

Upgrading an HP 39/40gs Calculator ROM

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Introduction

Please read this entire document before attempting to upgrade you calculator. While it is not a difficult operation to perform, there are a few steps needed in the process. This zip file contains the latest version of your calculator ROM.

For this ROM update, it is important to reset your aplets on your calculator when finished. This is because a bug that could clear your memory and affects several of the aplets was fixed, but if you don't reset the aplets after the upgrade it will remain and can cause a memory loss.

Before Beginning an Upgrade

1. Unzip the package in a directory on your computer.
2. Ensure that you have good batteries in the calculator.

Upgrading Using a USB Cable

These instructions assume you have copied the latest ROM binary file to your computer desktop. Another assumption is that you have downloaded and installed the latest Connectivity Kit and drivers from <http://www.hp.com/calculators/>. If needed, download the connectivity kit and USB drivers from the HP calculator website at <http://www.hp.com/calculators/>.

1. Get a paper clip and bend it into a reset tool. To do this, bend the end of the paper clip out so it is at a right angle to the rest of the clip. You will be inserting that end into a hole in the back of the calculator in a later step.
2. Connect the calculator to your PC using the USB to miniUSB cable supplied in the product package. Turn on the calculator and launch the 39/40gs connectivity kit.
3. In the menu bar, the second item is ROM. Press ROM and select the only available item: Download Calculator ROM... (see Illustration 1)

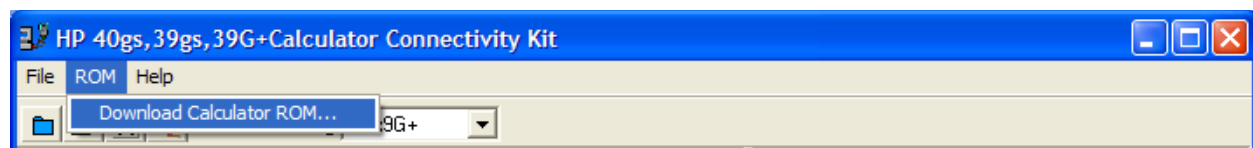


Illustration 1: Use the Download Calculator ROM... menu item

4. A dialog box will pop up with the files on your desktop listed. Highlight the ROM file and click on the “Open” button (see Figure 2).

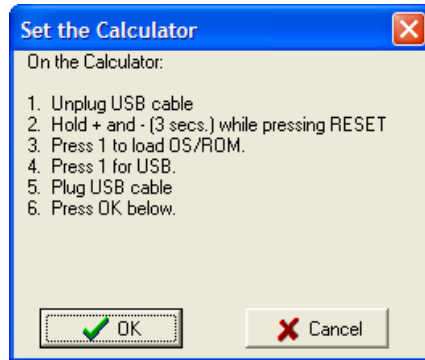


Illustration 2: The set the calculator dialog box.

5. Once you press the open button in the dialogue box, it will close and a new dialogue box will appear, as in Figure 3.

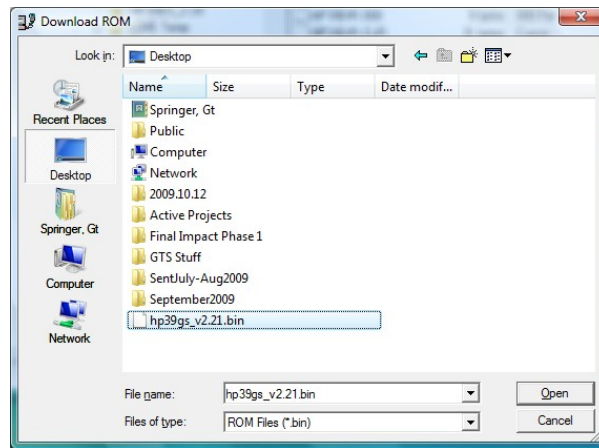








Illustration 3: The download ROM dialog box.

6. Unplug the USB cable for a moment. Take the calculator in your right hand but keep that reset tool handy!
 - a. Take the calculator and hold down both  and  at the same time. Use the first two fingers of your right hand to push down the buttons while placing right thumb behind the calculator to help you keep the buttons pressed. Hold the calculator so you can pick it up and turn it over with these three fingers of your right hand.
 - b. While you are holding these two keys down, pick up the paper clip with your left hand and put the paper clip into the reset hole on the back of the calculator. Push it and hold for a second while continuing to hold the keys.
 - c. Remove the paper clip and then let go of the keys. One of two things will happen. Either the calculator will reset or you will get a screen that says:

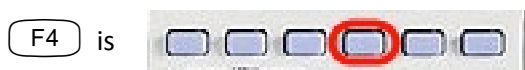
1. Update Code and 2. SELFTEST

7. If the update screen did not appear, go back and repeat Step 6 (try holding paper clip longer).
8. Once the update menu appears, plug the USB cable back in and press  to select `UPGRADE CODE`, and then  for USB.
9. On the calculator, you will see `BEGIN UPDATE` and then `ERASE FINISHED` messages. On the computer an update bar will show the transfer progress.
10. After about a minute when done, the calculator will display `UPDATE FINISH WAIT RESET or ENTER` and the calculator has been upgraded. Press  or remove and then replace a single battery to reboot the calculator.
11. Once the ROM is upgraded, you will need to reset all of your applets to avoid problems with memory clearing in the future. To do this, go to the applet screen and press SHIFT-CLEAR to wipe all applets. Alternatively, select each applet and press  until all have been reset. **If you do not do this, you may later encounter the bug that can cause a memory wipe at a future time!**

Alternative Method and USB Cable

This method does not require using a paperclip to press the RESET button on the back of the calculator. However, it takes more precise timing and some users have trouble getting it just right. If you have trouble, please use the previous method.

For clarity, this section will label the top row of menu keys from left to right as F1-F6. However, only two menu keys are used in this alternative method. Please examine the following pictures before proceeding.



1. On the calculator, press and hold **ON** and **F4**. Release **F4** and then **ON**. A test menu showing 1. LCD through A. AUTOTEST will appear.
2. Now press and hold **ON** and **F3** together. Release both keys and then hold down **+** and **-**. Hold these two keys for three seconds, and then release both keys. A menu showing 1. UPDATE CODE will appear. If it does not, please repeat steps 1-3 until it appears. **There must be a tiny delay between **ON****F3** and **+****-** in which no key is pressed. If you are too quick at pressing **+****-**, or leave too long a delay, the calculator will reboot instead. If you continue having trouble after several attempts, please use the previous upgrade method and the RESET button.**
3. Once the update menu appears, press **1** to select **UPGRADE CODE**, and then **1** for **USB**. If you are connected to the calculator with the USB and have selected Upgrade ROM, the computer will erase the ROM, and flash the new version. After about a minute, the calculator will be upgraded. Press **ENTER** or remove and then replace a single battery to reboot the calculator.
4. Once the ROM is upgraded, you will need to reset all of your applets to avoid problems with memory clearing in the future. To do this, go to the applet screen and press **SHIFT-CLEAR** to wipe all applets. Alternatively, select each applet and press **|||||** until all have been reset. **If you do not do this, you may later encounter the bug that can cause a memory wipe at a bad moment!**

Change Log

This section details changes made from version 2.00 onwards and will be updated as needed.

- Generated new supported entry list to support applets introduced in the 39/40gs. (C222)
- Fixed one bank of entry points that had shifted slightly. (C222)
- Fixed bug in which holding ALPHA-0 would not work properly. (B221)
- Fixed issue with flash test overwriting part of ROM on 39gs. (B221)
- Added Streamsmart application. (C220)
- Fixed bug that would cause memory wipe when accessing numerical setup view (C220)
- Various CAS fixes for 40GS calculator (C220)