

New DX-Patrol Local Oscillator upgrade for QO-100 Up converter

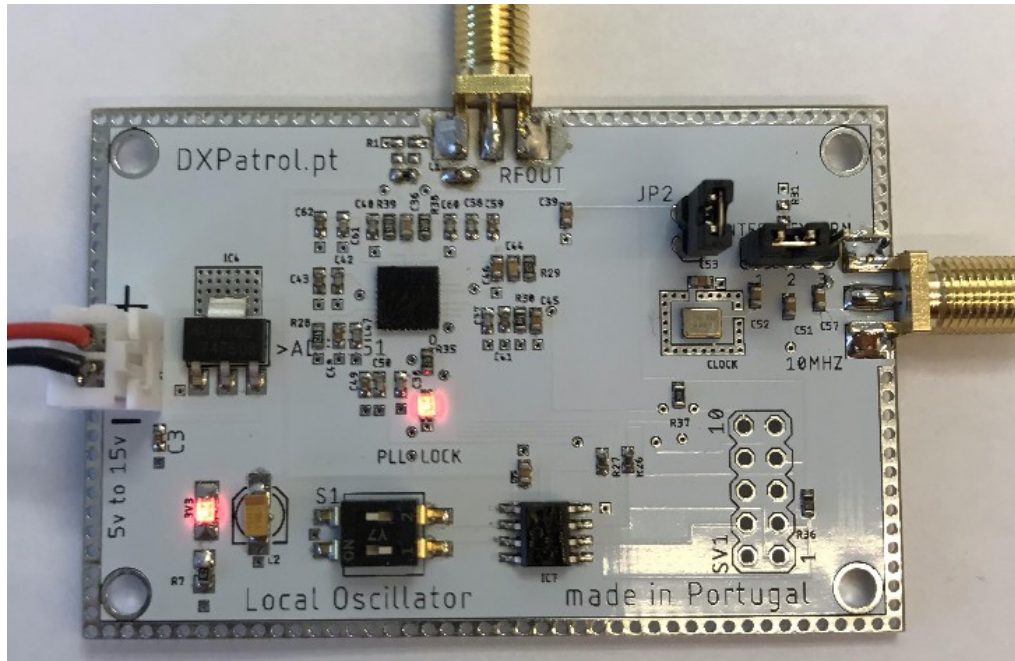


fig 1, Local oscillator PCB

- Full lockable into a internal TCXO 10 Mhz reference or a external GPSDO
- for extreme accuracy and precision transmission frequency.
- This Local Oscillator has 4 factory pre-programmed frequencies for 4 IF usages.
- Easy selection by dip switch (s1) on board.
- Clean and stable signal.
- Spurious emissions = < 50dB

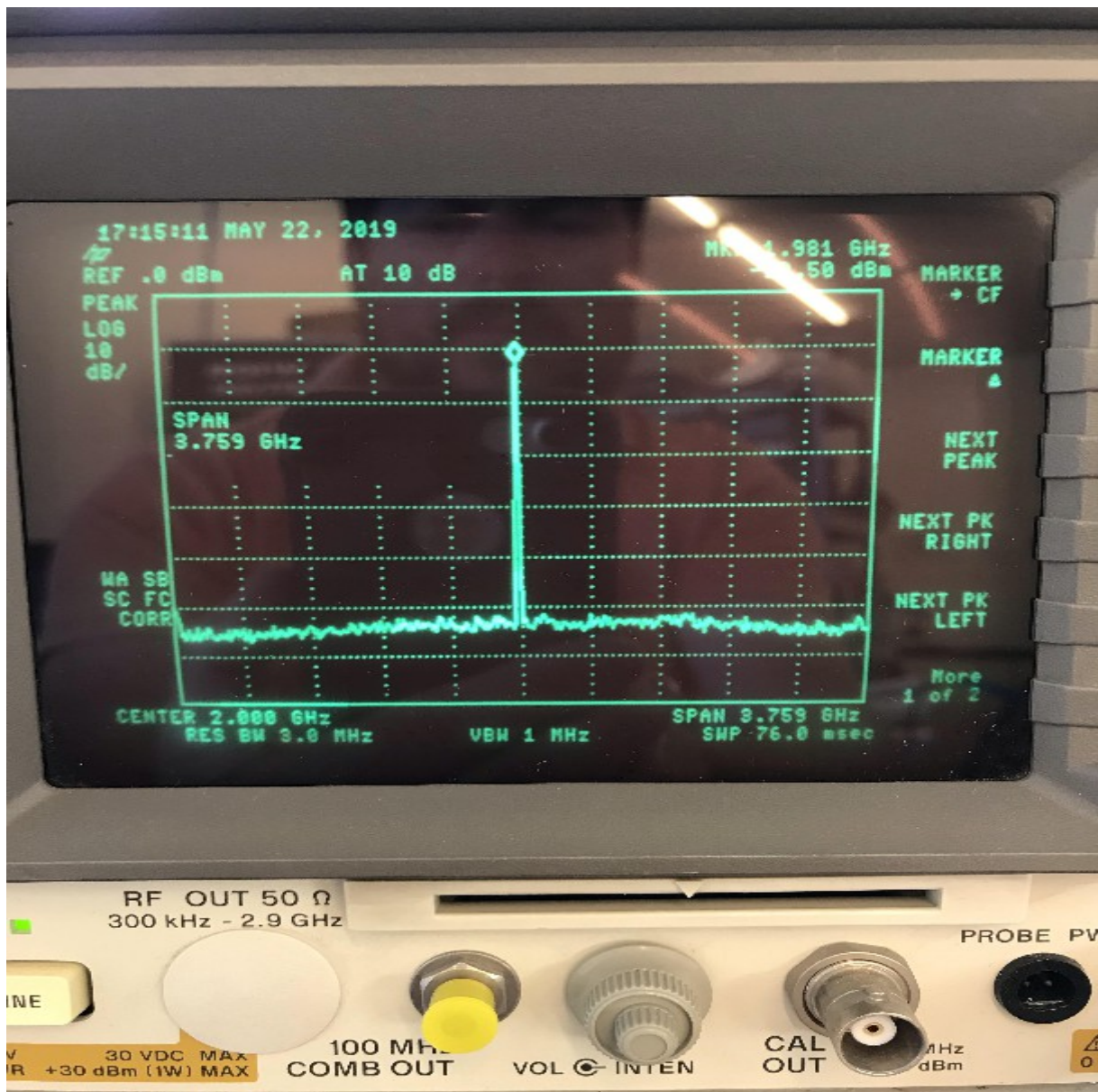


Fig 2 spectrum view 3,8Ghz span

IF 28MHz *	RF 2372Mhz	
IF 144MHz	RF 2256MHz	
IF 432MHz	RF 1968MHz	
IF 1296MHz	RF 1104MHz	

Table 1. IF frequencies options

External 10MHz reference:

-Remove JP2 Off (this jumpers turns OFF the TCXO; this avoid any dual reference signal on input resulting in erratic output signal.)

-Swap JP1 from Internal position, to External position

- Local Oscillators uses a Analog Devices AF4351 synthesizer
- locked into **10MHz TCXO Clipped Sine Wave Oscillator Frequencies Stability 500ppb**
- power supply 5 to 15V
- Current consumption 110mA
- output power 5dBm
- dimensions: 66mm/42mm
- connectors SMA
- PLL Lock red LED indication

- **Low IF input can increase the converter spurious emissions. Using this IF, some external filters might be needed to the converter or power amplifier.*
- *432Mhz IF is well recommended.*

Upgrade modification.

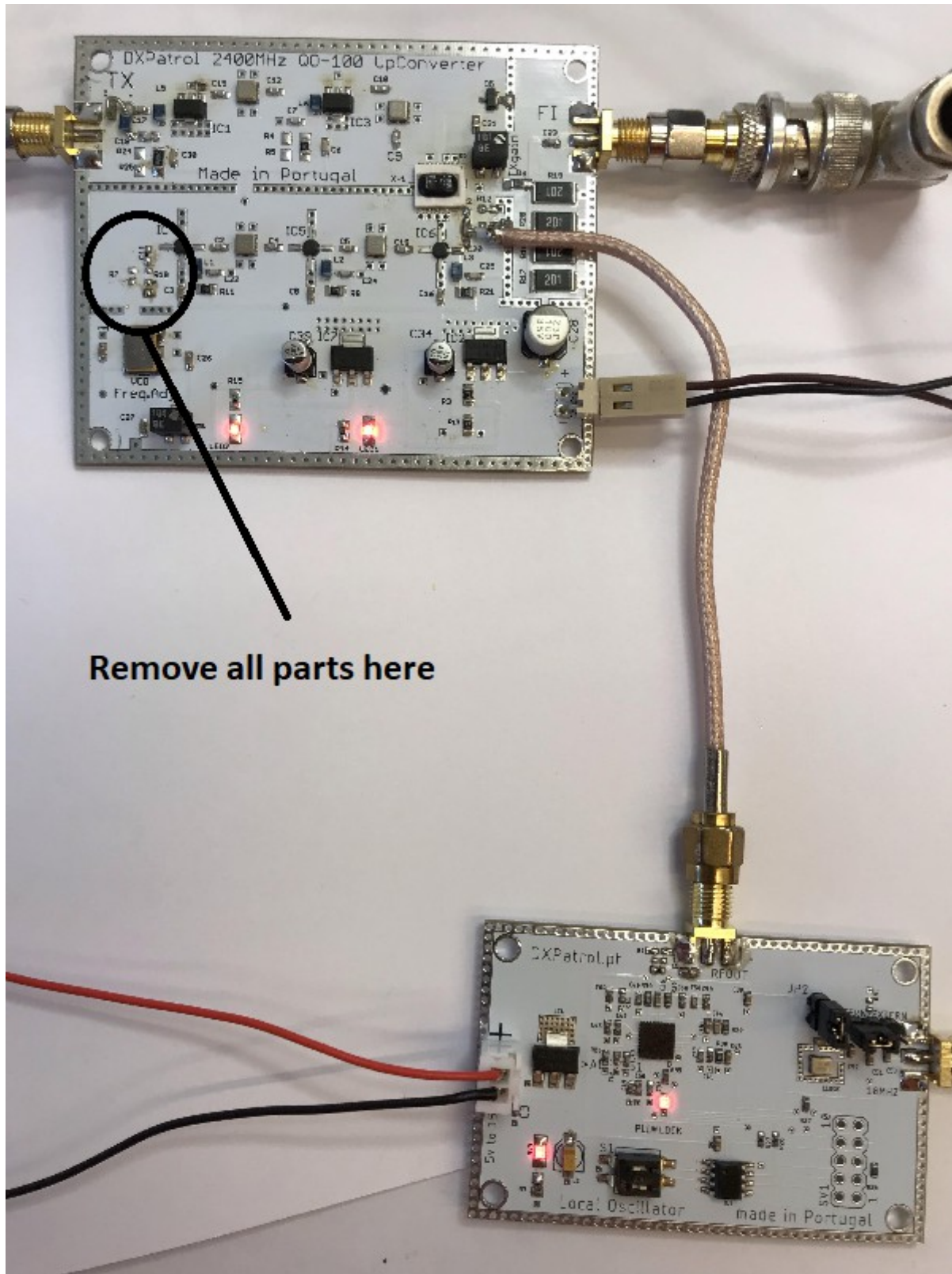


Fig 3. Get a SMA cable with connector only one side.

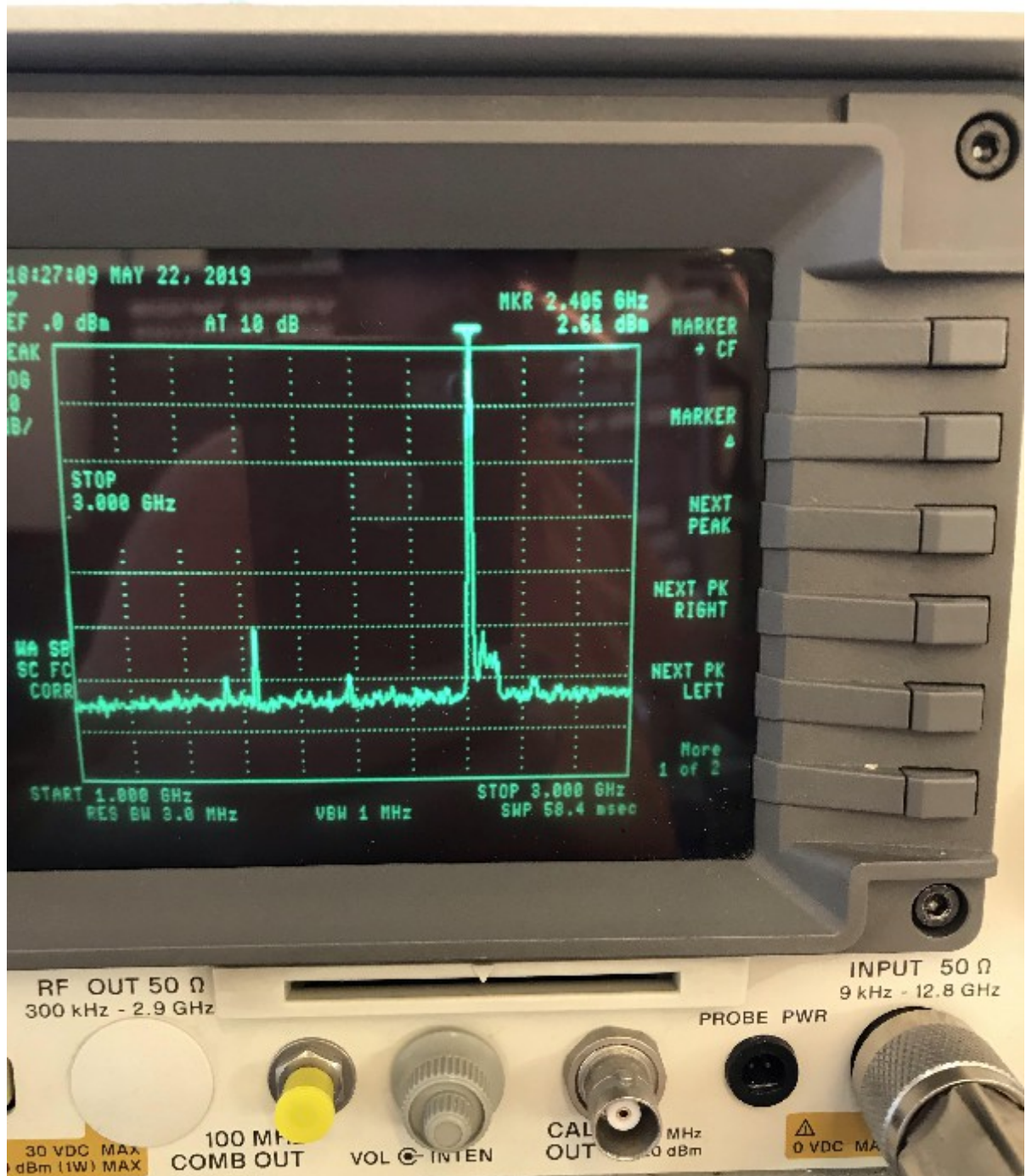


Fig 5 Output signal on 2400MHz (LO leakage 53dBs below)