

Resetting the calculator

It is probably inevitable as the line between calculators and computers becomes blurred that calculators will inherit one of the more frustrating characteristics of computers: they crash! The hp 39gs and hp 40gs can sometimes do this due to the very complex and flexible operating system they use. If you find that the calculator is beginning to behave strangely, or is locking up then there are a number of ways to deal with this.



Calculator Tip

If you are a user of external applets then you may occasionally find that an applet that has been working perfectly will unexpectedly stop working with the message "Invalid syntax. Edit program?". There is almost certainly nothing wrong. Press **NO**, try a soft reboot as below, then run the applet again.

Soft reboot (Keyboard)

Pressing ON+SK3 will perform a soft reboot. It is perfectly safe and will not cause any memory loss except that your HOME History will be cleared. Hold down the ON key and, while still holding it down, press the third screen key from the left. The calculator will very briefly display a boot screen and then redisplay the HOME view, with the Function applet as the active one.

If you find that the calculator locks up so completely that the keyboard will not respond then a method of reset is provided below which is independent of the keyboard. This shouldn't happen but it is important to know how to deal with it in case it happened during a test or an exam.

Soft reboot (Hardware)

This method is provided in case the calculator is locked up to the point that the keyboard no longer responds.

On the back of the calculator is a small hole. Poke a paper clip or a pin into this hole and press gently on the switch inside. This briefly interrupts the power supply and, to the calculator, is exactly equivalent to a soft reboot as outlined in the previous section. Normally it should not only unlock the calculator but retain your data intact. However, it must be pointed out that a problem so severe that it has locked up the keyboard may be so bad that it has corrupted the memory anyway. If so then you may find that you see the "Memory Clear" message when it reboots. If you find that it keeps locking up repeatedly then you should perform a hard reboot as described in the next section. If you have important data on the calculator then you might try to save it to a PC before doing this since a hard reboot will wipe all user memory.

Hard reboot (with loss of memory)

To completely reset the calculator's memory back to factory settings press ON+SK1+SK6. (SK1="screen key 1") When doing this, don't press them all at once; hold down the ON key and, while still holding it down, press the first and then the last screen keys. Release them in the opposite order. Don't release SK1 and SK6 together - release SK6, then SK1, then ON. This is deliberately made complex so that it won't happen by accident!

This type of reset will always cause complete loss of data. If you find that the screen fills with garbage, or if the calculator's in-built diagnostic routine starts to run, then it is just that you have not released them in the right order. Simply try again.



Calculator Tip

1. If your calculator is really thoroughly locked up or won't turn on then try the procedures listed below this tip.
2. My past experience with these calculators is that they do tend to lock up occasionally, particularly if you load applets and programs from the web. I usually suggest to my students that they regularly save their work to a PC and perform a hard reboot about once a month, reloading the saved work onto the calculator afterwards.
3. Pressing ON+SK4 by mistake will result in the screen shown right. This is a special diagnostic mode that can be used by engineers to test the calculator's components. There is nothing wrong with experimenting with it but it is of no use to the average user. To exit, simply reboot normally by pressing ON+SK3.

1. LCD	2. KEY
3. FLASH	4. SRAM
5. USB	6. RS232
7. BUZZER	A. AUTOTEST

Locked Calculator? Won't turn on? Turns on briefly and then immediately off?

Try the following:

- Try a soft reboot using ON+SK3.
- Try a paperclip in the hole in the back (gently).
- Is it possible that the screen is blank because the contrast is turned to extremely light?
Try ON and  to make the screen darker. (Hold down ON and press  repeatedly.)
Use ON and  to lighten the screen.
- Change the batteries for new ones. Try this more than once because sometimes batteries are dead right off the shelf if they've been in the shop too long. Try replacing the backup battery too. Make SURE you've put the batteries in right way around. Putting them in reversed may seriously damage the calculator.

- Take the batteries out, including the round backup battery. Press and hold the ON button for 2 minutes to remove any possible remaining power from the internal capacitors. Leave the calculator overnight and re-insert fresh batteries.
- If this happened when running a game or applet that you've downloaded from the internet then consider that this may be the source of the problem. Backup anything that you want to keep to the PC and do a full reboot to restore factory settings.
- Try a full reboot using ON+SK1+SK6.

Some less likely options:

- Did the paperclip feel funny when you inserted it? There should be a very subtle sensation of 'pressing a button' as the paperclip shorts out the batteries momentarily. Could you have accidentally bent the shorting contact last time you used a paperclip so that it is permanently shorting out?
- Check the battery compartment. Are any of the metal contacts broken or out of place? Are the batteries firmly in contact with all of them? Is anything out of place? Do any of the batteries or the metal contacts show corrosion? If so, clean them carefully, being careful not to get moisture inside the calculator.
- Have you recently dropped the calculator or spilled liquid on it? If so, this is not good. It is probably permanently dead. Did you need a very expensive paperweight?
- Check the USB and Serial ports at the top of the calculator. Do they have anything wedged in them courtesy of a young child perhaps?