

Connecting the HP40 / HP38G calculator to PC with USB

English version 1.2
based on Dutch version 1.11
15 October 2005

Problem: You want to connect the calculator to the pc with the cable, but you don't have a COM port...

Many modern laptops are missing the COM port (serial port) which is needed to communicate with the HP38G, HP39G & HP40G. This can easily be fixed with the aid of a cable. The first step is to buy a USB-to-Serial converter cable (prices vary). On one end, you'll find a USB-connection. On the other will be either a DB25 or DB9 serial plug. If your version has a DB25 plug and has no adaptor to allow connection to a DB9 port then you may also need to purchase an adaptor, since it very rare to find DB25 plugs on modern computers. The adaptor is shown in the image below left.

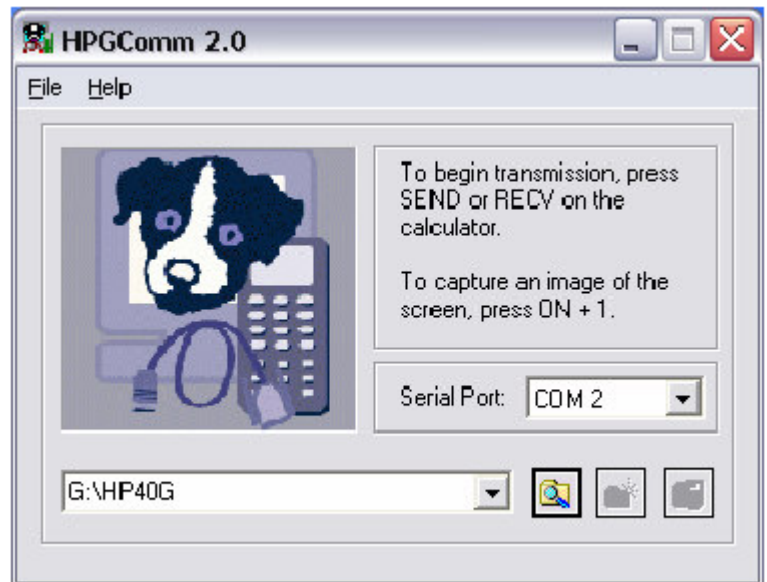


These USB to serial adaptor cables generally support both Windows and Apple Macintosh but because the calculator software is currently almost entirely written for Windows, this document will concentrate on that OS.

Installation for Windows:

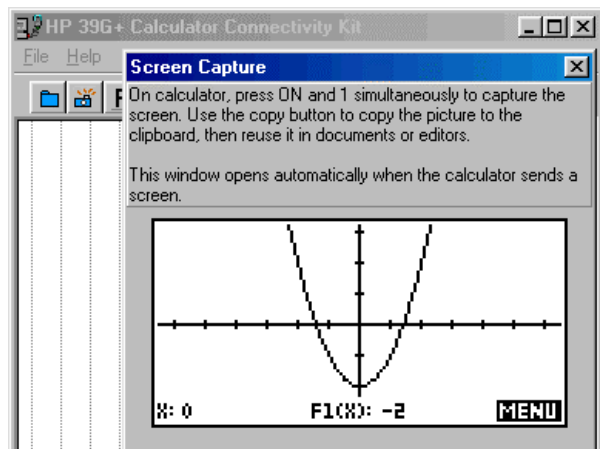
- 1) Install the program HPGComm. You can download this from either <http://www.hpcalc.org/details.php?id=3715> or from <http://www.hphomeview.com/zipfiles/CommPlus.zip> but DON'T connect the cable yet to the PC.

- 2) Your cable almost certainly came with a cd-rom containing drivers. Follow the instructions on how to install these. This may involve installing the drivers first before connecting the cable, or it may involve connecting the cable and waiting for Windows to recognise it and request an installation disk. You may have to reboot the computer after the installation has finished.
- 3) After rebooting, ensure that the cable is connected to the computer and to the calculator. Normally, Windows recognizes the cable and configures it automatically as part of the installation process and will not ask you to do anything further. Sometimes, however, Windows may fail to recognize the drivers and will require you to install them more than once. You may need to search on the cd-rom for the folder containing the drivers and direct Windows to that folder when it requests them.
- 4) Turn the calculator on and start the HPGComm program. You may find that this is the end of the process and you can immediately use the cable & program normally. If the program appears to be running correctly then the easiest way to check if there is a valid connection between the calculator and the computer is by capturing an image of the screen.



On the hp39g, hp40g, hp39g+ and related models this is done by pressing ON on the calculator, holding it down and then pressing 1.

If your connection is valid then a screenshot will appear on your PC showing the calculator's screen. If this occurs then you have successfully installed your cable and software.



- 5) Sometimes, however, you see a message from HPGComm telling you that the program is unable to use the assigned COM port. This means that the program has been unable to find a cable attached to the port you have asked it to use. If so, go to the next step in this explanation.



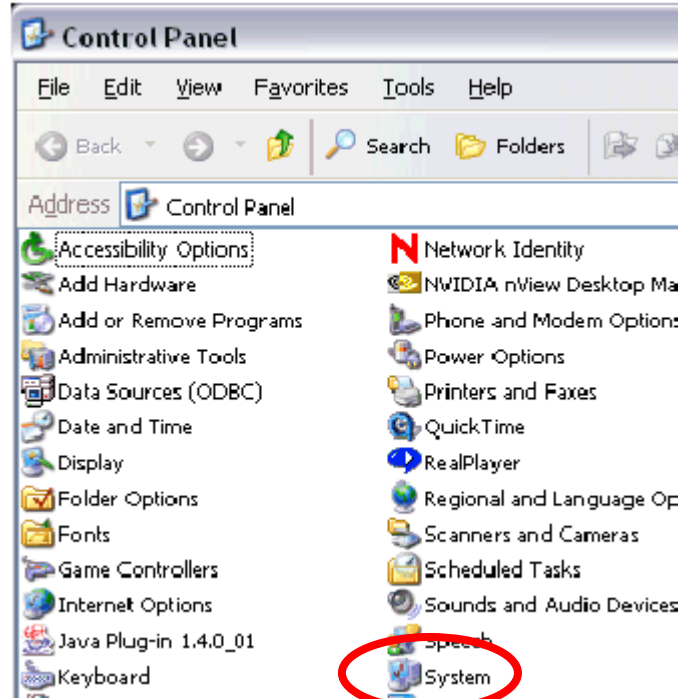
- 6) If the steps up to this point didn't work then it may be for one of a number of reasons.
- a. Firstly, HPGComm is capable of accessing COM ports numbers 1 to 4. You can change this using the control on the main program screen. Try the other ports to see if they will work.
 - b. Secondly, the problem may be that Windows has assigned a COM port to the cable during the installation process that the program can't access. In the following steps, there is a description of the way to change the COM port number in Windows XP. The procedure for other Windows OS's differs slightly, but is essentially similar.



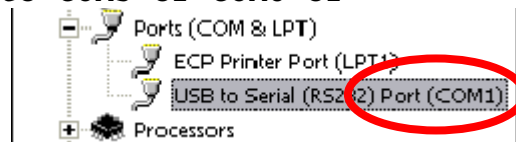
Reassigning the COM port

1) If the error message from HPGomm is still displayed, click OK to remove it and then close the HPGComm program.

2) Click on the Start menu and choose the Control Panel. If your Control Panel is set up to display in XP style then use the button on the left of the window to change it to the Classical View. The aim is to see something similar to the view shown right.

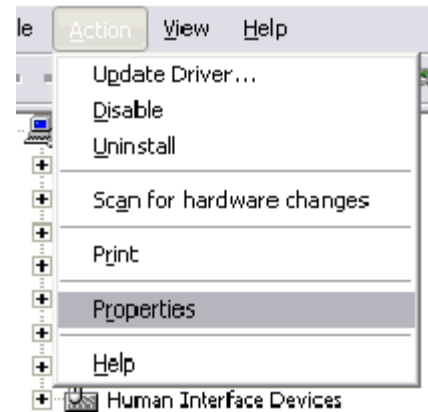


3) Run the "System" control icon and choose the Hardware tab. Now click on the Device Manager button. In the screen that appears next, look down until you find your new USB to Serial connection. Unlike the example here, which shows that it is connected to COM1, you will probably find that it is listed as being connected to COM5 or COM8 or something similar. This means that HPGComm can't use it until you change the port assignment.

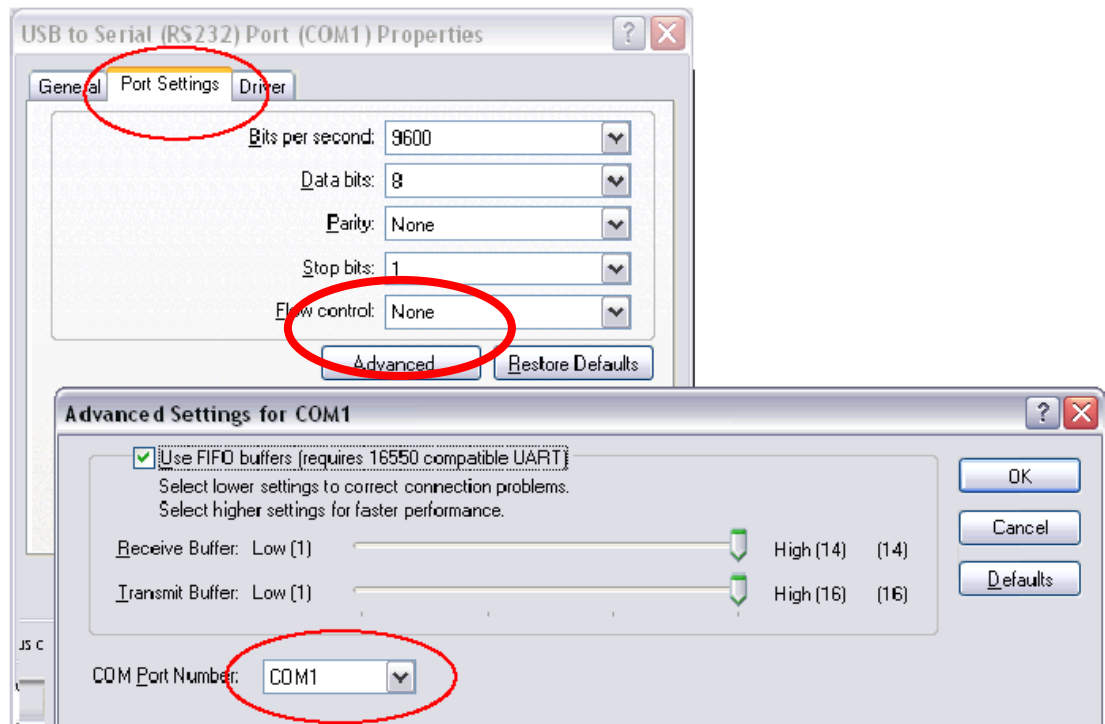


If your version shows COM1, COM2, COM3 or COM4 then you should run HPGComm, set it to connect to that port and then check again for a valid connection by capturing a screenshot. If the connection is still invalid then you have a larger problem! You need to look at whether you have any other programs such as modems or joysticks which are taking control of the serial port and refusing to allow HPGComm to gain access. Good luck!

- 4) To change the assigned port, select the device in the list and then choose 'Properties' via the Action menu as shown.



- 5) In the Properties dialog box, click on the "Port Settings" tag and then on the "Advanced..." button (see below). In the Advanced Settings box that appears you will see a pull down menu that allows you to assign a different COM port number than the one that Windows has allocated. Use it to choose one that HPGComm will recognise. You should generally avoid choosing one that is already in use. This is indicated in the list that pops up.



- 6) After you have chosen a valid port number, you may now close all windows by clicking on the OK button in every screen or on the X in the upper right corner of your screen when there is no OK-button.
- 7) Restart Windows, then run the program HPGComm again. The warning message may still appear if HPGComm is not set to the port you've chosen. If so, ignore it and click OK.

- 8) Finally, use the selection box on the main screen of HPGComm to choose the same port as you chose in the Windows Device Handler. Hopefully, everything should now work correctly.

You can, of course, use the converter cable for older printers or scanners who don't have a USB-connection. The procedure is almost the same as described above if the port numbers shouldn't match at first configuration.

Colin Croft
ccroft@hphomeview.com

Frederick De Groot
Frederick.De.Groote@gmail.com