### SNAP

| **Input number** | **Label on SNAP** |
| --- | --- |
| 0 | N0 |
| 1 | E2 |
| 2 | N4 |
| 3 | E6 |
| 4 | N8 |
| 5 | E10 |

Input 0 can be delayed using the command fpga.set\_pol01\_delay(delay) where *delay* is an integer from 0 to 511.

We have two SNAPS.

| **Label** | **MAC** | **IP** |
| --- | --- | --- |
| A000023 | 00:08:cf:3d:13:03 | 10.10.10.236 |
| C000091 | 00:35:56:0e:17:01 | 10.10.10.13 |

### Raspberry Pi

ssh eigsep@10.10.10.10 (eth)

ssh eigsep@192.168.0.116 (wlan)

Password: universe

Pip installing without wifi: ``python -m pip install --no-build-isolation .”

Set up github over eth

### Valon

Program using <https://github.com/nrao/ValonSynth> (Python 2). Christian has the program on his laptop. Connect with USB and program with:

import valon\_synth

s = valon\_synth.Synthesizer(PORT)

s.set\_frequency(synth, freq) # synth = 0 or 8 (for output 1, 2), freq in MHz

print(s.get\_frequency(synth))

s.set\_rf\_level(synth, rf\_level) # rf\_level in dBm, either -4, -1, 2, or 5.

print(s.get\_rf\_level(synth))

s.flash() # stores settings in memory so it is retained after power cycle.

Can get the PORT with the command:

python2 -m serial.tools.list\_ports

Typically, it shows up for me as “/dev/ttyUSB0”. But this didn’t show up on the Raspberry Pi, so I had to do it on my laptop.

Valon was programmed on Oct 4, 2023. Using output 1 (synth=0) at rf\_level 5 dBm and frequency 500 MHz. Output 2 (synth=8) is set to rf\_level -4 dBm and frequency 500 MHz, the output is terminated.

### Fem Switch

Real:

01: load (lsb off, msb on)

10: noise (lsb on, msb off)

00: antenna

**OPPOSITE**

10: Load (i.e., green on, yellow off)

01: Noise (green off, yellow on)

11: Antenna

### Pi Tin

- Rotate switches to be horizontal to save room

- Going to have to use a flat head screwdriver to lift and remove ethernet cable right next to the switches

- Wires into switch are bigger than the switch so be gentle with the switch or it could break off

- The feed-throughs are also delicate. Be nice to them (don't crank them super tight)