS's default HOME menu, you may continue. If you see a custom menu (such as Luma3DS, GodMode9, Decrypt9WIP), stop right now, you already have custom firmware! If you'd like to reinstall it, go to the [Nintendo Homebrew Discord](#) for help.

Step 2 - System Version

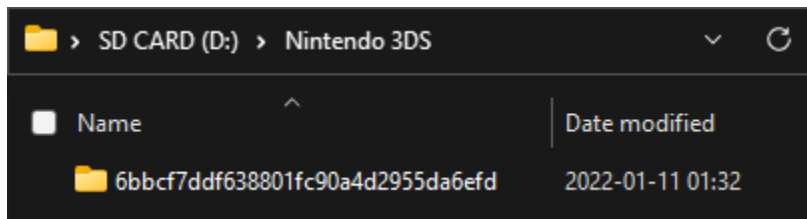
To see what version your 3DS is on, open System Settings. Your version will be on the bottom of the top screen (e.g. Ver. 11.17.0-50U). Take note of your version.

Seedminer Exploit

Step 1 - Preparations

This will help you get necessary information about your 3DS.

1. Power down your system.
2. Put your SD card into your computer.
3. Go to the /Nintendo 3DS/ folder on the card.
4. Find the 32-letter folder name and copy it.
 - a. This code is unique to each console.
 - b. If you see multiple codes, follow [add later]
 - c. Ignore the /private/ folder if you have it.



5. Paste the 32-letter code into a doc for later reference.
 - a. This folder is called an <ID0>. Take note because the guide will continue to refer to it.
6. Turn on your 3DS. The SD card does not need to be inserted.
7. Go to your Friend List - the orange face at the top of your HOME Menu.
 - a. If you get kicked out with an error, make a new Mii. If you do that and it does not work, your console has either been banned or is having connectivity issues. Go to the [Nintendo Homebrew Discord](#) for more information.
8. Find your Mii's profile and find your Friend Code.

Step 2 - Bruteforce Movable

In this step you will use the Bruteforce Movable tool to find your console's encryption key as |movable.sed|.

1. Open the [Bruteforce Movable](#) website on your PC.
 - a. If it isn't working then ask on the [Nintendo Homebrew Discord](#).
2. Enter your Friend Code (no spaces or dashes) in the Friend Code section of Bruteforce Movable. (you don't say)
3. Paste your console's <ID0> in the Your ID0 section. Do not enter it manually as it is easy to make a mistake and brick your 3DS. Copy and paste the code from the doc you made in Step 1.
4. Select Go.
5. Select the Register Friend button on your 3DS and add the friend code given to you by the Bruteforce website. If you are prompted about it, the name does not matter.
6. Wait for the website to update. If it doesn't, wait a few minutes and refresh.

7. Once the site processes your info, it will proceed to Step 2: Bruteforce on its own. Wait for the process to finish.
 - a. This will take 1-5 minutes on average. During this time, the bot that you added may not show up in your friend list. This is not an issue.
 - b. If you are still waiting over a half an hour ask on the [Nintendo Homebrew Discord server](#).
 - c. If you get the *We are unable to successfully complete your bruteforce request. :(* then go to the [Nintendo Homebrew Discord](#)
8. Once the process completes itself, download the movable.sed file. Keep it as you will need it later.
9. Power off your console.

Installing boot9strap via Steelhax

WARNING: If you have save data for *Steel Diver: Sub Wars* then this guide will overwrite that data. If you need this data for any reason make a backup of the `|00000001.sav|` file before continuing.

What you need to continue:

- Steel Diver: Sub Wars installed on your 3DS
 - SD card must be inserted to download
- movable.sed from completing Seedminer
- Latest release of Steelhax (`|steelhax.zip|`)
- Latest release of SafeB9SInstaller (`|SafeB9SInstaller-20170605-122940.zip|`)
- Latest release of boot9strap (`|boot9strap-1.4.zip|`)
- Latest release of nimdsphax (`|nimdsphax_v1.0.zip|`)
- Latest release of Luma3DS (`|Luma3DSv13.0.2.zip|`)

[Steelhax Exploit Files \(download all\)](#)

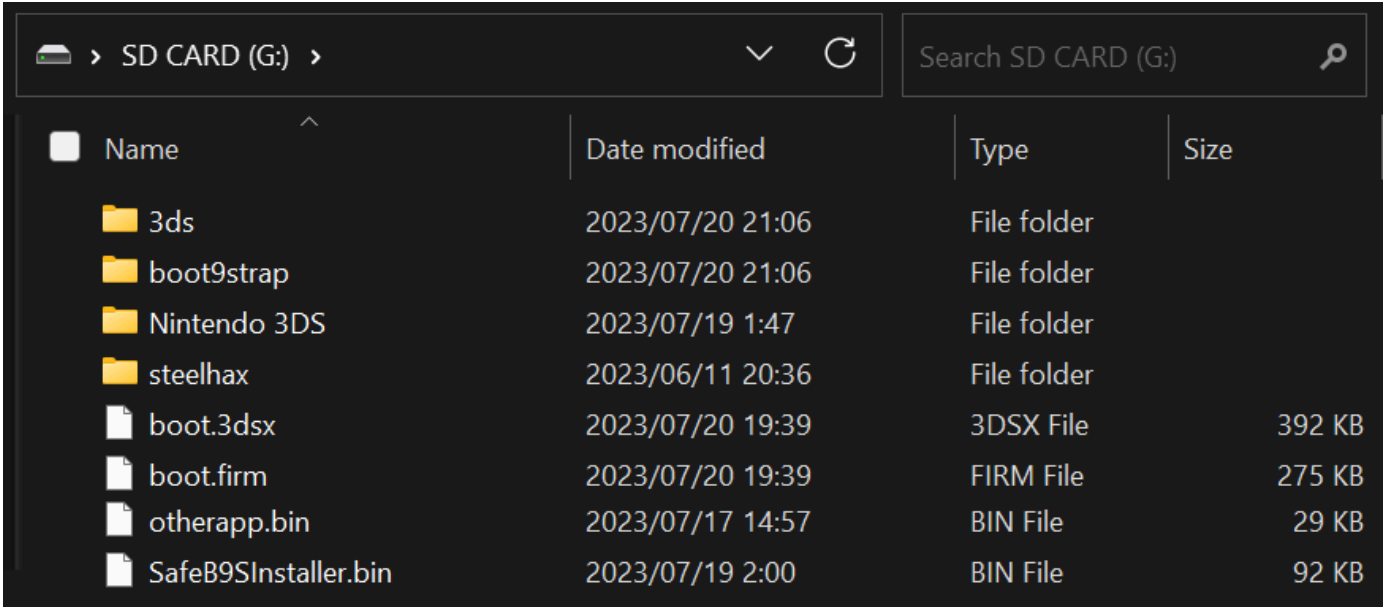
Step 1 - Preparations

You will copy some files for the Homebrew Launcher to work.

1. Download the game *Steel Diver: Sub Wars* from the Nintendo eShop. If you already have, skip this step.
2. Insert your SD card into the 3DS.
3. Copy `|boot.firm|` and `|boot.3dsx|` from `|Luma3DS.zip|` to the root of your SD card.
4. Create a folder called `/boot9strap/` on the SD root.
5. Copy `|boot9strap.firm|` and `|boot9strap.firm.sha|` from the `boot9strap.zip` to the root.
6. Copy `SafeB9SInstaller.bin` from the `SafeB9SInstaller .zip` to the root.
7. Copy the `/steelhax/` folder from `|Steelhax-release.zip|` to the root.
8. Copy the 3DS otherapp version for the region/model/version of your 3DS from `|otherapps_with_CfgS_11.17.zip|` to the root and rename it to `|otherapp.bin|` (If the `.bin` extension is already there, then do not add another `.bin`).
 - a. You can tell what region your 3DS is by going into your system settings. It is in your version number - U is North America while any other letter is either European, Korean or Japanese.
9. Create a folder named `/3ds/` on your SD root if it isn't already there. This stores homebrew whereas the `/Nintendo 3DS/` folder is automatically created by the console.
10. Copy the `/nimdsphax/` folder from the `nimdsphax .zip` to the `/3ds/` folder.
11. Put your SD into your 3DS.

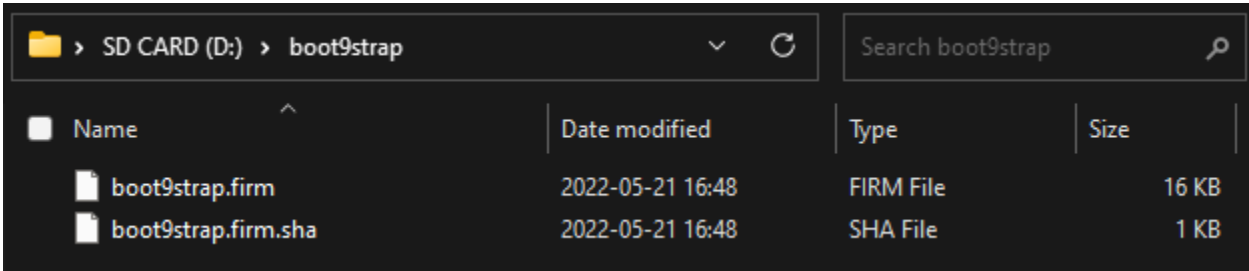
Your directory should now look like this:

Root :



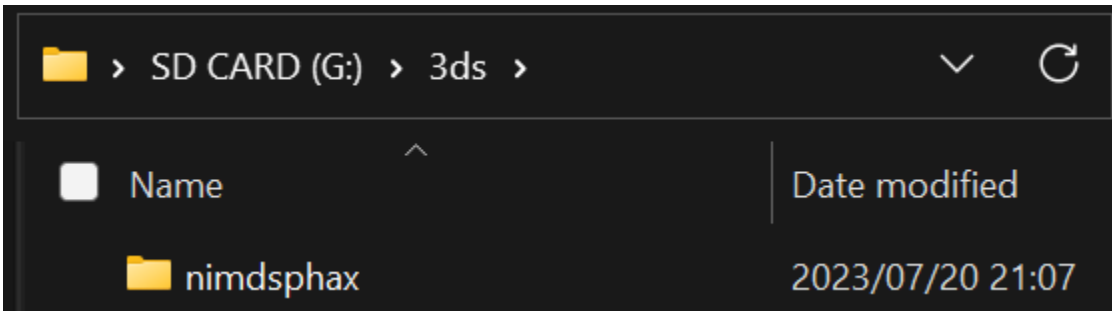
Name	Date modified	Type	Size
3ds	2023/07/20 21:06	File folder	
boot9strap	2023/07/20 21:06	File folder	
Nintendo 3DS	2023/07/19 1:47	File folder	
steelhax	2023/06/11 20:36	File folder	
boot.3dsx	2023/07/20 19:39	3DSX File	392 KB
boot.firm	2023/07/20 19:39	FIRM File	275 KB
otherapp.bin	2023/07/17 14:57	BIN File	29 KB
SafeB9SInstaller.bin	2023/07/19 2:00	BIN File	92 KB

/boot9strap/ folder:



Name	Date modified	Type	Size
boot9strap.firm	2022-05-21 16:48	FIRM File	16 KB
boot9strap.firm.sha	2022-05-21 16:48	SHA File	1 KB

/3ds/ folder:



Name	Date modified
nimdsphax	2023/07/20 21:07

Step 2 - Steelminer

You will create a hacked *Steel Diver: Sub Wars* save file in this step.

1. Launch *Steel Diver: Sub Wars* and select your Mii to continue.
 - a. Decline the game update if prompted.
 - b. If you have accidentally updated it then go to System Settings>Data Management then delete the update there.
2. Quit *Steel Diver: Sub Wars*.
3. Power down your 3DS.
4. Put your SD card in your computer.
5. Go to [Steelhax Save Tool](#).
6. Find your |movable.sed| file after clicking Choose File.
7. Select your region.
8. Select "Build and Download"
9. Wait for it to finish.

10. Go to `/Nintendo 3DS/<ID0>/<ID1>/title/00040000/<region-code>` (see below)/data/ on the SD card.
European region code: `000d7e00`
Japanese region code: `000d7c00`
USA region code: `000d7d00`
11. Copy the `|00000001.sav|` file that you just downloaded into the `/data/` folder.
12. Overwrite your old save when asked.
13. Insert your SD card into the 3DS.
14. Turn on your 3DS.
15. Launch *Steel Diver: Sub Wars*.
16. Your 3DS will boot into the Homebrew Launcher. Open `nimdsphax` from the list of apps.
17. If this process was successful, you should be booted into the `SafeB9SInstaller`.
18. Do not turn off the 3DS.

If you were booted and received a red screen, don't panic. Turn off your system then retry this section and make sure your files are in the correct places.

Step 3 - Install boot9strap

You're in the home stretch of modding your 3DS. This is the second to last section.

1. After you complete Step 2, input the key combo on the top screen to finish installing your apps.
 - a. If you aren't prompted to input the key combo or get a red bottom screen with text, ask for help at the [Nintendo Homebrew Discord server](#).
2. Once you've done this, press (A) to reboot the system.
3. Your 3DS should be booted into the Luma3DS config menu. This is obviously a settings page for Luma3DS. Do not enable or disable any settings. If you do by accident, revert it to its default state. If your console does not turn on, make sure that you've copied `|boot.firm|` from the Luma3DS .zip file.
4. Press Start to save your settings and reboot.
 - a. The Luma3DS menu does not look any different from the regular 3DS HOME menu.

Finalizing your Setup

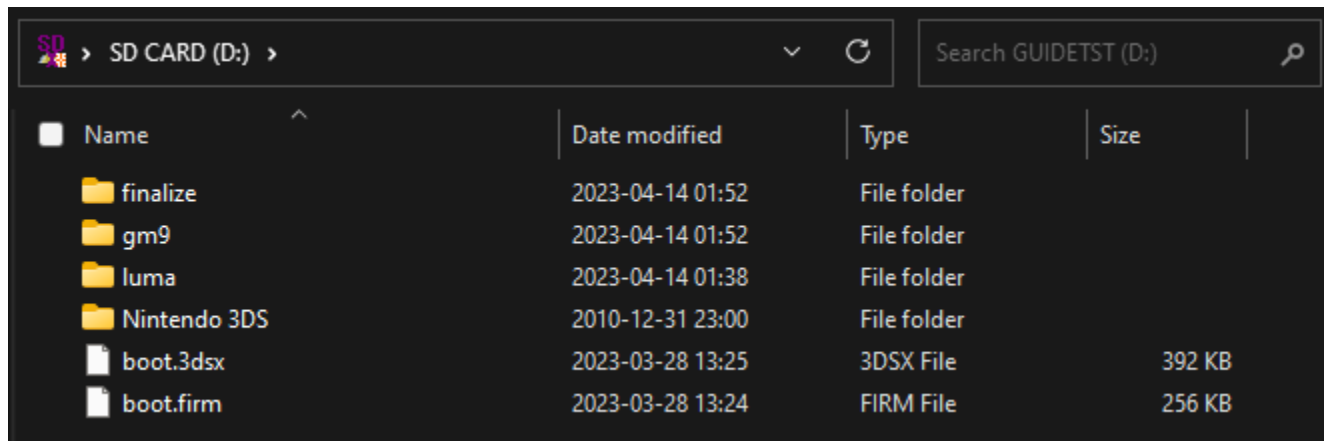
This next section will finish the installation of mods. It will install the following:

- FBI (installs .CIA files)
- Homebrew Launcher Loader (opens the Homebrew Launcher)
- Anemone3DS (installs custom themes)
- Checkpoint (backs up and restored DS and 3DS save files)
- ftpd (wirelessly access your SD card)
- Universal Updater (app store)
- GodMode9 (multipurpose tool that can create NAND backups and cartridge backups)

Step 1 - Finalizing

1. Turn off your 3DS.
2. Put your SD into the computer.
3. Copy the contents of the `|finalizing.zip|` file to the SD root. Merge or replace any existing folders if prompted.

4. SD card layout so far: (must look like this to continue)



5. Put your SD card in the 3DS.

Step 2 - Custom Firmware Check

WARNING - IF CUSTOM FIRMWARE IS NOT INSTALLED AT THIS POINT AND YOU CONTINUE, YOU WILL NOT BE ABLE TO HACK YOUR 3DS AGAIN.

1. Power off the 3DS.
2. Hold (Select).
3. Power on the 3DS while holding (Select).
4. If you installed everything properly, you should be booted into the Luma3DS config menu
5. Press Start to save and reboot your 3DS.

If you do not boot into the Luma3DS menu, ask for help on the [Nintendo Homebrew Discord](#).

Step 3 - Setting Up RTC and DSP

Sync the 3DS's internal clock to real-time and dump the sound firmware.

1. Press (L) + (D-Pad Down) + (Select) all at once to open the Rosalina menu.
 - a. If you cannot press all of these buttons, ask on the [Nintendo Homebrew Discord](#).
2. Select "Miscellaneous options".
3. Select "Dump DSP firmware".
4. Press (B) to keep going.
5. Select "Nullify user time offset".
6. Press (B) to keep going.
7. Press (B) to return to the Rosalina menu.
8. Press (B) to exit the Rosalina menu.

Step 4 - Script

Finish modding your 3DS.

1. Turn off your console.
2. Press and hold (Start) while powering on your 3DS to boot into GodMode9.
 - a. If you don't boot into GodMode9, make sure that you've copied folders from |finalizing.zip| correctly and that those folders are properly named.
3. If you are asked to make an essential file backup, press (A) to do that and press (A) again once it finishes.
4. If you are asked to fix the RTC Date&Time, press (A) to do that, set the date & time and press (A).
5. Press (Home) to bring up the action menu
6. Select *Scripts...*
7. Select *finalize*
8. Follow the prompts you will get and answer any questions. If you encounter an error, consult someone at the [Nintendo Homebrew Discord](#).

9. Once the scripts will say *Setup complete!* press (A) to turn off the 3DS. If you do not see *Setup complete!* then redo *Step 4 - Script*.
10. Insert your SD card into your computer.
11. Copy /gm9/backups/ to a safe location where it will not be tampered with on your computer.
 - a. This folder contains backups and should be backed up to multiple places (cloud storage, flash drive, etc.) so you can recover your data and console in the event of a brick.
 - b. The SysNAND files are a NAND backup and can be used in a hardware brick.
 - c. The |essential.exefs| file contains system-specific software that can be used to recover your console from a hardware brick.
12. If you still have the two SysNAND files on your SD card in /gm9/backups/, delete them both.

Congratulations! Your 3DS is now properly modded! Go to [Recommened 3DS Games](#) or [3DS:Things to do](#) for game and homebrew recommendations.

Extras

Read these if you are unsure how to do something. If this section does not answer your question, go to [Nintendo Homebrew Discord](#).

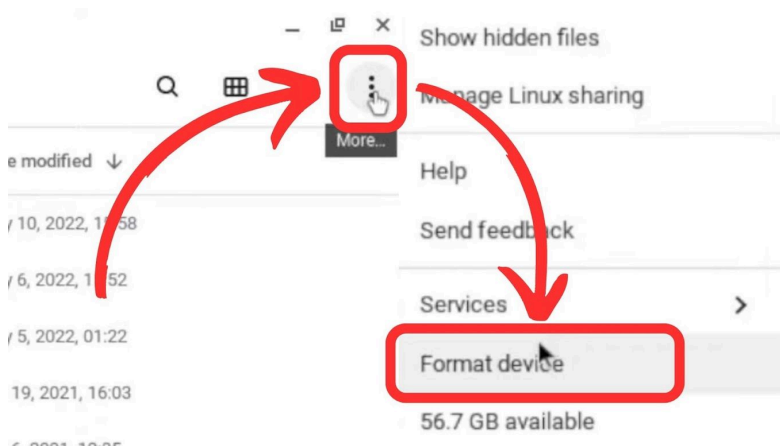
Button Combos:

- a. Hold (Select) when booting to launch the Luma3DS config menu.
- b. Hold (Start) when booting to launch GodMode9 or other software (in some cases).
- c. Press (L) + (D-Pad Down) + (Select) at the same time to open the Luma3DS menu. You can take screenshots, enable cheats, browse system info and more.
- d. Hold (Start) + (Select) + (X) while booting to change

How to format an SD card to FAT32 on Chromebook:

WARNING: Do not have any files on your SD as formatting it will erase them.

1. Open your SD card directory
2. Select More
3. Select Format device
4. The name of the card does not matter. Select FAT32 from the dropdown menu.
5. Select Erase and Format.



How to format SD card to FAT32 on Mac:

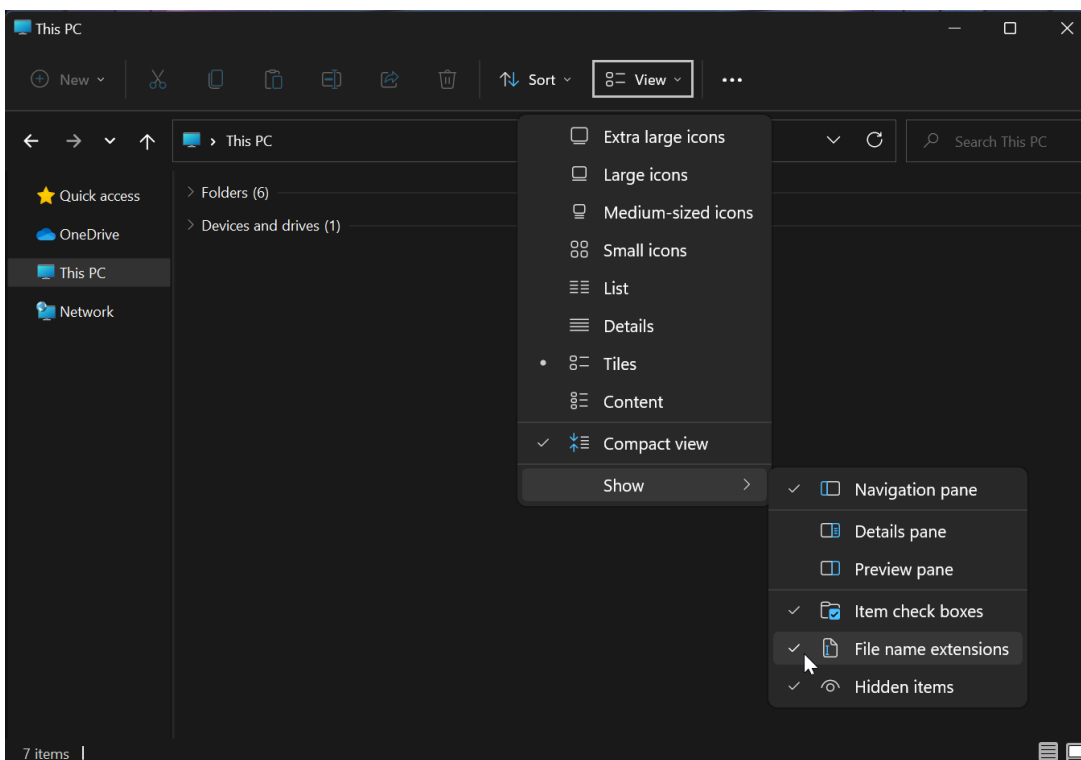
1. Insert SD Card
2. Open DISK UTILITY or Press Command + Spacebar
3. Select SD Card In the Left Menu
4. Press ERASE Button
5. Select the format from the dropdown menu FAT32.



How to enable file extensions (Windows only)

Windows 11:

1. Open your file explorer.
2. Click "View" in your toolbar.
3. Click "Show".
4. Click "File name extensions"



Windows 10, 8.1, 8

1. Open your file explorer.
2. Click the “View” option on the ribbon menu
3. Check the box “File name extensions”

