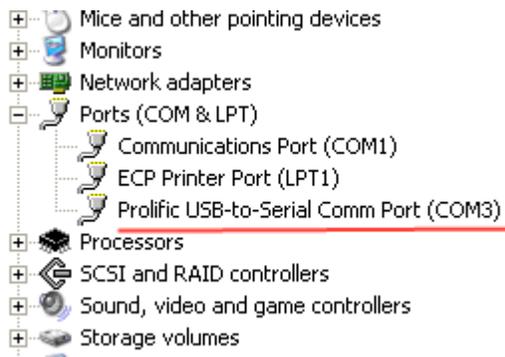


# Solving Problems using RS232 to USB convertors

The serial port is becoming scarce on some computers/motherboards and certainly has not featured on most laptops for some time. Therefore the use of USB to RS232 convertors has become popular.

The convertor will consist of a cable/convertor and a MS Windows driver. Typical installation will see you install the driver & plug the convertor in to your computer. MS Windows should report that it has found the device and configured it – usually displaying a pop-up notification to that effect. You can check that the USB convertor is connected and working by looking at the Windows Device Manager under Control Panel.

You should see the USB convertor under Ports, see example below:



This should also list the virtual com port number it is using. If it does not show up under ports or there is a yellow exclamation symbol next to it then there is a problem with the driver or the physical device. Read the convertor's installation manual for help.

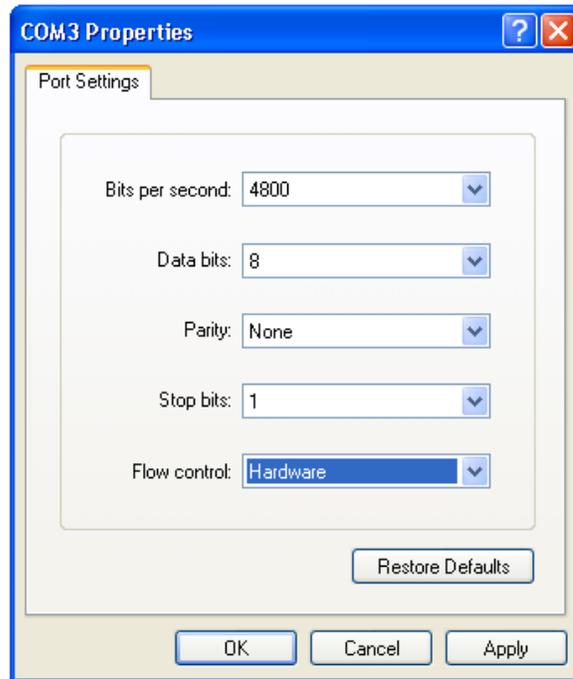
Assuming all is ok so far then you can try connecting the USB to RS232 convertor to the scale. A basic communication test should be executed to make sure data is flowing correctly from the scale to the computer. A program like HyperTerminal on MS Windows XP can be used, though this program is not included on later operating systems like MS Vista & Windows 7. Alternatively you can use a free program like Putty.

## Typical HyperTerminal Setup for a basic test:

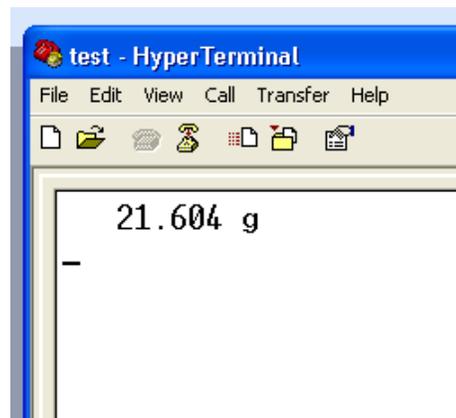
Launch HyperTerminal:



Set the com port to the virtual com port of your USB to RS232 convertor – COM3 in this example. Next set the Baud settings, typically 4800 Bps, 8 data bits, no parity and 1 stop bit for most ADAM scales (though not all, so you need to check the user manual’s RS232 Section to find out how to check the settings inside your scale/balance.



Once the HyperTerminal settings have been entered you should try pressing print on the scale/balance/indicator etc and hopefully you will see a reading appear in HyperTerminal like below (Note the scale output varies considerably per model but as long as you can see something that resembles the reading from the scale it should be working, you may also see lots of extra information depending upon the model, that is not displayed on the scale’s screen – that is ok).

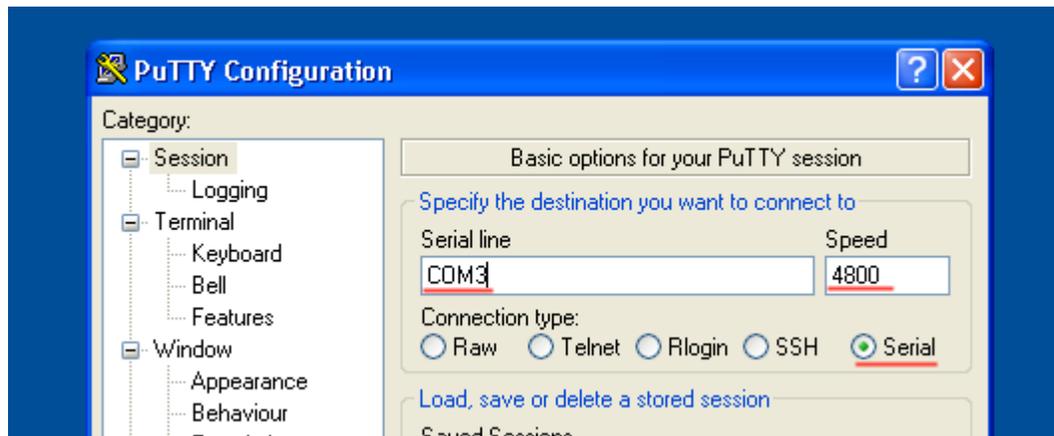


## Typical PuTTY setup for a basic test:

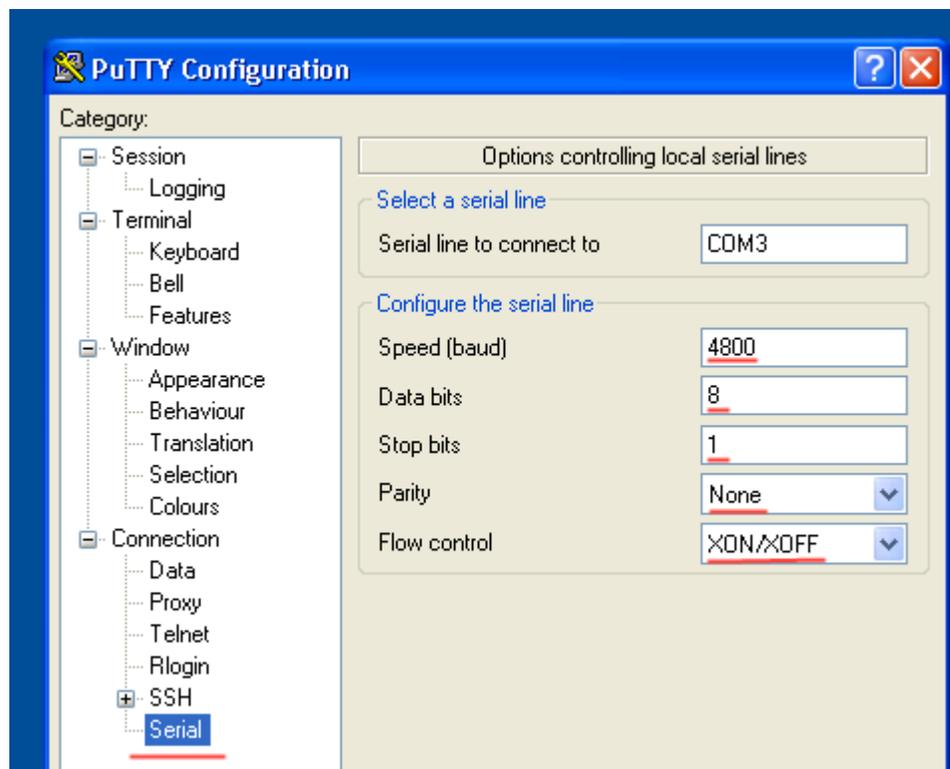
Download and install the free program PuTTY from:

<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

There are multiple versions to download, the simplest one to download/install is the “Windows installer” version. Download and install using the default options. Launch the PuTTY program. Change the PuTTY configuration screen so “connection type” is set to “serial”. Then enter the com port in the “Serial Line” box (this is the same as your virtual com port of your USB to RS232 convertor) COM3 in this example

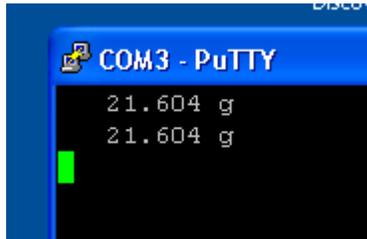


Next set the Baud/speed setting, typically 4800, 8 data bits, no parity and 1 stop bit for most ADAM scales (though not all, so you need to check the user manual’s RS232 Section to find out how to check the settings inside your scale/balance. The flow control can be left at its default.



Click open and you should get a black window open.

You should try pressing print on the scale/balance/indicator etc and hopefully you will see a reading appear in Putty window like below (Note the scale output varies considerably per model but as long as you can see something that resembles the reading from the scale it should be working, you may also see lots of extra information depending upon the model, that is not displayed on the scales' screen – that is ok).



## Interpreting the Results:

**If you see lots of characters that look nothing like the reading on the scale for example:**

```
\x%31\v\n&€o\x%32\x%31\x%31|\x%31\x%33\x%31\x%31
```

This usually means you do not have the com port/baud settings correctly matched between the scale and Putty/HyperTerminal, you need to recheck the settings in the scale & Putty/HyperTerminal – they must match.

**If you see nothing appear in the Putty/HyperTerminal screen** then again this usually means you do not have the com port/baud settings correctly matched between the scale and Putty/HyperTerminal, you need to recheck the settings in the scale & Putty/HyperTerminal – they must match.

**The data is readable in the Putty/HyperTerminal window** - this means the basic communications test is now complete, your USB to RS232 convertor appears to be working OK. You should now be able to use the scale with other software like the [ADAM DU Data Utility](#) for collecting and analyzing readings from ADAM Balances & scales. See [www.adamdu.com](http://www.adamdu.com) for more information about this program.

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