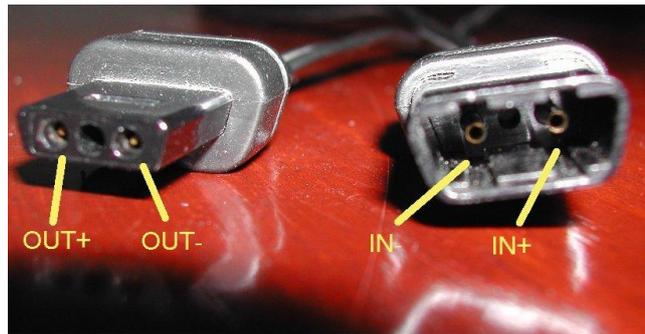
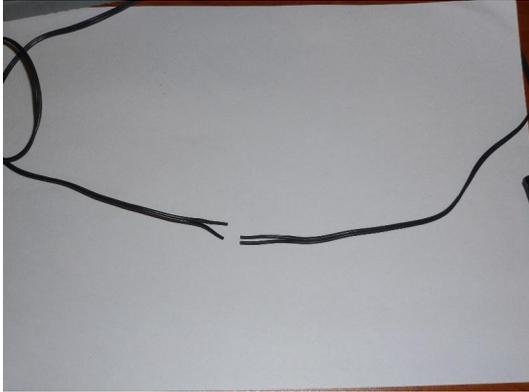


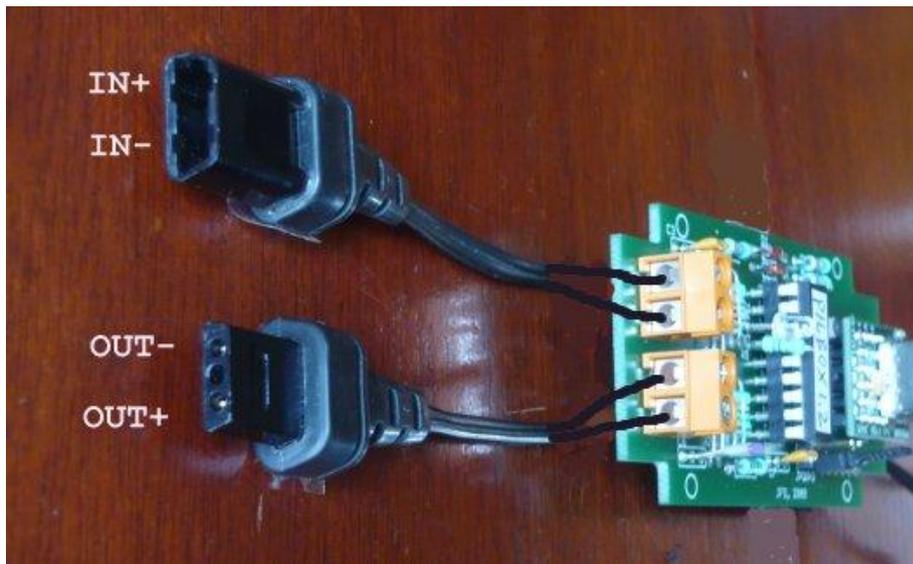
PIL-Box Setup Notes

J-F Garnier, Sept 2009

Cut a HP-IL cable in two halves, one will be the IN cable, and the other one will be the OUT cable:



The IN and OUT cables must be wired like this:



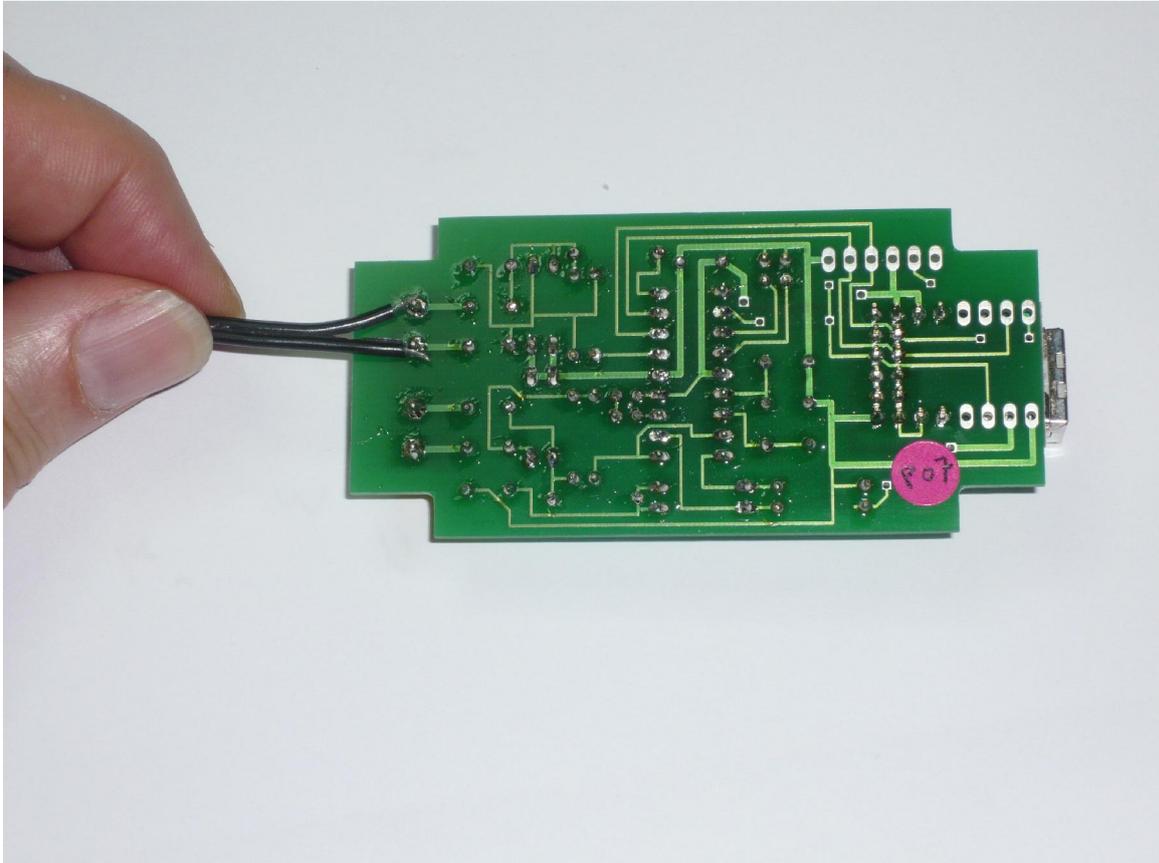
There are two ways to wire the HP-IL IN and OUT cables to the PIL-Box board:

- soldering on the PCB (most reliable method)
- attaching the cables to the screw connector (no soldering required).

Both methods are described below.

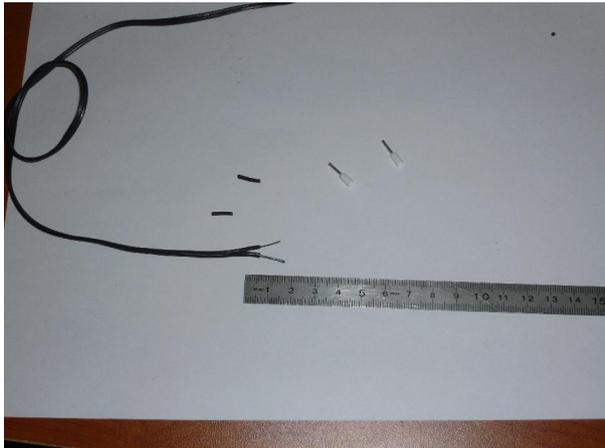
1. Soldering the cables

The method I recommed is to solder the cables without removing the connector. The soldering is made on the solder side, like this:



Some users prefered to completely remove the connector, see an exemple on my site.

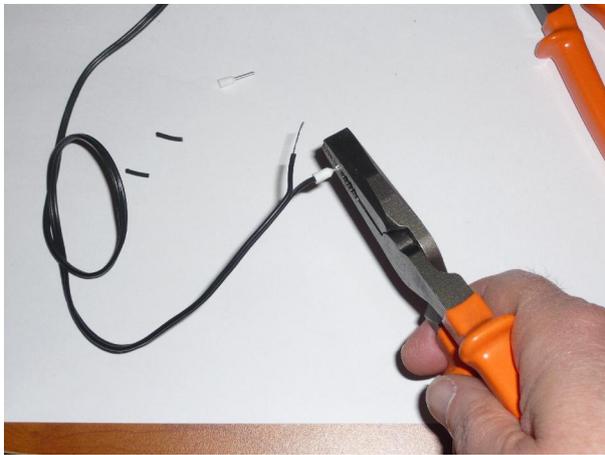
2. Attaching the cables to the screw connector



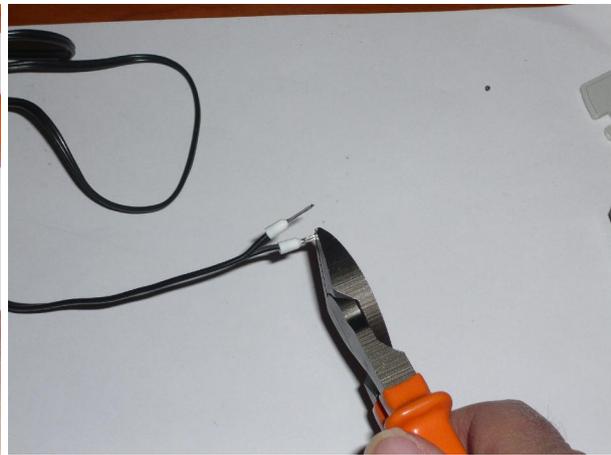
remove the insulator on about 1 cm



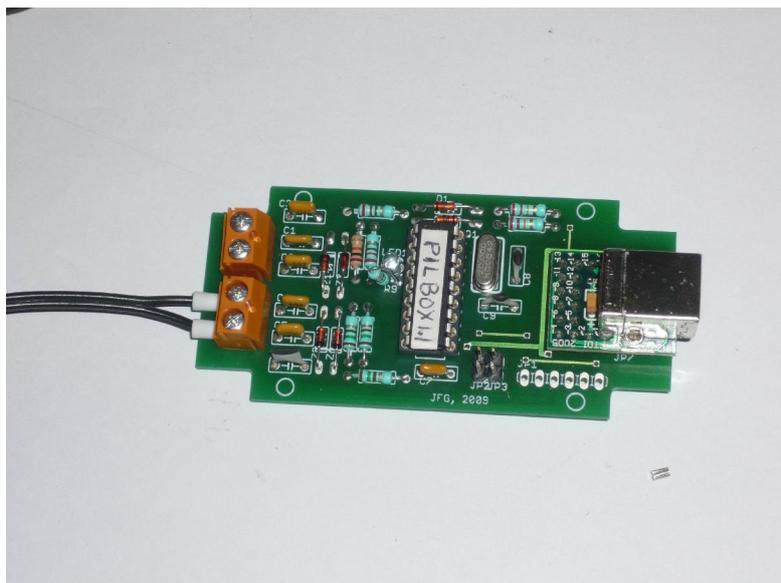
insert the terminals



Fix the terminals on the wires



shorten the metal tabs to about half size



wire the cables on the connectors,
and tighten the screws firmly but without excess!

Take care of the IN/OUT and +/- polarities !

3. Installing the board into the housing (mini-USB connector version)



The top and bottom parts of the housing must be aligned, i.e. the 'notches' (the PILBox serial number is normally written on the top side 'notch') must be on the same side than the HPIL cable outputs.



A) insert the board into the USB slot



B) put the board in place



C) install the back



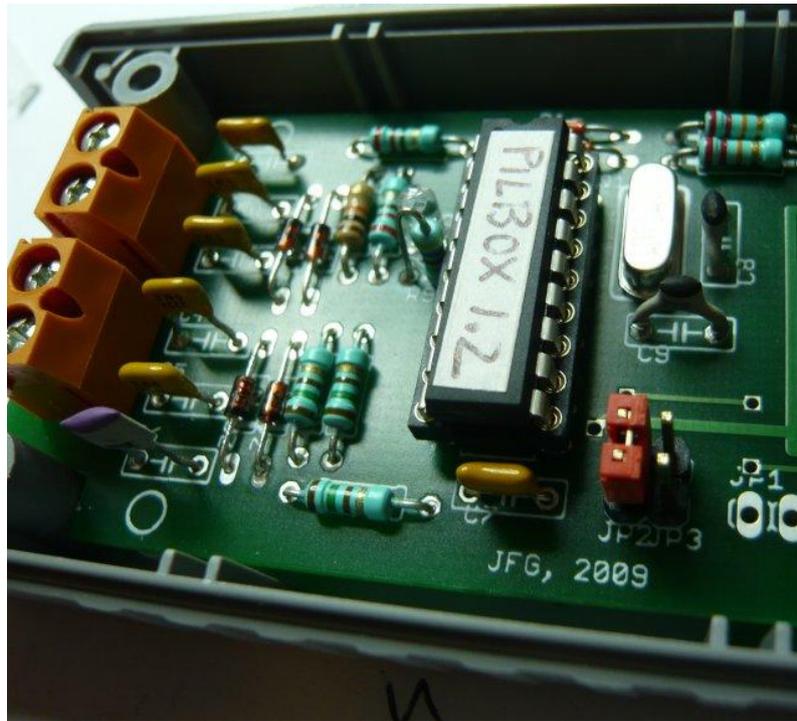
D) almost done (put then the screws)

4. Use of the jumper

A jumper is provided with the PILBox. It is used to select the 'high speed' option (with firmware revision 1.2 or higher). The actual effect is to use a data rate of 115kbauds instead of 9600 bauds between the USB module and the PIC microcontroller..

The jumper must be placed on the JP2 position.

The JP3 position is not used.



Jumper installed for high speed operation

Notes:

1. The jumper is only taken into account at power up when the USB cable is plugged in.
2. There is almost no speed improvement with the HP41C. A small speed improvement is noticeable with the HP71B, but the limiting factor is then the ILPer software, more precisely the VCP driver which is using a scanning period of 2 ms with the recommended setup (on fast PC, 1 ms can be used to further improve the effective speed).
3. Future software may take benefit of the high speed option in a more effective way.