Es'hail-2 Spectrum Monitor
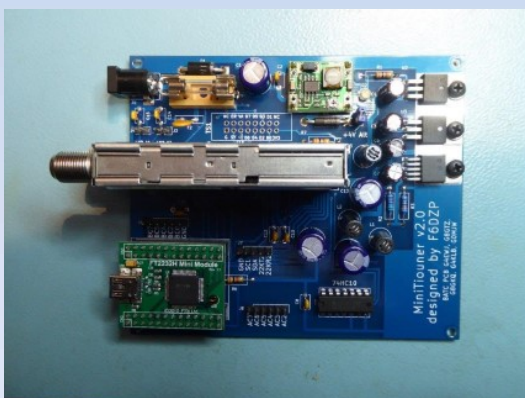
Dave, G8GKQ

Topics

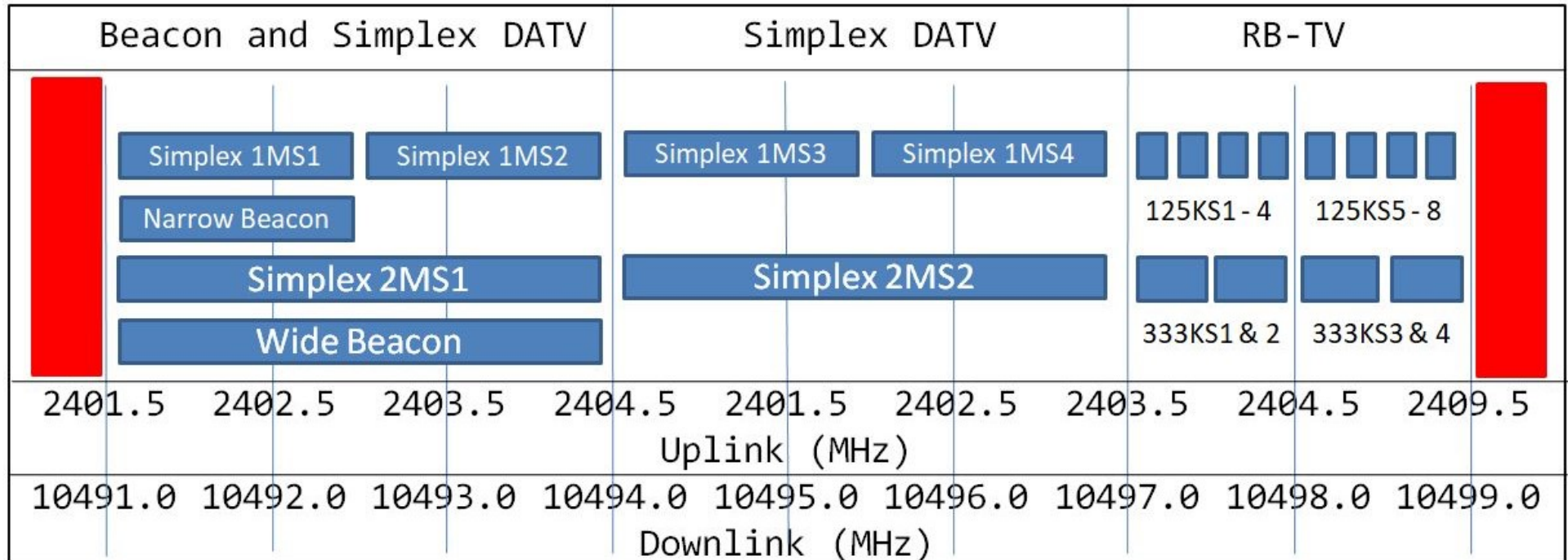- Why
- What
- How

Why

- First time that power needs to be controlled
- Not that easy to listen for activity
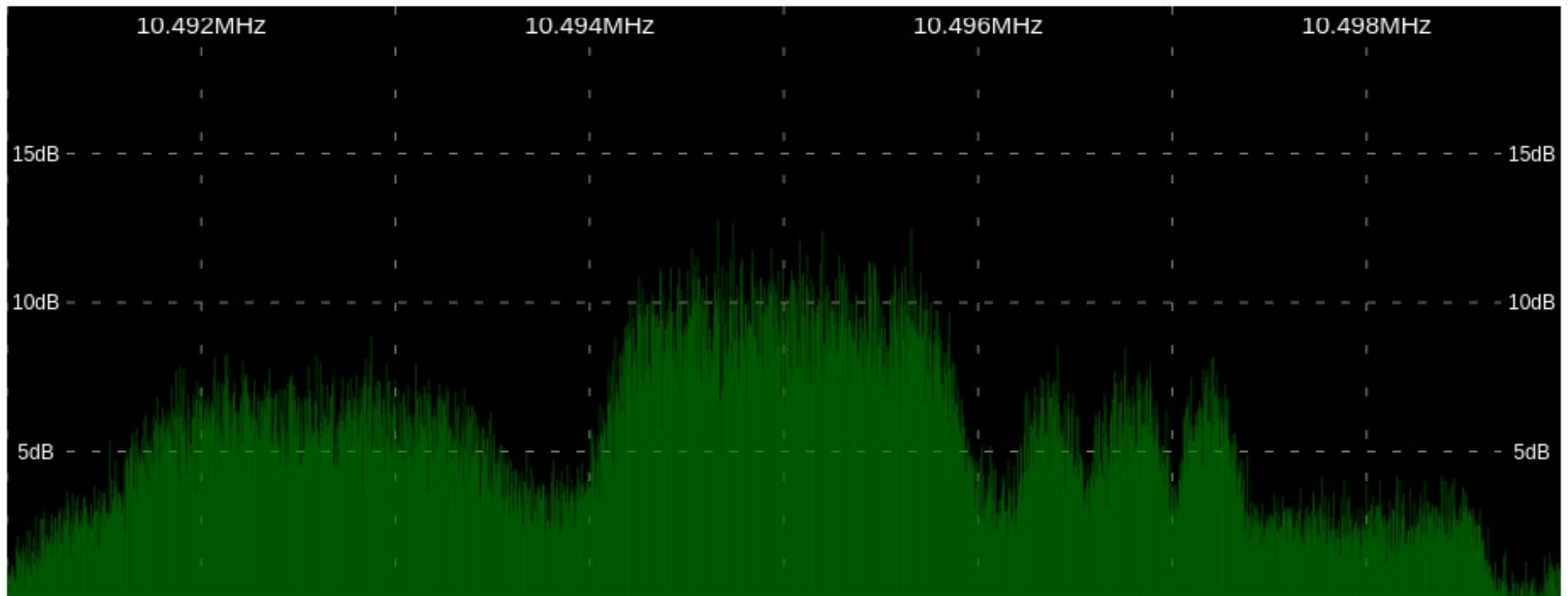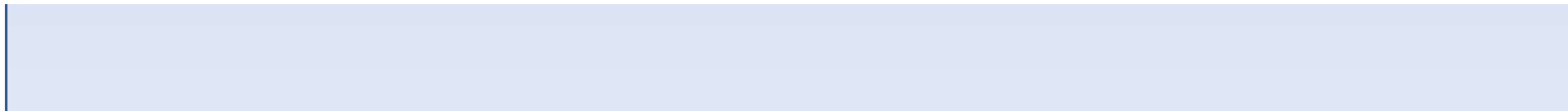- Not that easy to tune around

Bandplan

Beacon and Simplex DATV		Simplex DATV		RB-TV

Simplex 1MS1　　Simplex 1MS2　　Simplex 1MS3　　Simplex 1MS4

Narrow Beacon

125KS1 - 4　　125KS5 - 8

Simplex 2MS1　　Simplex 2MS2

Wide Beacon

333KS1 & 2　　333KS3 & 4

2401.5　2402.5　2403.5　2404.5　2401.5　2402.5　2403.5　2404.5　2409.5

Uplink (MHz)

10491.0　10492.0　10493.0　10494.0　10495.0　10496.0　10497.0　10498.0　10499.0

Downlink (MHz)

Bandplan

Beacon and Simplex DATV	Simplex DATV	RB-TV

Simplex 1MS1 | Simplex 1MS2 | Simplex 1MS3 | Simplex 1MS4

Narrow Beacon

125KS1-4 | 125KS5-8

Simplex 2MS1 | Simplex 2MS2

Wide Beacon

333KS1 & 2 | 333KS3 & 4

2401.5 2402.5 2403.5 2404.5 2401.5 2402.5 2403.5 2404.5 2409.5

Uplink (MHz)

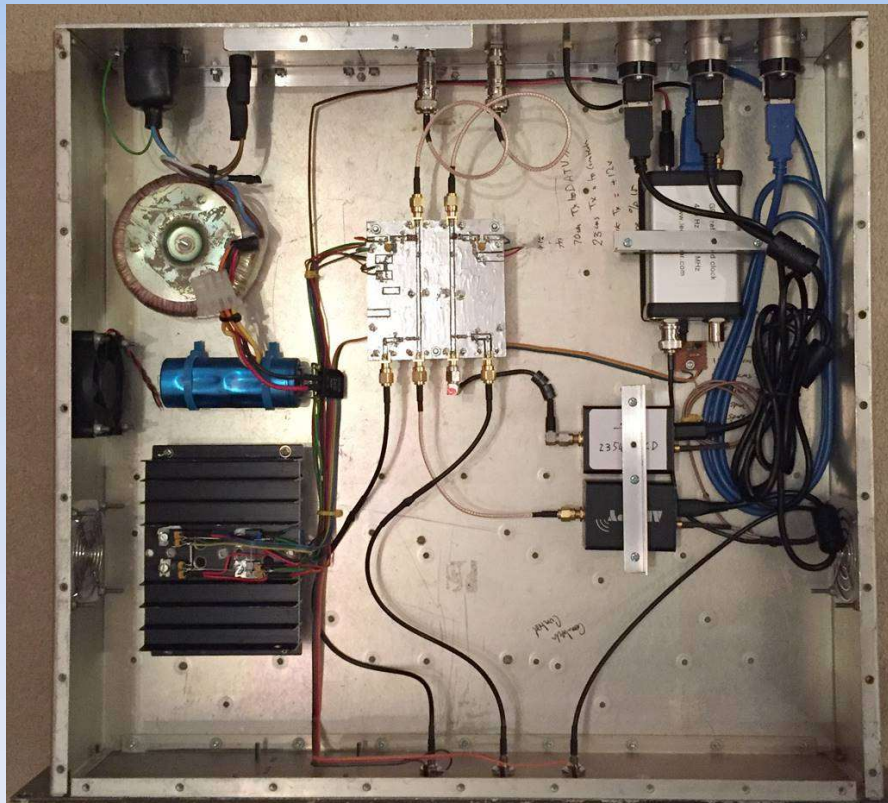10491.0 10492.0 10493.0 10494.0 10495.0 10496.0 10497.0 10498.0 10499.0

Downlink (MHz)

15dB

10dB

5dB

What
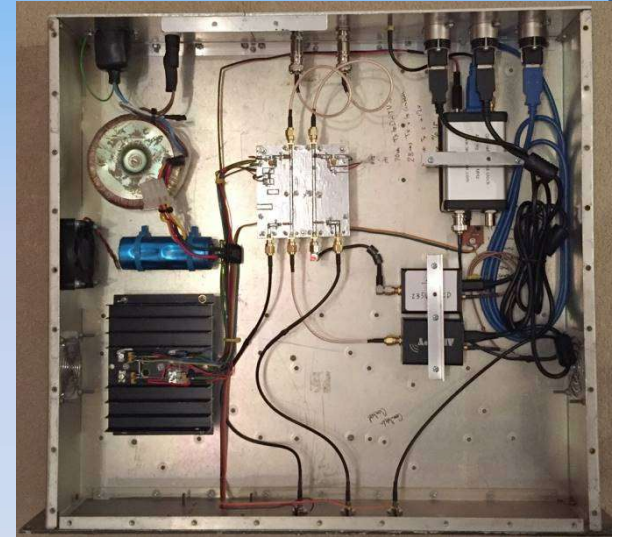
1.3 Metre dish at Goonhilly

What

- 1.3 Metre dish at Goonhilly

- Standard LNB and Airspy

What

- 1.3 Metre dish at Goonhilly
- Standard LNB and Airspy
- Linux PC

How

- **Hardware**
  - i7-2600 CPU
    16GB DDR3 RAM
    Intel DQ67SW Motherboard
    500GB Samsung 850 EVO SSD
    750W Corsair TX Power Supply

- **Software**
  - Ubuntu Server 18.04
    Nginx mainline
    airspy_tcp fork
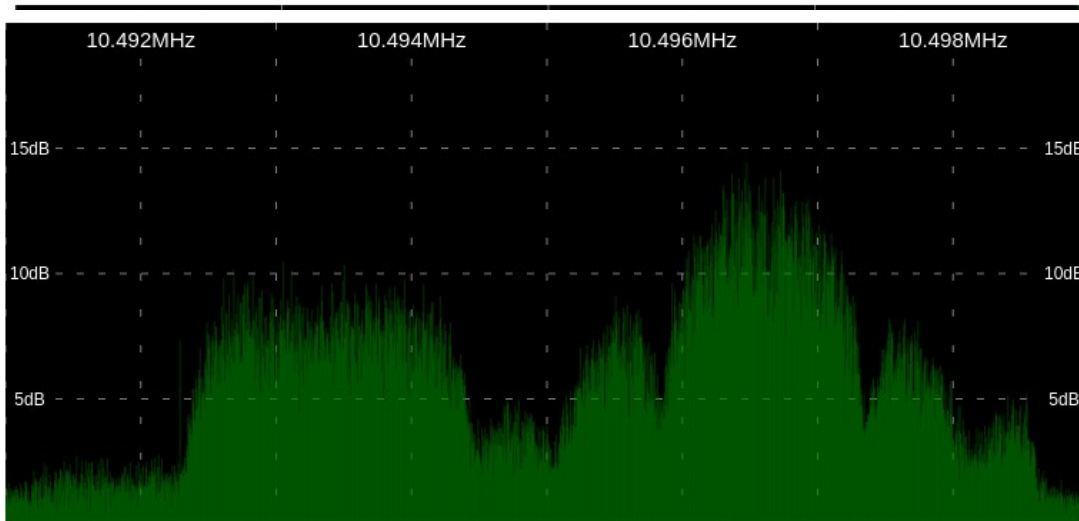   narrowband WebSDR by PA3FWM
    wideband spectrum monitor

Result

Questions