As you all might now, F4toPokeys works great and has been updated recently. He added a feature request for the PoExtBus & segment displays.
It works, but it has a small bug (no biggy though). See below for more information.

For those who don't know. Pokeys is a bit like the famous Xkeys but it also handles output (leds, pwm, segment displays…), analog inputs (pots), digital inputs (encoders) and is available in both ethernet & USB version, with or without screw terminals.
It has a very user friendly interface to program, even for a total electronics noob like me!
More info here.
I currently have a PoKeys56U for testing (and will use it in my actual pit eventually).

The Pokeys has a limited power supply (via USB connection) for the output. It can handle a max of only a couple amps for 5V leds.
When you need more leds, or like me also control 12V bulbs for indicators, you need an extension.
That's where the PoExtBus comes into play. You have an OC version, and an Re version. I ordered the Re version.

The board contains 8 relays and can be daisy chained for a total of 10 boards, giving up to 80 extra outputs possible via 1 Pokeys board.
The Re version lets you control the relays via 5V or 12VDC.

The part below could be wrong in some ways, I am a total noob when it comes to electricity and electronics, so don't shoot me 😫
Thanks to the help of my father in law and a friend who I occasionally bug for this stuff, I have achieved the following yesterday.

I stripped a 12VDC power adapter and connected it to the lower right corner terminals. This is where the board accepts 5 or 12 VDC to handle the relays and have communication with the PoKeys device.
The left terminal is +, right terminal is - (GND).
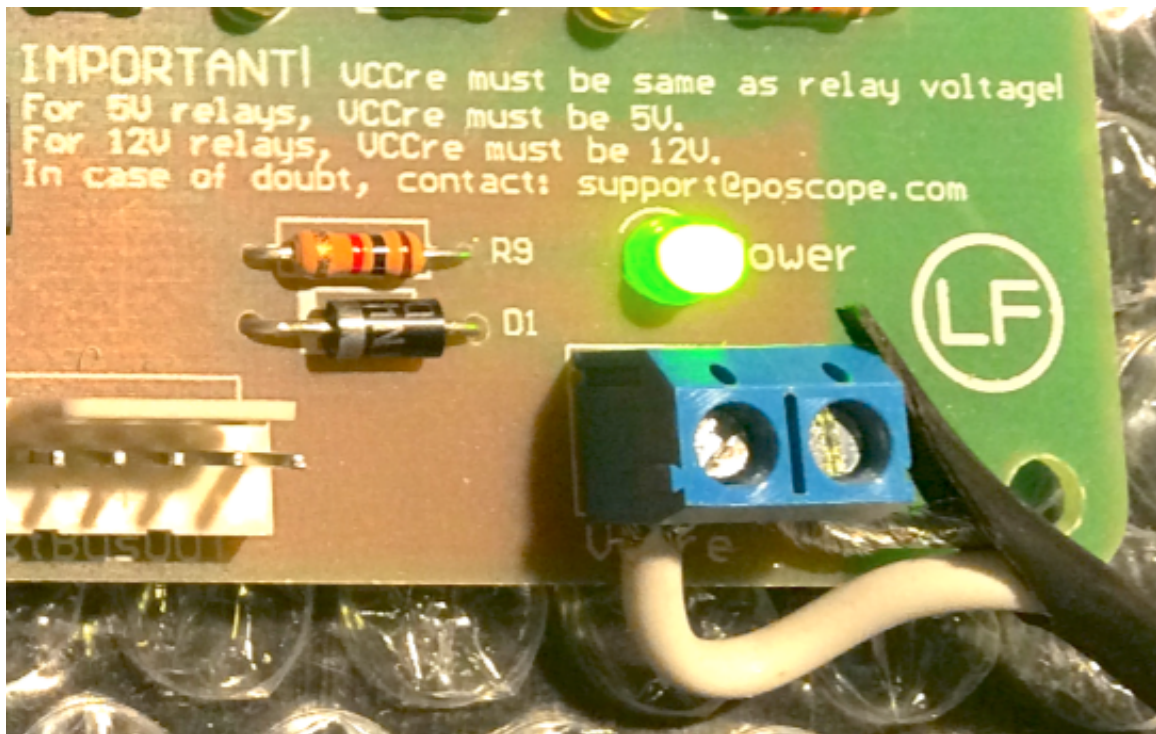
The board is delivered with a 5-cable ribbon to connect the Pokeys with the board. Use the left connector on the board, labeled 'IN'. The 'OUT' is used when you want to daisy chain more boards.
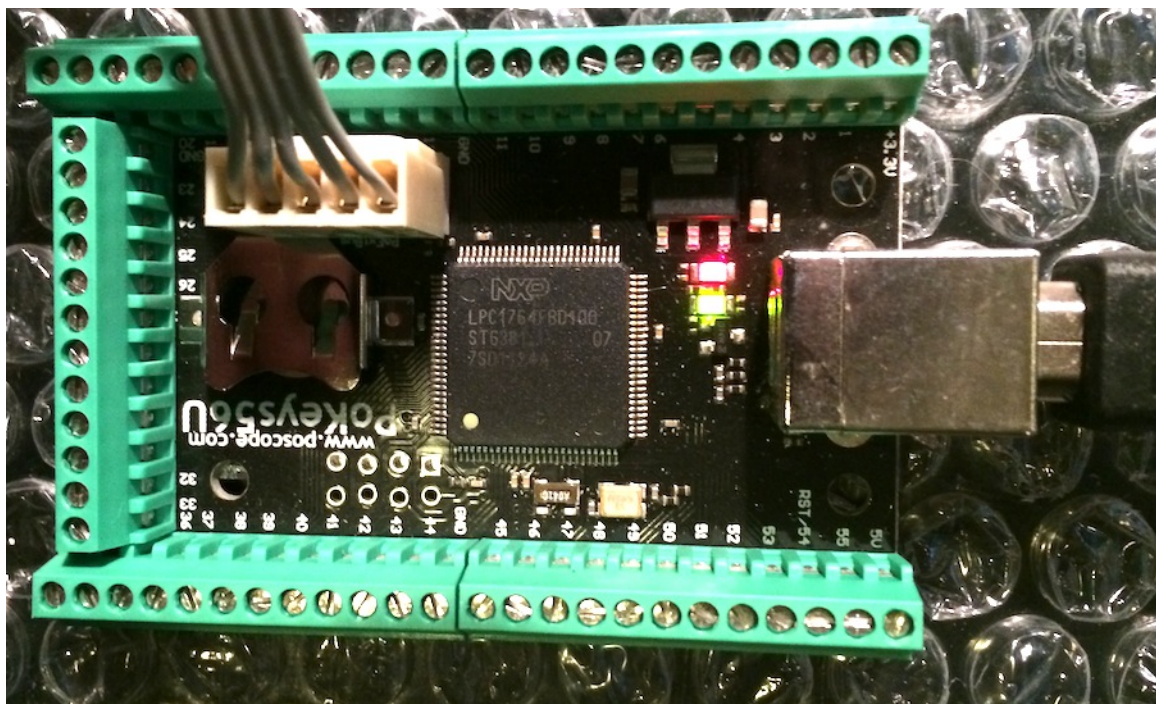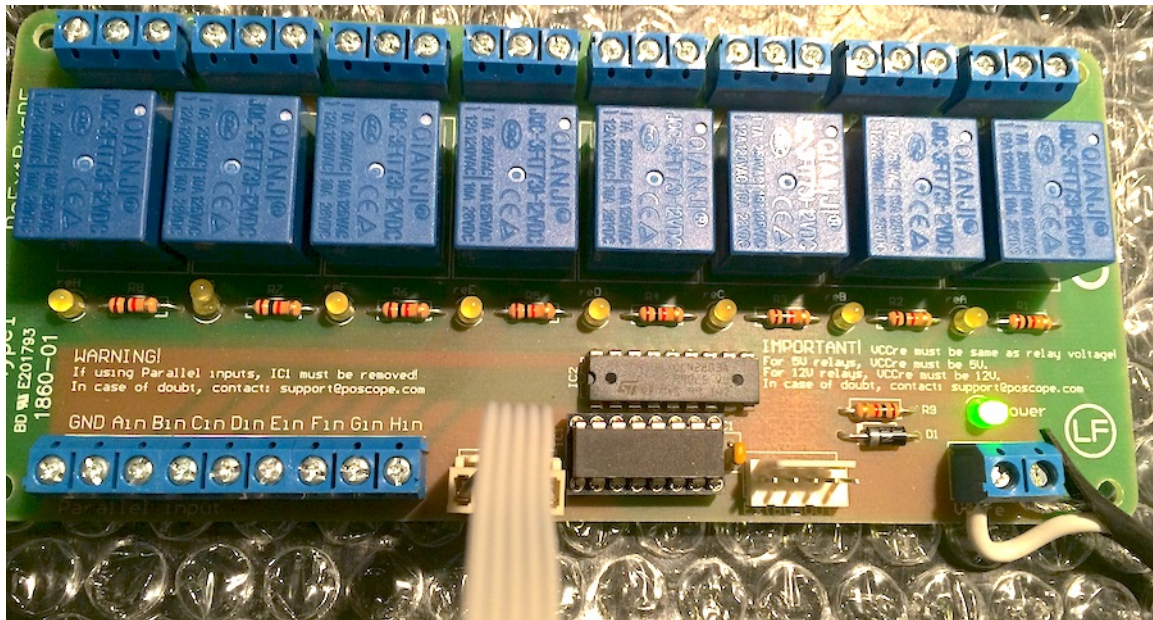
Next open up the Pokeys Sofware on your PC and go to 'Periphirals' -> 'PoExtBus settings'.
You get a screen with 10 rows (max 10 devices) with 8 columns (8 relays per device).
Be sure to check the box "enable PoExtBus". If it's connected with the ribbon, DO NOT check the "use on pins 35,36,37". You can, I think, add another board on those pins too, then it would need to be checked on. If it's checked on, but it's connected with the 5-wire ribbon, it won't work.
I only have 1 board so it's first row, named "device 1". The boards relays are assigned by letters A to H.
Do notice, on the actual board, the A starts on the right side, H is on the far left side, so the other way around from in the software.
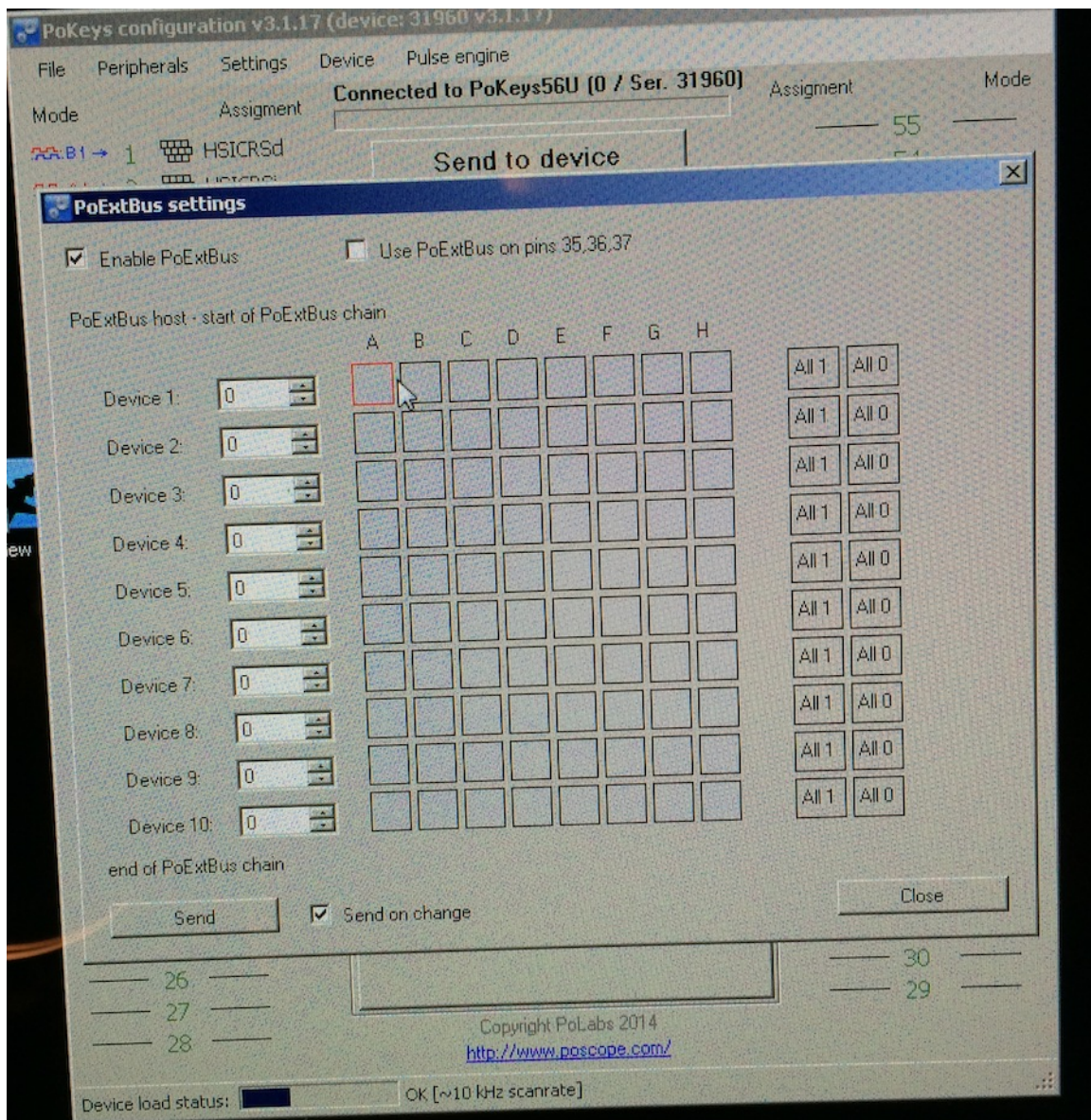
To test, it's easier to check the box on the bottom "send on change" so you don't need to hit the big 'send' button each time.
If you left click on a square, it lights up green and you should hear the relay close on the board. A yellow-orange led lights up to indicate the relay is closed on that side.

PoKeys configuration v3.1.17 (device: 31960 v3.1.17)

File   Peripherals   Settings   Device   Pulse engine

Mode   Assigment   **Connected to PoKeys (0 / Ser. 31960)**   Assigment   Mode

B1 → 1   HSICRSd   55

                                                          Send to device

PoExtBus settings

☑ Enable PoExtBus   ☐ Use PoExtBus on pins 35,36,37

PoExtBus host - start of PoExtBus chain

                              A   B   C   D   E   F   G   H

Device 1:   128 ⬍   [green]   [All 1] [All 0]

Device 2:   0   ⬍   [All 1] [All 0]

Device 3:   0   ⬍   [All 1] [All 0]

Device 4:   0   ⬍   [All 1] [All 0]

Device 5:   0   ⬍   [All 1] [All 0]

Device 6:   0   ⬍   [All 1] [All 0]

Device 7:   0   ⬍   [All 1] [All 0]

Device 8:   0   ⬍   [All 1] [All 0]

Device 9:   0   ⬍   [All 1] [All 0]

Device 10:   0   ⬍   [All 1] [All 0]

end of PoExtBus chain

[Send]   ☑ Send on change   [Close]

26   30
27   29
28   Copyright PoLabs 2014
                      http://www.poscope.com/

Device load status: ▮▮▮▮   OK [~10 kHz scanrate]

Now to attach an indicator with 12V bulbs.
A 12V 4x10WA power supply was modified from AC to DC with spare car diodes so I can test stuff.
To put a relay in between your indicator you connect it as followed:
- power supply + to the middle terminal, labeled V1n
- power supply - to the ground pole on the indicator
- cable from left or right terminal, labeled NO or NC to the positive pole on the indicator

NO NC
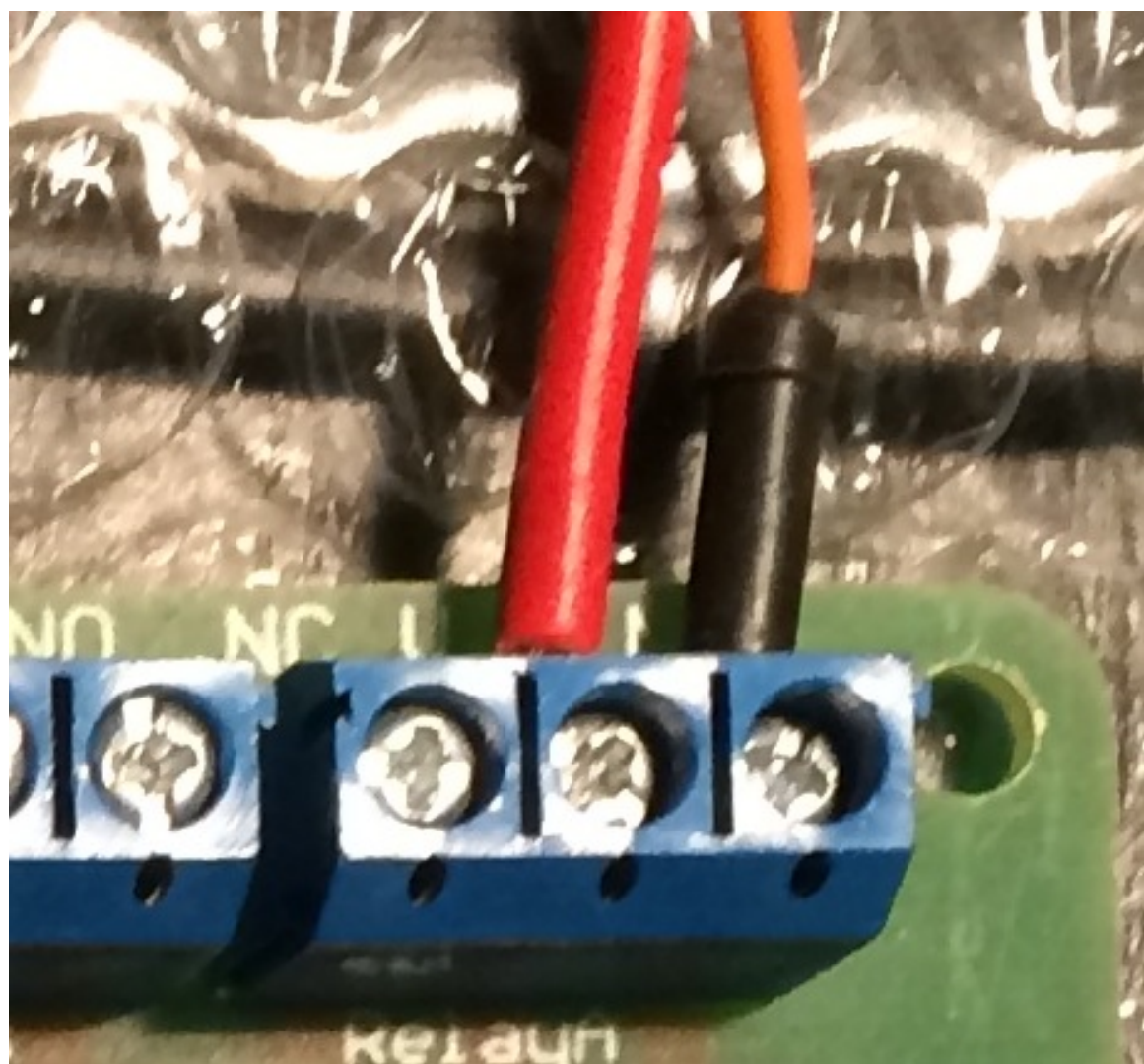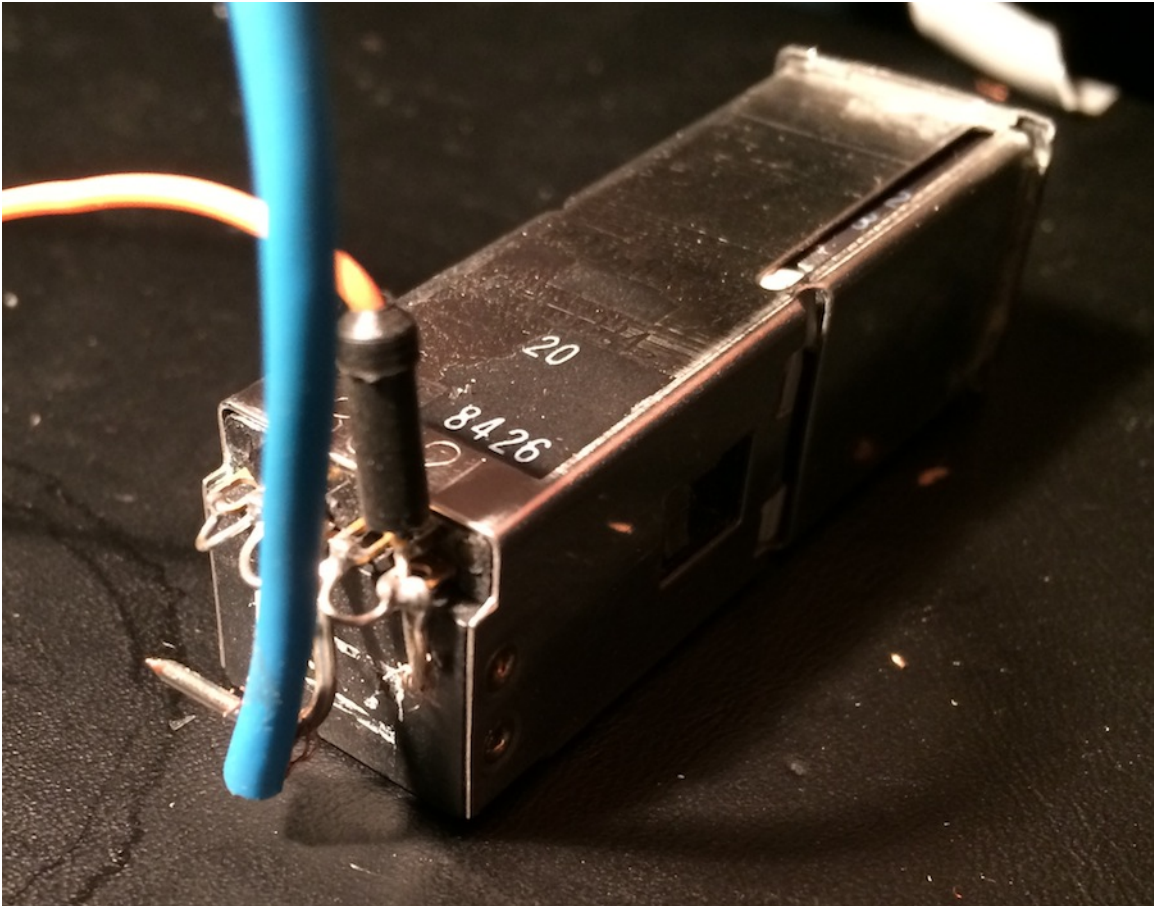
Relay

NO stands for "Normally Open", thus does not supply power when the relay is open (not activated by Pokeys). This is what you want to connect when your indicator should be off unless given a signal.
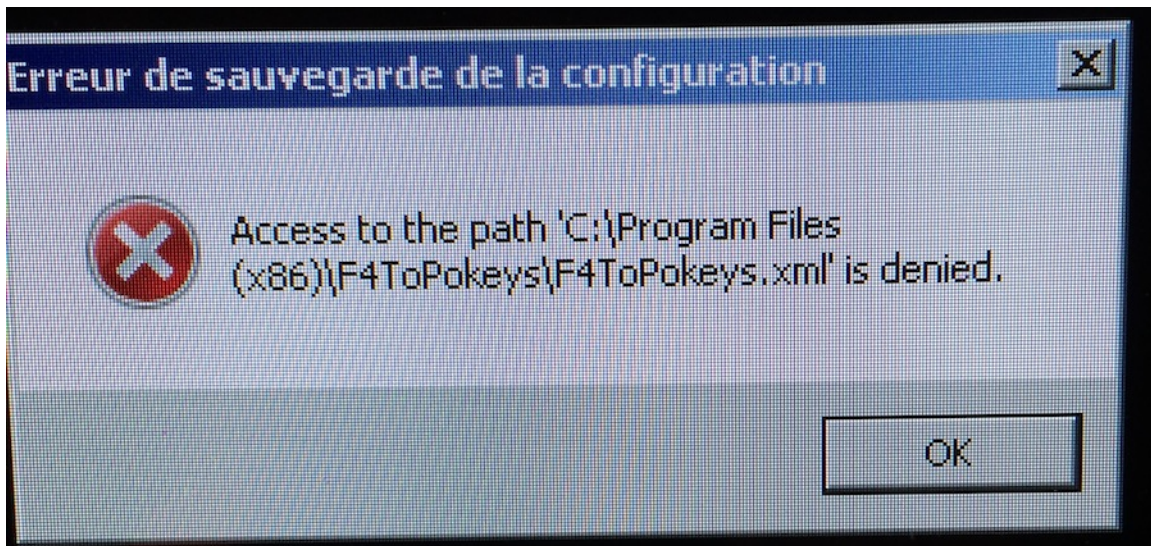NC stands for "Normally Closed', thus supplies power until the relay is closed.
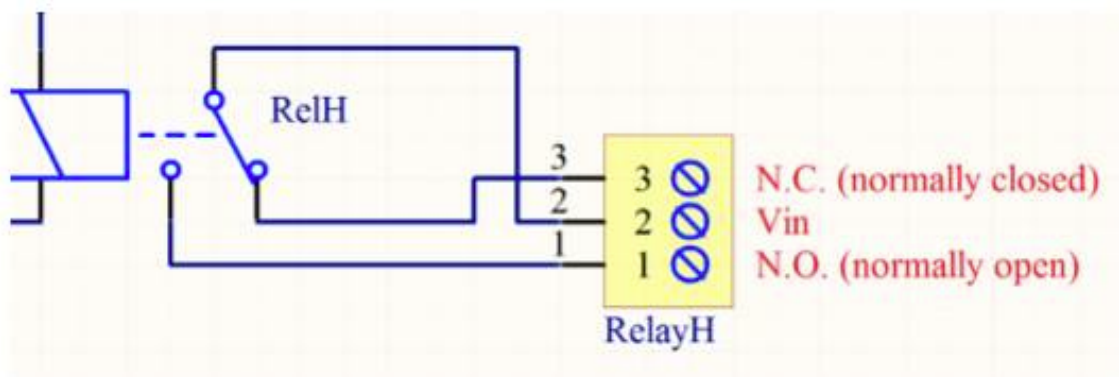
Activate it in Pokeys, and voila, let there be light.
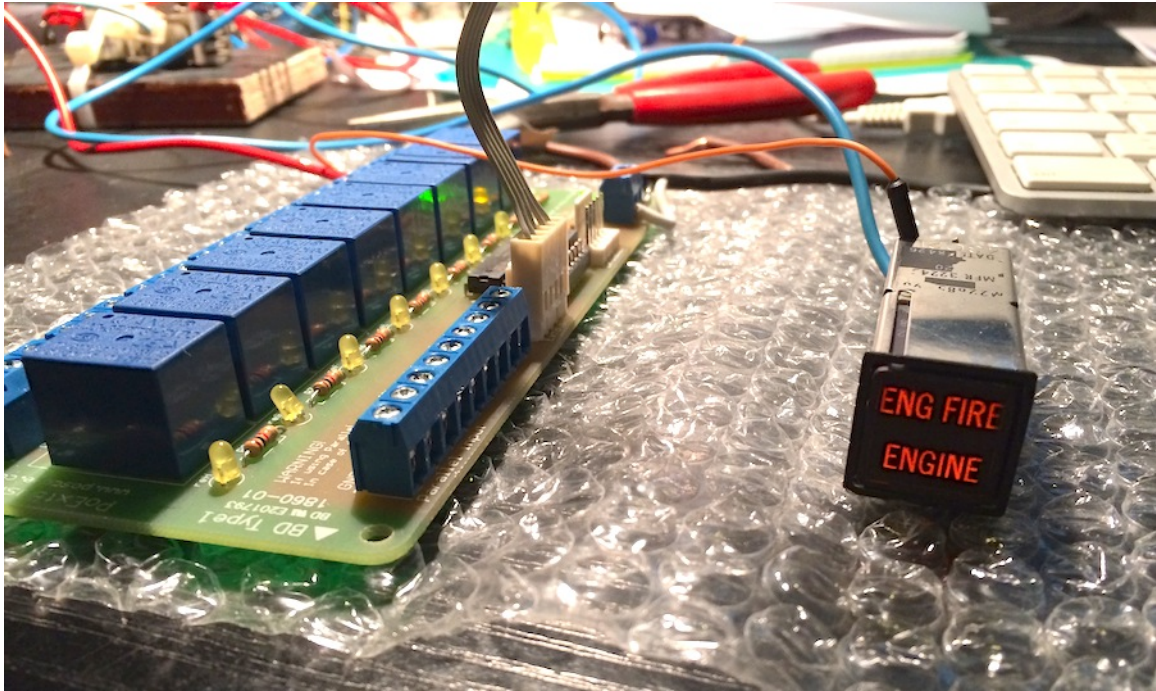
Then comes the interfacing with Falcon 4 BMS.
The F4toPokeys software was recently updated so it can handle segment displays and PoExBus, on community request. Thank you Alabamic for this!

Be sure to close the peripheral window in the Pokeys software again or it will interfere settings from time to time with what F4toPokeys is sending.

When opening F4toPokeys, be sure to execute it as administrator (right click the icon), otherwise I get an error it can't write/access an XML file.

Erreur de sauvegarde de la configuration

Access to the path 'C:\Program Files (x86)\F4ToPokeys\F4ToPokeys.xml' is denied.

OK

Next; select the Pokeys from the drop down list. I only have one and the array starts with 0, so 0 it is.
Then click on the button "add a PoExtBus output".
The first drop down 'output' is the relay, the second drop down 'device' is the board (in case you have several chained). The third drop down is the action from BMS you want to have as a trigger.
You also have on-off buttons to activate the trigger to the board manually as test.
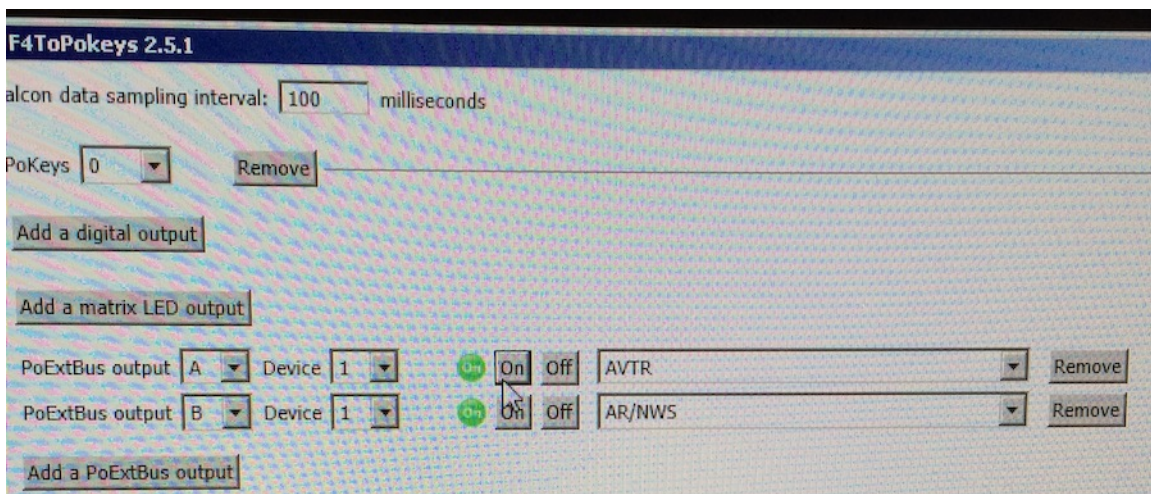

Let me make it clear. It works, no doubt.
However, notice the logic behind the 2 first drop downs (output/relay & device/board) are not right.
I thought it didn't work for some weird reason, I could activate the relays. Not with the on-off buttons in the software, not by running BMS and actually activating the wanted triggers.
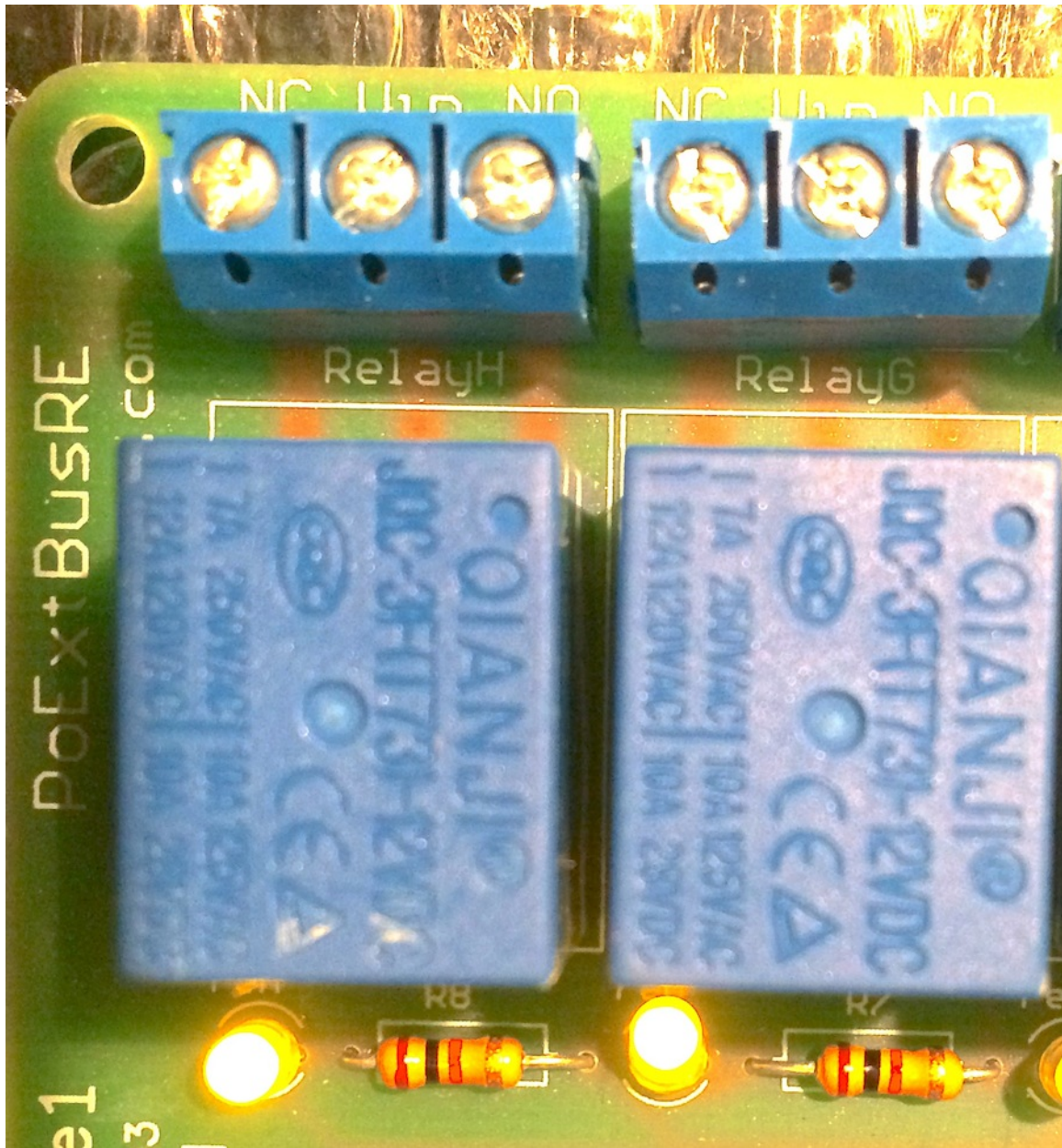
But then I started choosing other items from the list.
Seems the relays are in opposite order. So relay A on the board is
mapped to relay H in the software.
And seems the count of boards has an issue to, because eventually I
found device nr 10 was my first board.
So Device 10 relay A & B are actually activating device 1 relay G & H.
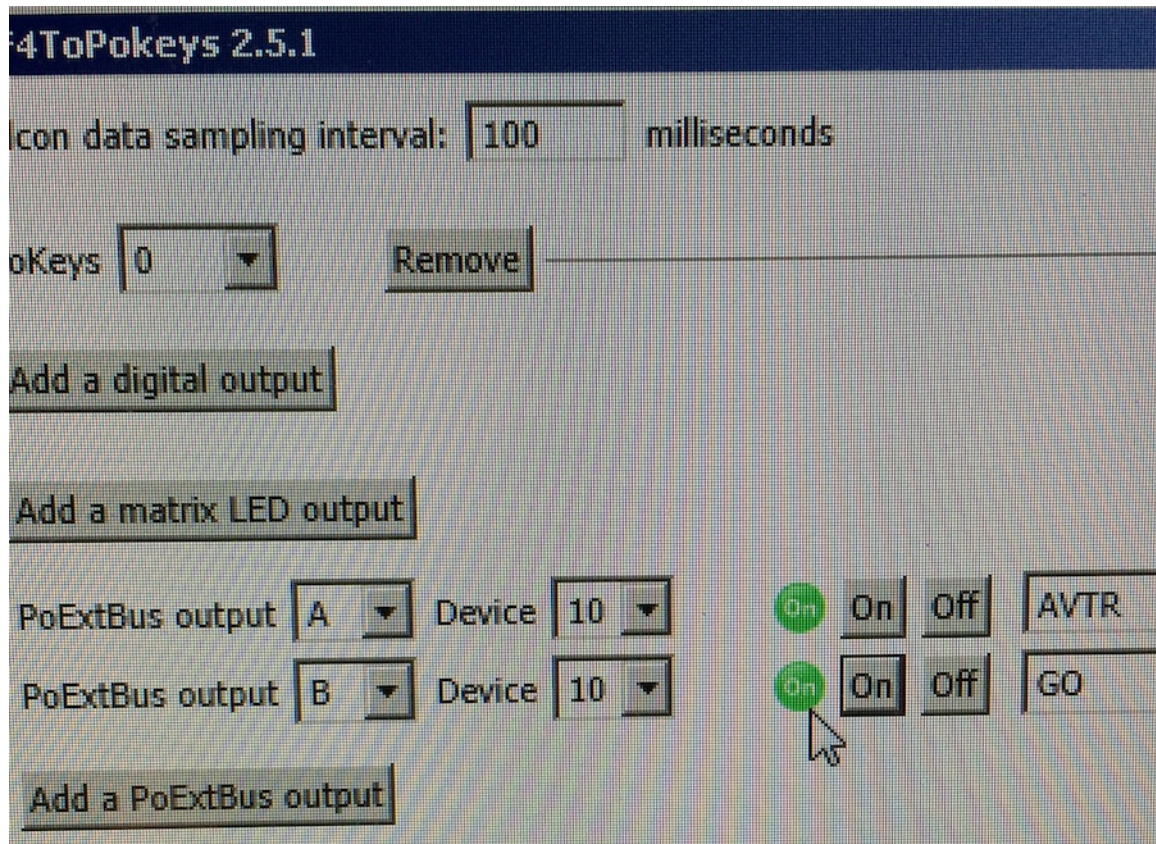
So no big issue, but I can imagine if I start chaining several boards, I could get confused with the wrongly mapped drop down items. Hope this is addressed in a future update.

EDIT: original documentation above dat from july 2014. Meanwhile F4toPokeys has addressed the reported issue and a newer version is available where output letters are correctly mapped.