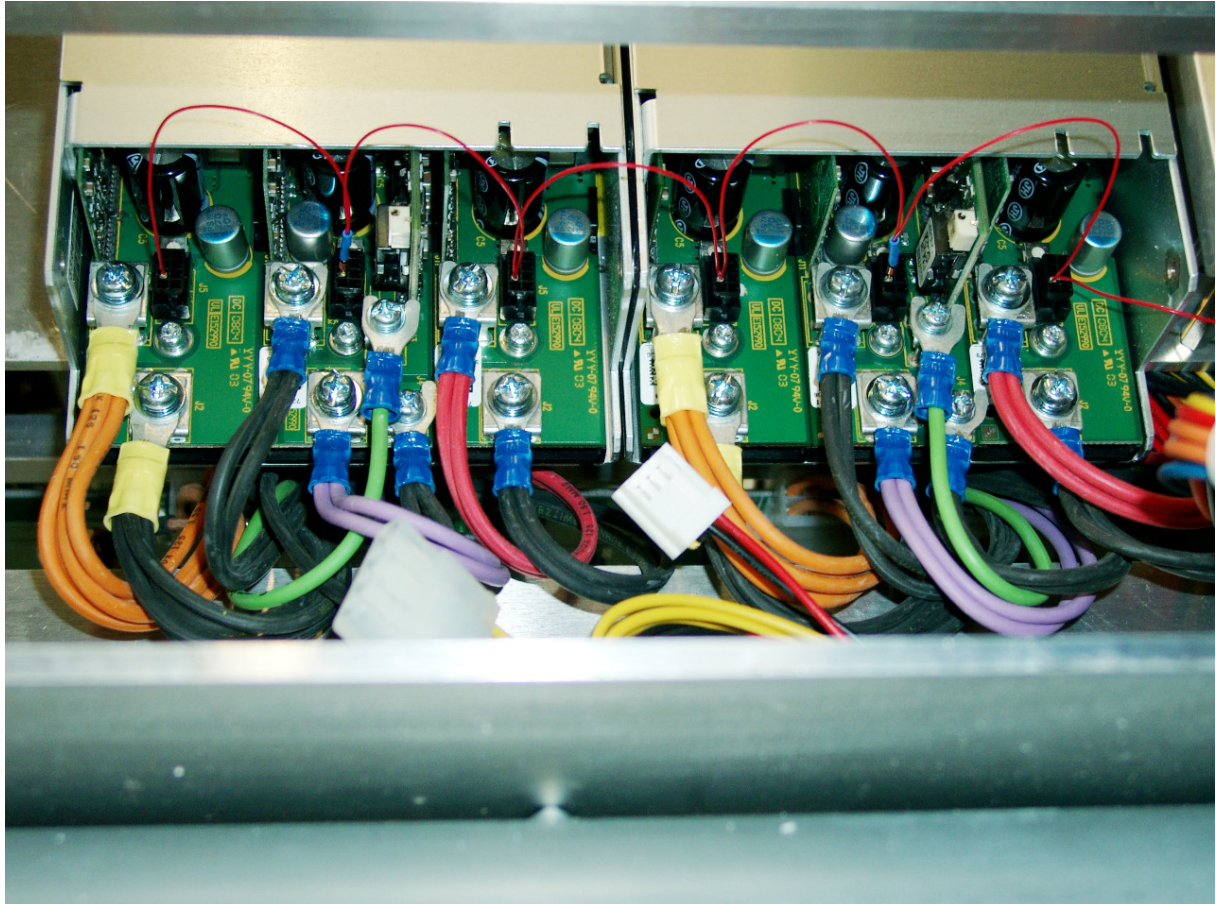


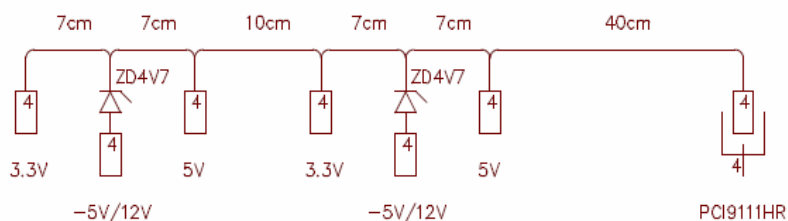
How to add the „remote power off“ feature into the DBBC

1. Remove top and bottom cover from the DBBC
2. From the bottom have a look at the power supplies for the electronics. It should look like this:



Make sure the power cables are connected in this way. For some reasons there are DBBCs where the cables for +5V (red/black) and -5V (violet/black) are swapped. We do not have a real supply for negative voltages, only the cables are reversed as you can see. The module in the middle supplies less current than the one in the right, so – if necessary – recable things so that we have -5V in the middle and +5V on the right.

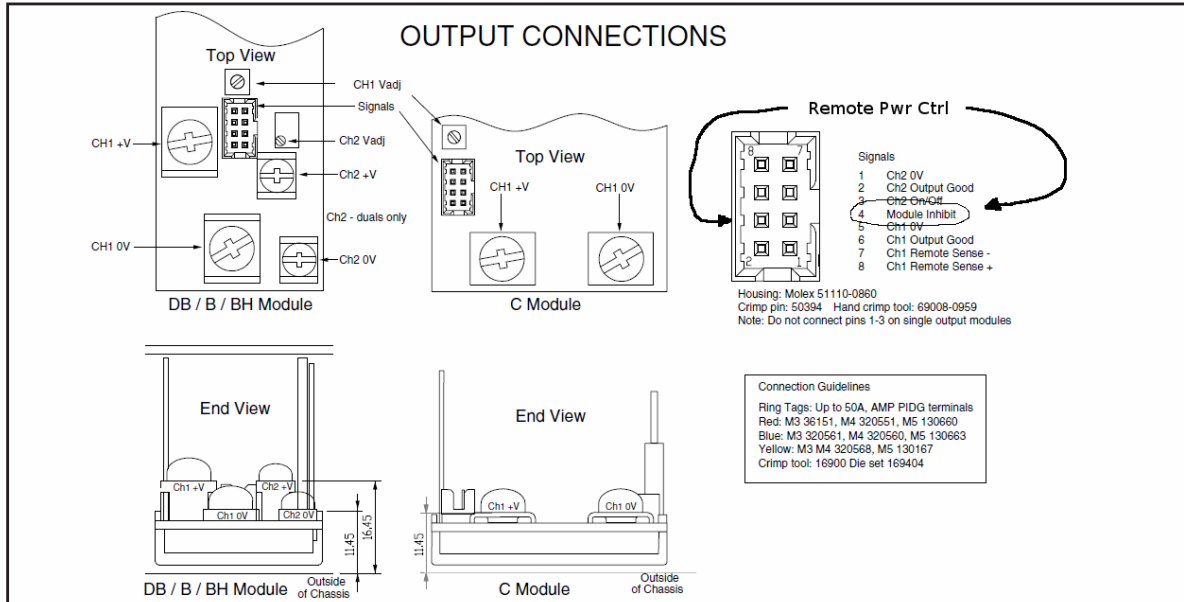
3. Attach the new cable. It looks like this:



Housing: Molex 51110-0860
Pins: Molex 50394-8200
Crimping Tool: Molex 63819-0100

Header: Molex 87832-0820

Plug it in from left to right. Make sure that the connector with the zener diode is attached to the module which supplies the -5V. Since we use a reversed power supply here there is a shift in logic levels, hence the diode. Fiddle the loose connector in some way to the upper part of the DBBC. Please be careful, it's only one very thin cable. Here is a bit of documentation for the power supplies for details:



4. You can now close the bottom cover and put the DBBC in the normal position.

5. You will have to dismantle the PC part now to get hold of the PCI 9111HR card. It is the rightmost one. Unfortunately you will have to remove all the attached cables to remove it.



Glue one of the 8-pin headers to the edge of the card. Epoxy will do. We do not use the GND connection you can see in the photo above.

We will use one of the output pins of CN3. Here is part of the documentation for details:

• **CN 3 : Analog Input/Output, Extended I/O, Trigger Signals**

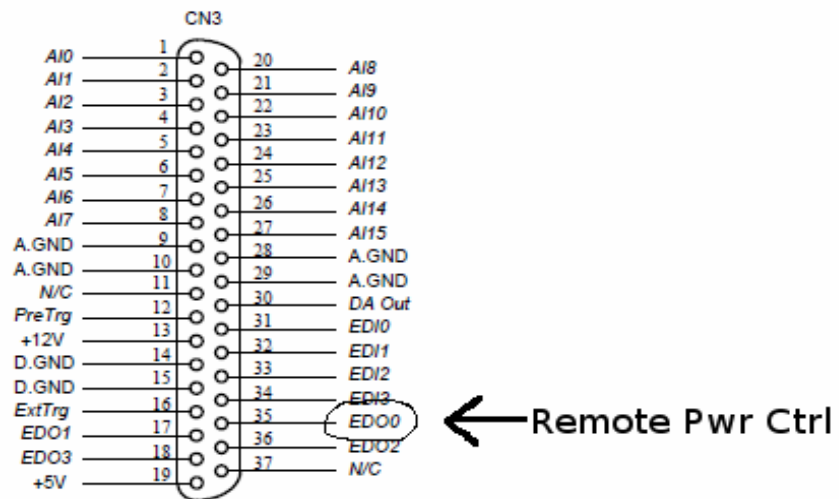
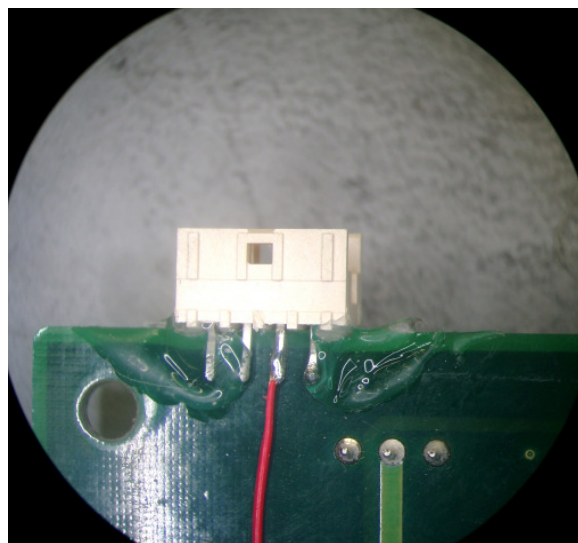
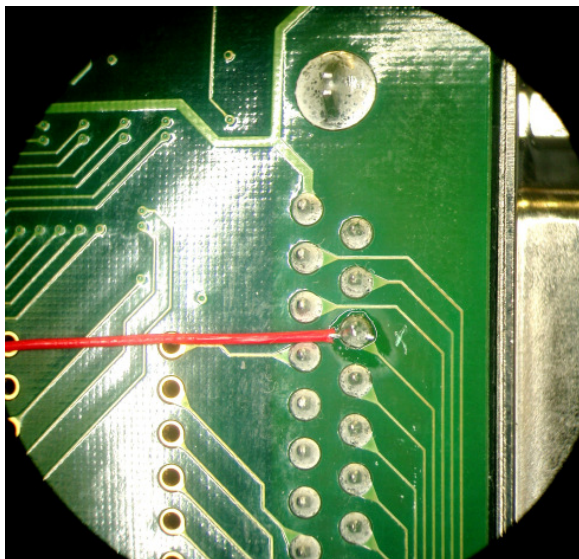


Figure 3.3 Pin Assignment of CN3

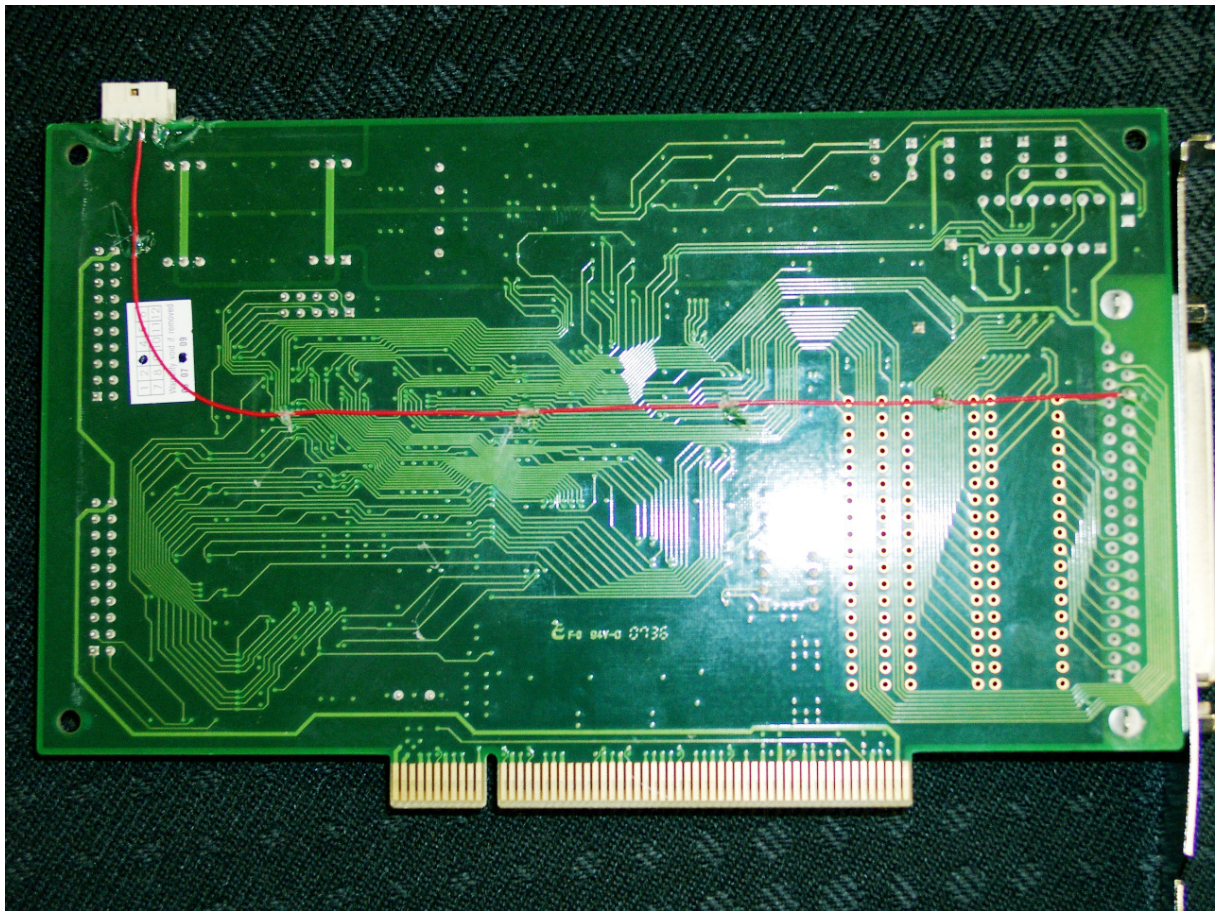
Legend :

- A1n* : Analog Input Channel *n* (single-ended)
- DA Out* : Analog Output Channel
- ExtTrg* : External A/D Trigger Signal
- PreTrg* : Pre-Trigger Stop Signal
- EDIn* : Extended Digital Input Channel *n* (0~3)
- EDOn* : Extended Digital Output Channel *n* (0~3)
- A.GND : Analog Signal Ground
- D.GND : Digital Signal Ground
- N.C : No connection

Now solder one wire from pin 35 of CN3 to pin 4 of the header on the edge.

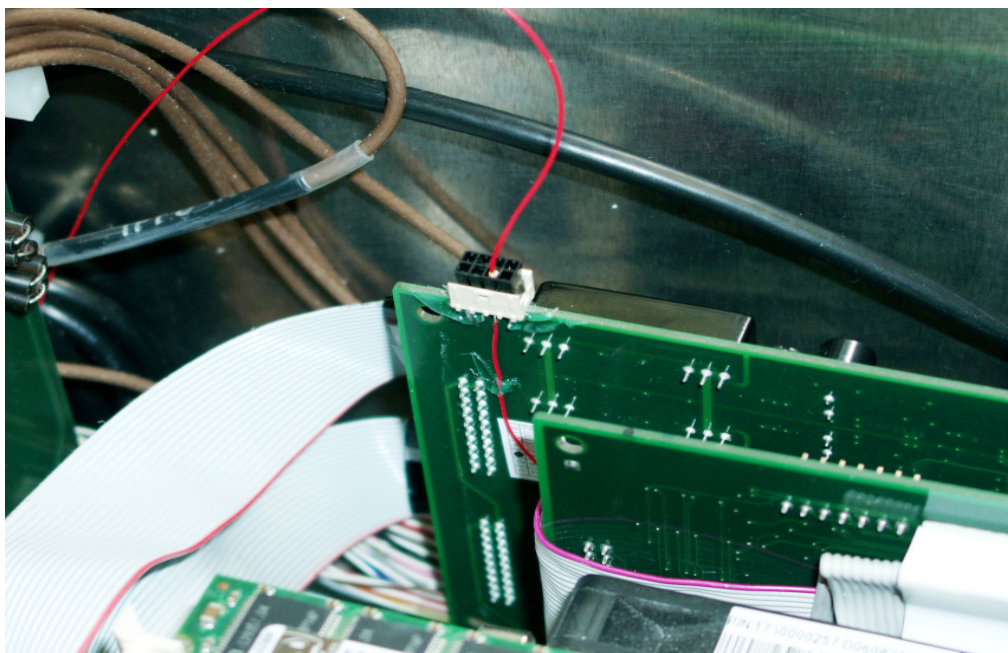


When complete, it should look like this:



For new DBBCs the 8pin header will be placed on the small board with all the SMA connectors used for TP and such, but for existing ones we use this method.

6. Insert the PCI9111HR card and attach all the loose cables. When done, attach the new cable from the power supplies to the 8pin header.



7. You've done all the hardware modifications now. Last step is to copy the POWER.EXE utility to the PC. From the command line it's just: POWER OFF and POWER ON. In the next release it will be something like POWERCYCLE which switches off for two or three seconds and then on again. That will be for safety, we are not quite sure about how long the reversed power supply can stand the OFF status. There is a small side-effect you will observe: When off for more than three seconds, the reversed supply tries to switch on again. You will see the power indicating LEDs blink on the backplane. So just cycle for now and NEVER use this feature to keep the electronics off for a long time.