

CONVERT YOUR MTP850/MTP830 SERIAL DATA CABLE PMKN4025 INTO USB



Go and get from your favourite supplier the FTDI USB TTL Serial Cable **TTL-232R-5V-WE**.

The product page: <http://www.ftdichip.com/Products/Cables/USBTTLSerial.htm>

Virtual COM Port (VCP) drivers: <http://www.ftdichip.com/Drivers/VCP.htm>

FTDI web shop: <http://apple.clickandbuild.com/cnb/shop/ftdichip?op=catalogue-products-null&prodCategoryID=102&title=USB-TTL+Wire+Ended>

The TTL-232R-5V-WE ("wire ended") is a USB to Serial (TTL level) converter cable which allows for a simple way to connect TTL interface devices to USB. This version of FTDI's USB to TTL serial adapter cable has its I/O pins configured to operate at 5V levels.



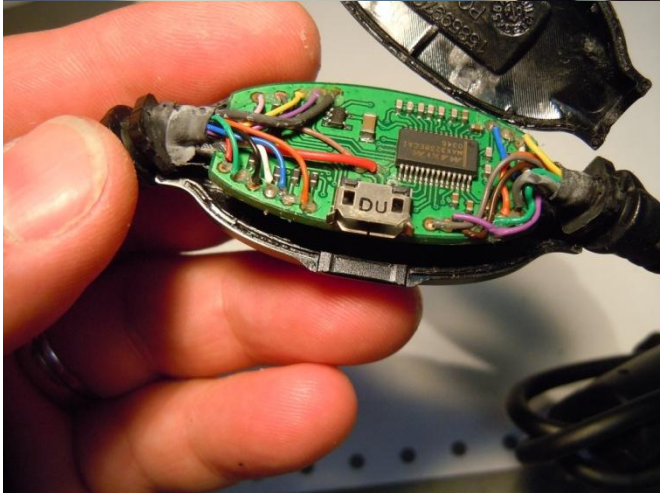
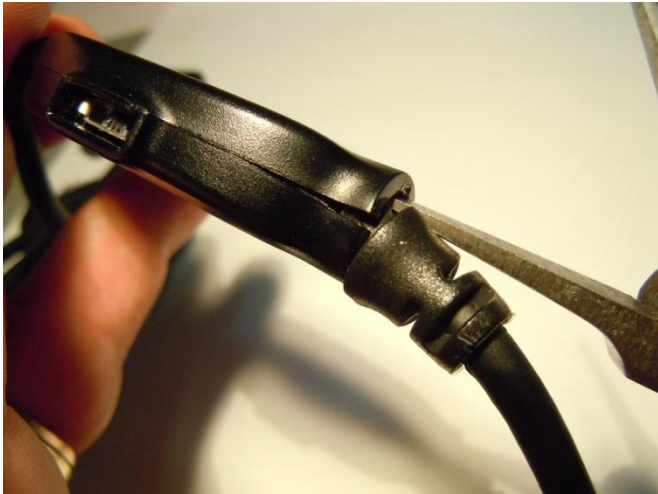
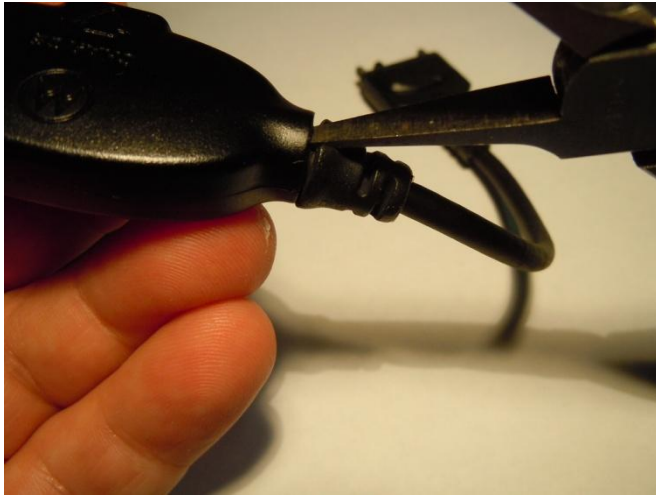
The TTL-232R-5V-WE uses a FT232RQ device which is housed inside the USB 'A' connector, and is terminated at the end of a 1.8 m (70") cable with 6 bare, tinned wires which provide access to transmit (Tx), receive (Rx), RTS#, CTS#, Vcc (5V), and GND signals. This allows the customer to customise the TTL-232R-WE with their own connector, according to the requirements of their application. Alternatively the TTL-232R-WE can be hard wired

onto a PCB.

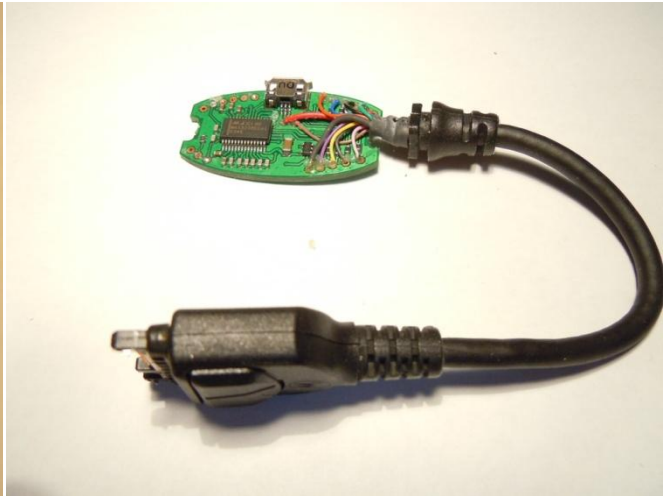
The TTL-232R-5V-WE is fully RoHS compliant and is supplied loose packed in an anti-static bag. It is FCC and CE approved.

Let's start!

First we need to open the housing of the TTL - RS232 level shifter. Use adequate pliers, tweezers or screwdriver and use it as a lever to crack the housing. Be careful not to damage the housing. Take your time.



Now remove the cable with the 9pin DB connector.

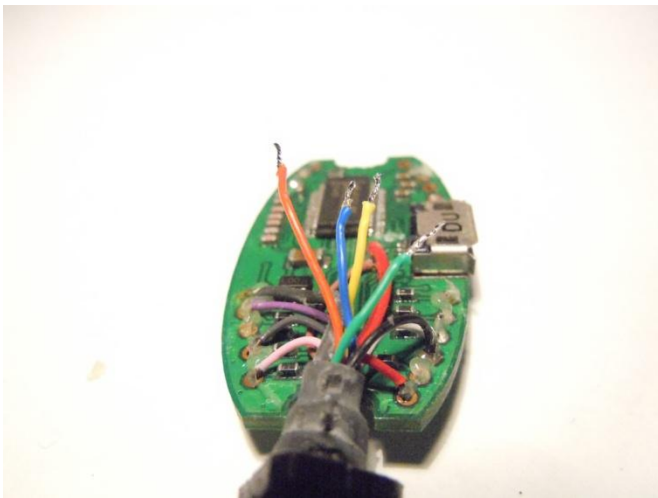


From the remaining radios cable, you need these three wires:

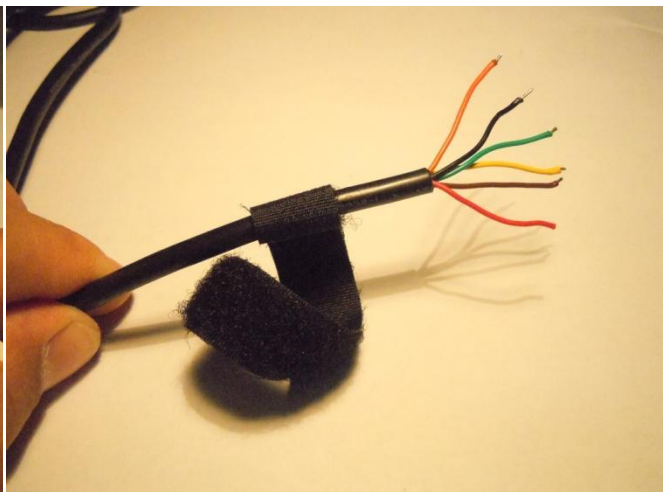
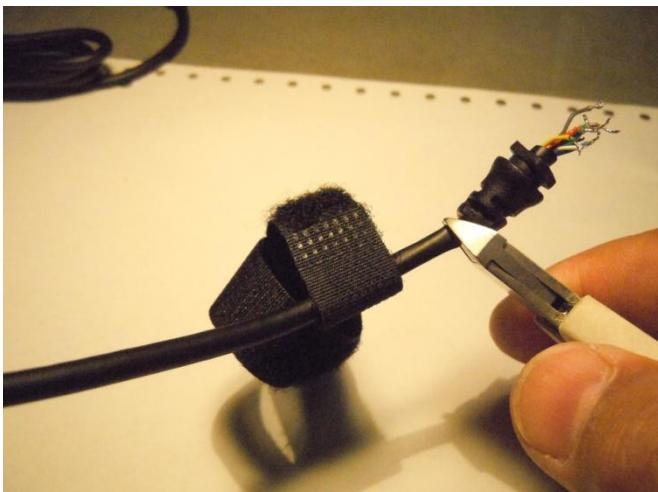
- Orange
- Yellow
- Blue

Remove them from the PCB.

ATTENTION! Although the green wire on the radio cable side is not connected to the PCB in the following pictures, keep it soldered to the PCB.

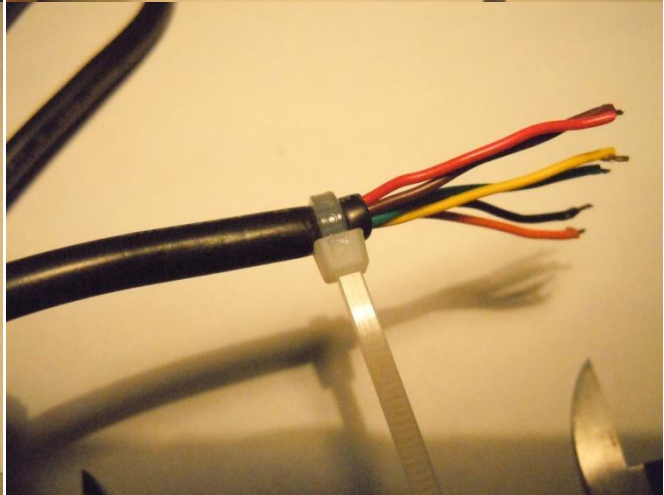
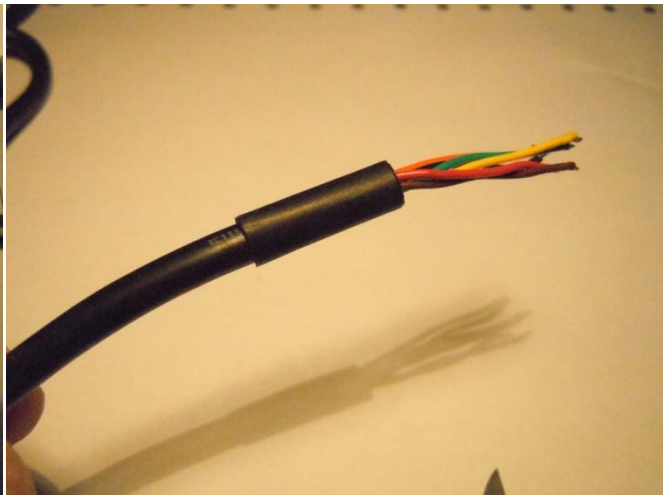
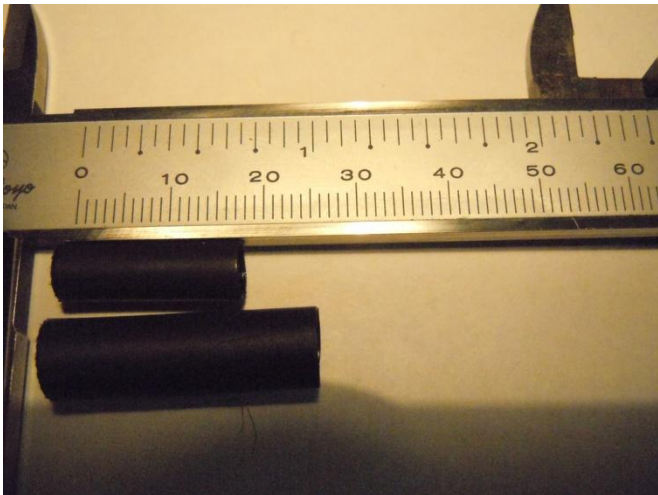


If you want to use the velcro cable binder, free it from the old serial cable....

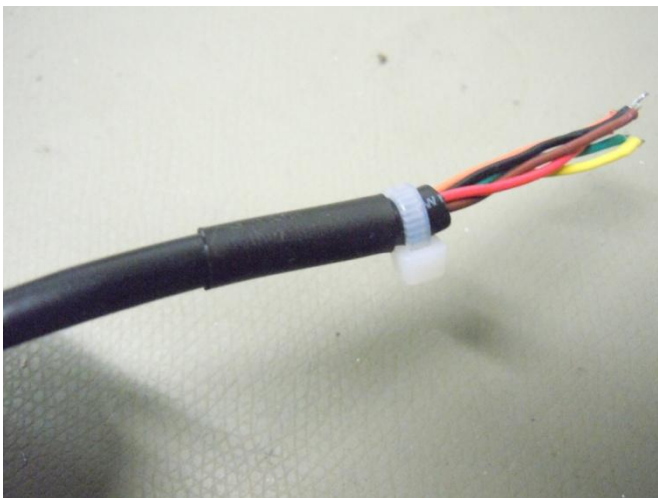


...and attach it to the FTDI USB cable.

Prepare two sizes of shrink tube to make up a new bend protection.

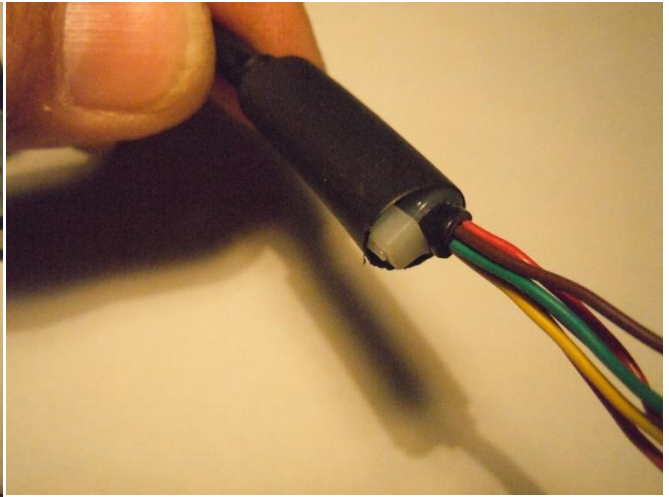


Slide them on the cable and attach a cable strap to the end of the cable.

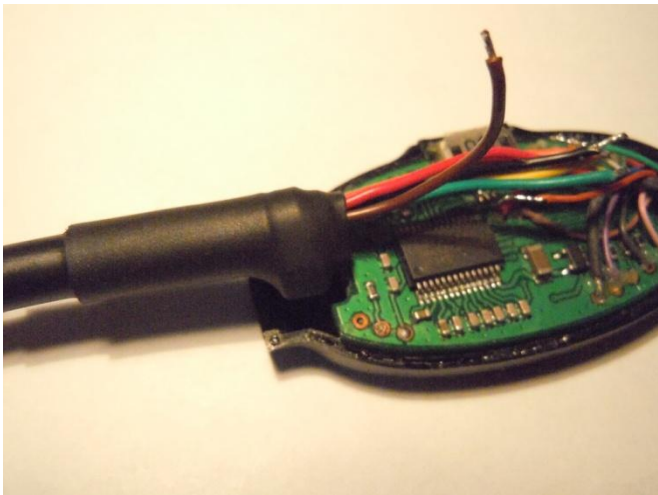


Heat and shrink the tubes.

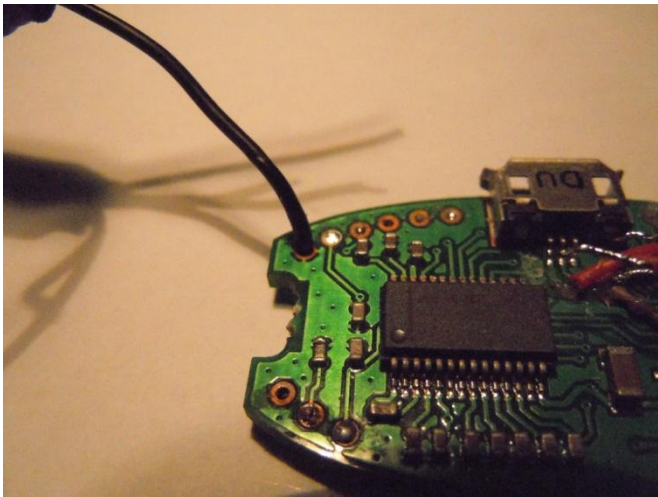
Cut a bigger piece of shrink tube to length and attach to the cable, covering the cable tie, too.



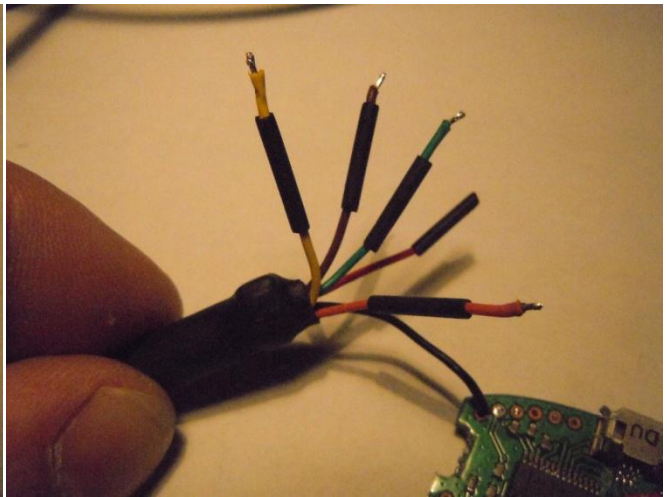
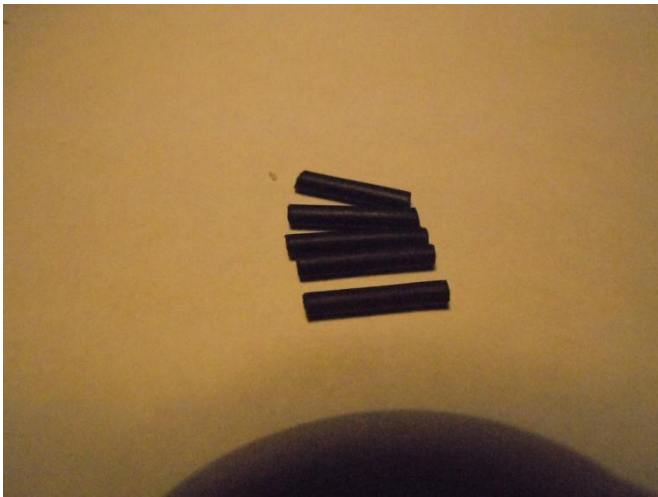
This is how it shall look like and fit the new position in the housing.



Now solder the black wire of the USB cable to the position of the PCB shown in the picture.



Prepare five short pieces of shrink tube for wire insulation.



Now solder the other three wires...

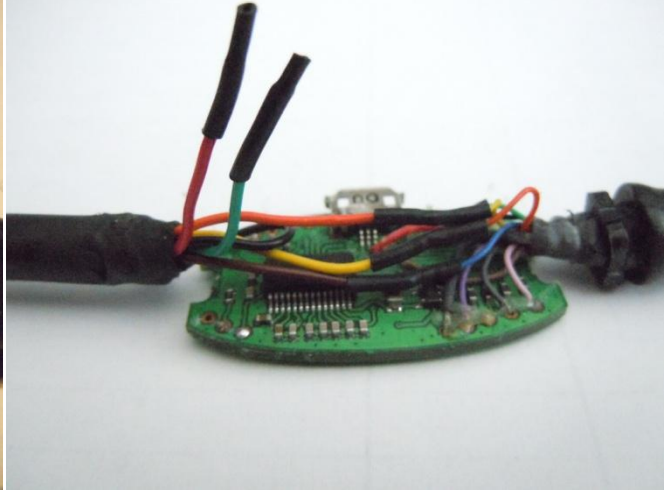
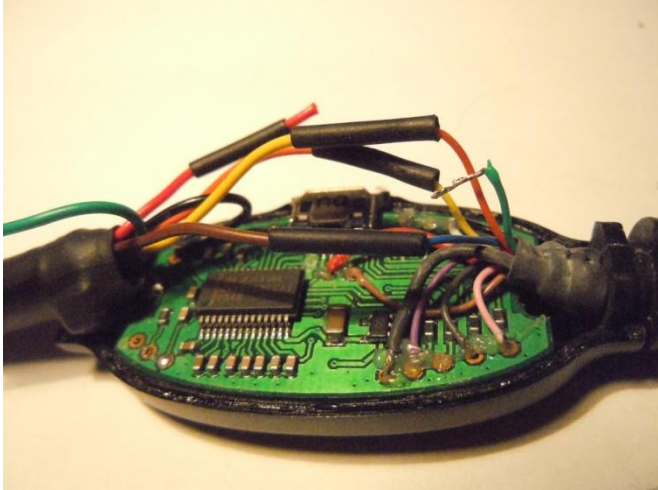
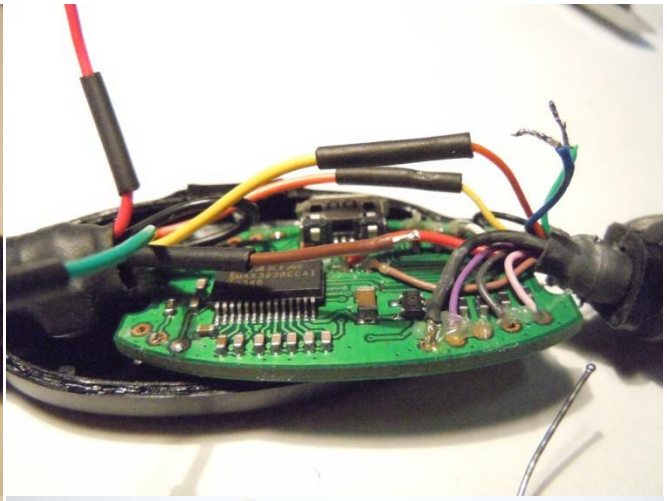
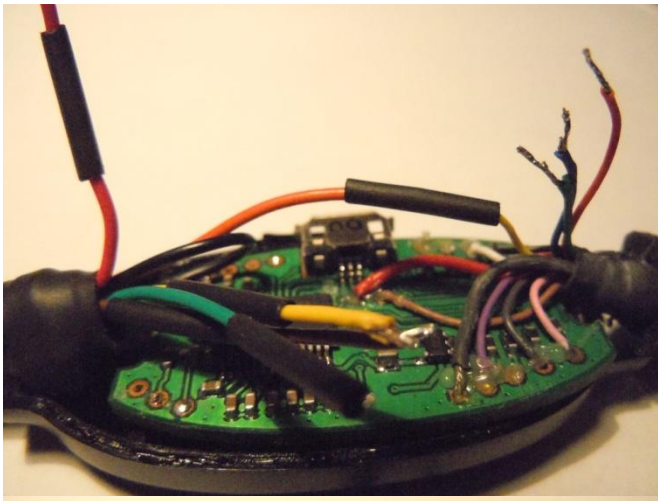
USB/Orange – Radio/Yellow

USB/Yellow – Radio/Orange

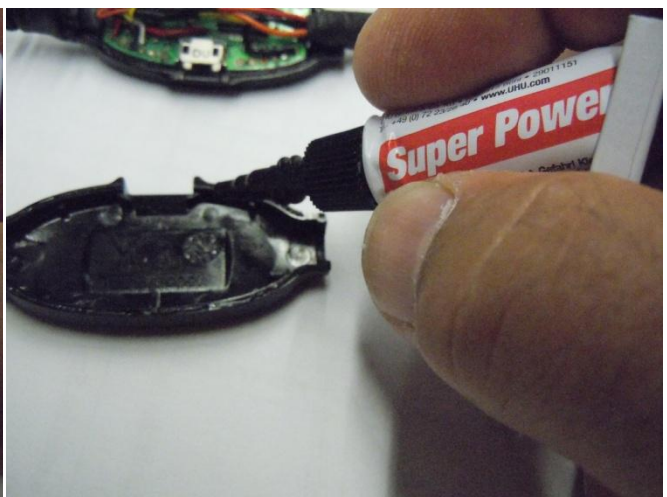
USB/Brown – Radio/Blue

USB/Green – Not Used/insulate with shrink tube

USB/Red – Not Used/insulate with shrink tube



Finally use some CA glue to re-assemble the housing.



All Done!



From the FTDI USB cable you use four wires:

Yellow	-	RXD
Orange	-	TXD
Brown	-	CTS
Black	-	Ground

Not used:

Green	-	RTS
Red	-	5V from the USB connector

Cut to size and insulate with shrink tube.

Install the VCP driver from the FTDI page. <http://www.ftdichip.com/Drivers/VCP.htm>

For Scout usage:

Make sure that the newly installed COM port has a number in the range from 1 to 16.

Go and get the number from the Windows Device Management (Start, Run..., devmgmt.msc)

Adjust Scout to the port and save settings.