VK3NX –JA1WQF JT4F QSO REPORT

DATE : 7th Dec 2013 0940- 1000z

Wx at VK3NX Approx 20 deg Celsius 69% humidity No cloud No wind
Great circle Distance = 8212km (WSJT figure)
Elevation @ V3NX @0930z = 40 degrees @1000z= 35 degrees
Loc at VK3NX QF21CT
Loc at JA1WQF QM05AV

Equipment VK3NX:

- *2.4 m Solid dish (Andrews)*
- *11.5 W Kuhne SSPA (10 W at feed) short WR42 flexible W/G to W/G Switch (~0.5dB loss)*
- *Feed: Super VE4MA choke flange with Circular to rectangular transition (WR42)*
- *W/G switch: "EVENTS HORIZON"*
- *LNA @ feed*
    - *Kuhne 1.5dB NF 27 db gain + DB6NT design (homebrew) NF= Max 2.0dB Gain = 11.5dB*
    - *Total gain is 38.5dB in "feed box"*
- *LMR240 with Radiall 18GHz connectors for short run on Tx and Rx from "feed box" to transverter*
- *Transverter = Thales 26 GHz units running 1296 MHz IF. Then down-converted to 144MHz IF. IF driver IC-746. (With 500 Hz filter used for CW contact)*
- *Kuhne 24 GHz W/G filters on Rx and Tx ports of Thales unit. (Absolutely necessary due to very poor image rejection ~4dB only with 1296 MHz IF)*

Perfomance:

- *Best Moon noise measured at 2.2dB*
- *Moon noise at time of sked = 1.8dB*

Equipment @ JA1WQF

- 2.4m dish
- Power 10 W

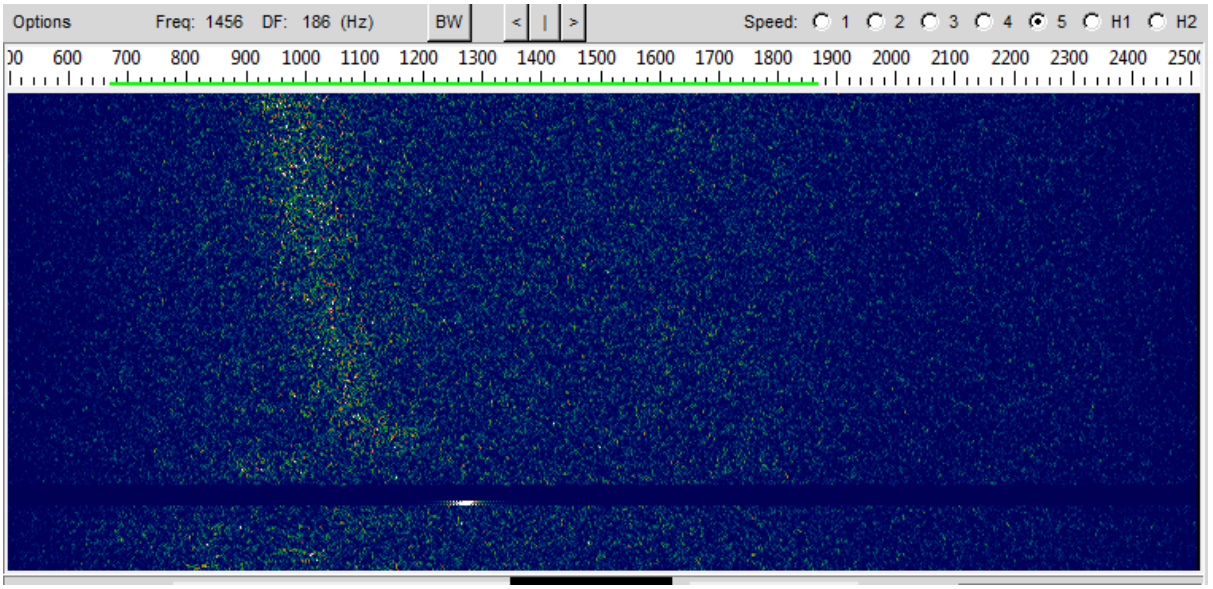
WSJT DECODED TEXT:

092800 0 -21 5.7 -31 22 *
092937 Transmitting: JT4F JA1WQF VK3NX QF21
092946 Transmitting: JT4F @1270

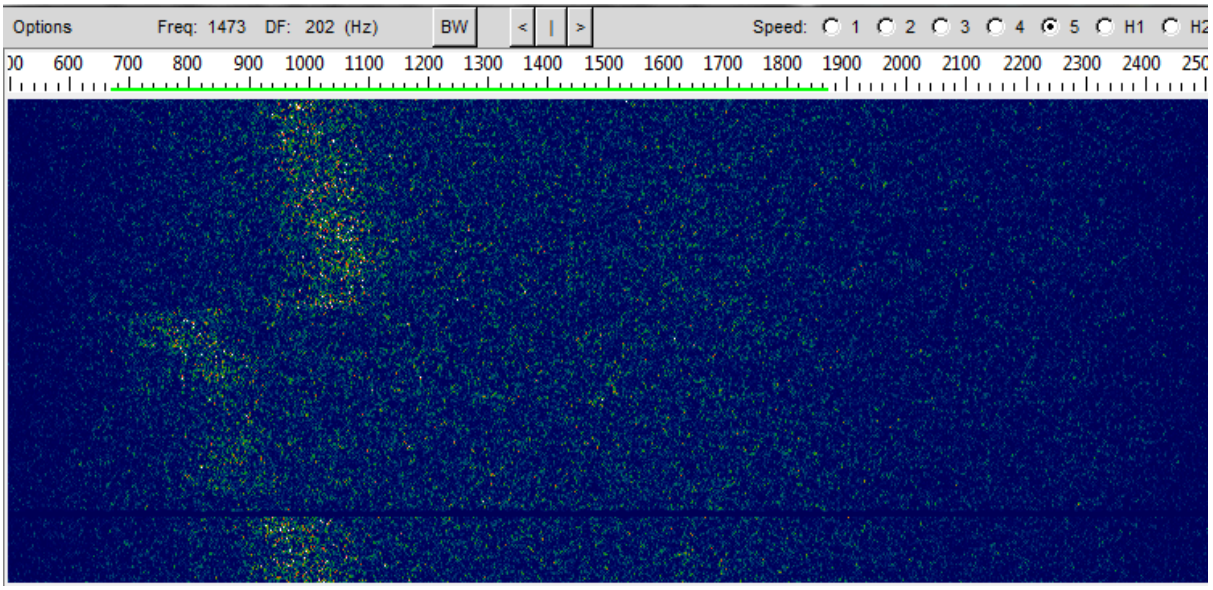
094800 7 -14 2.3 -317 96 * VK3NX JA1WQF 1 0 E
094900 Transmitting: JT4F JA1WQF VK3NX -14
095000 7 -14 2.3 -389 101 * VK3NX JA1WQF 1 0 D
095000 1 1/1 VK3NX JA1WQF 1 0
095200 4 -16 2.2 -396 90 *
095400 5 -15 2.6 -418 94 *
095600 5 -15 2.3 -365 101 * R-17 1 0 D
095700 Transmitting: JT4F JA1WQF VK3NX RRR

095800 6 -14 2.3 -438 101 * 73 1 0 D
095900 Transmitting: JT4F @1700
100000 6 -14 2.5 -466 74 *
100000 1 6/6 73 1 0
100100 0 -21 1.2 -70 7 #
100100 1 6/6 73 1 0

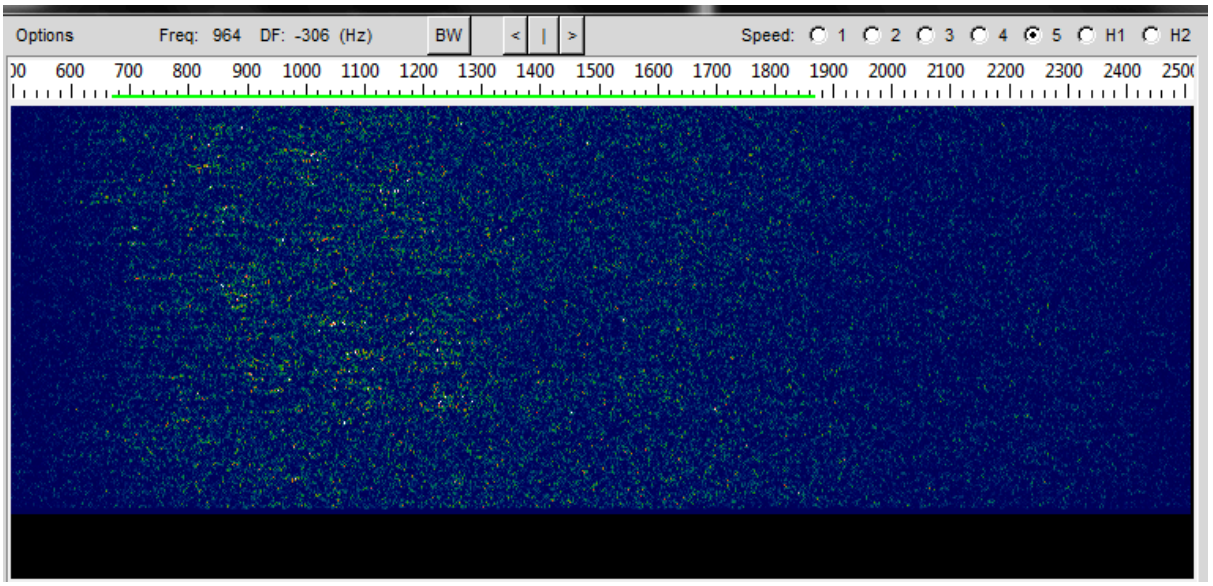
WSJT SCREEN SHOTS:



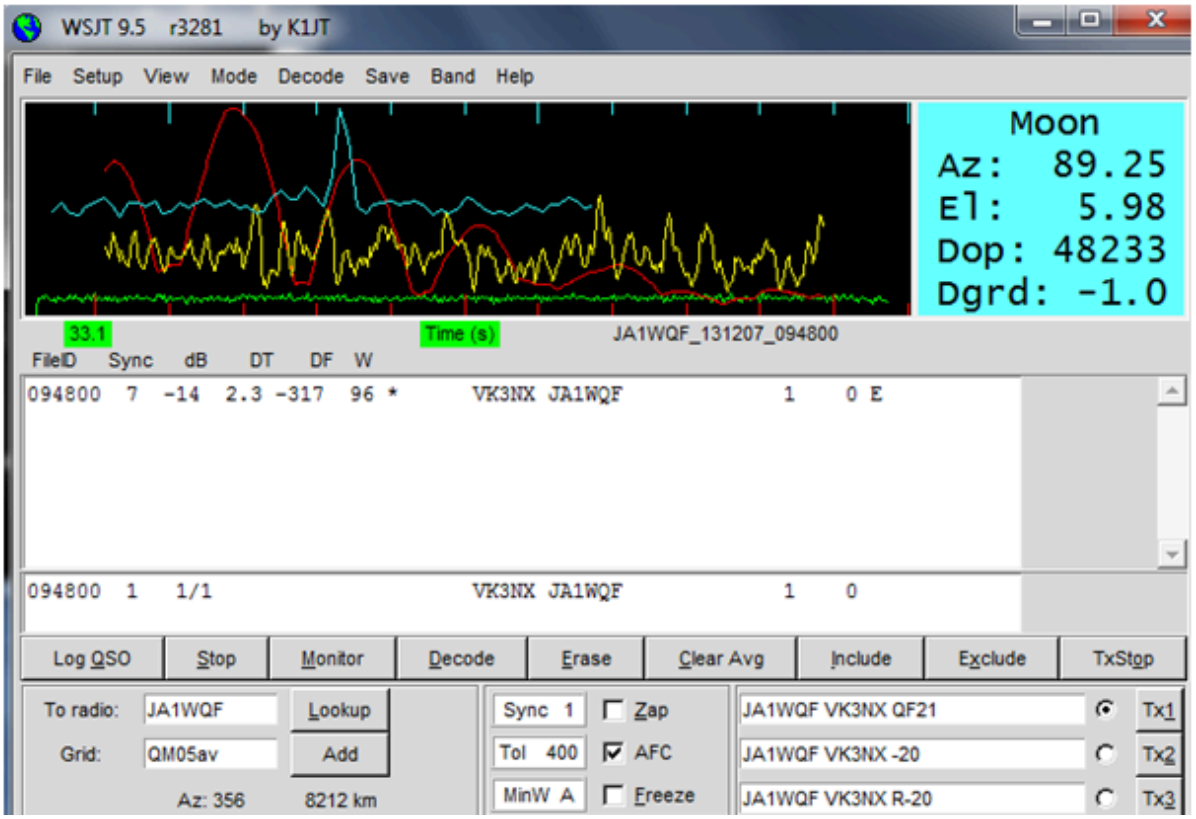
0944z JA1WQF 1270 Hz Tone



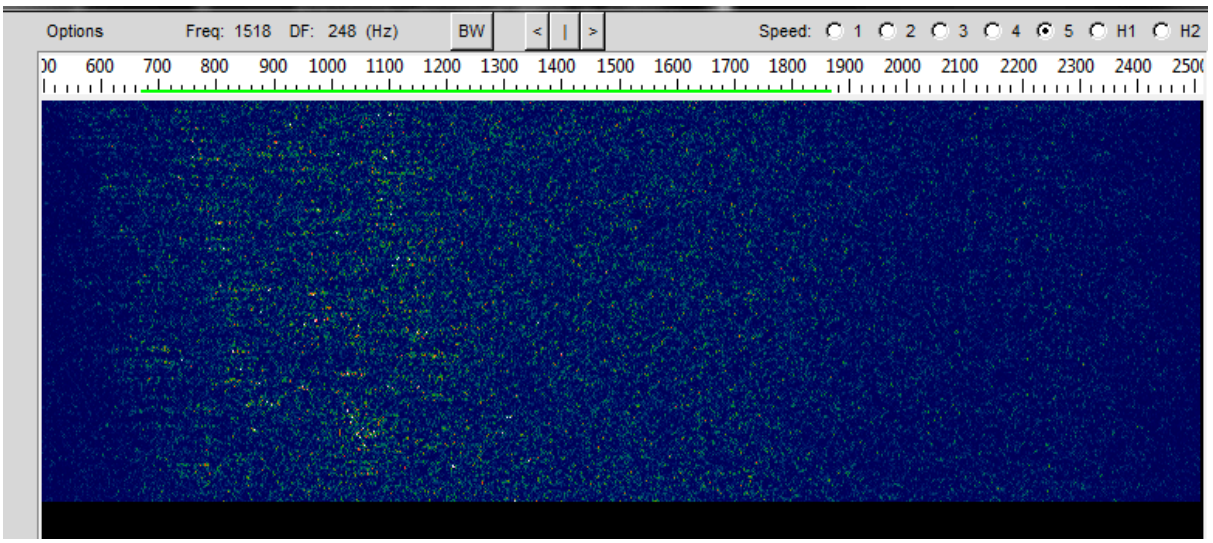
Frequency correction (netting) by VK3NX on 1270 Hz tone Rx from JA1WQF



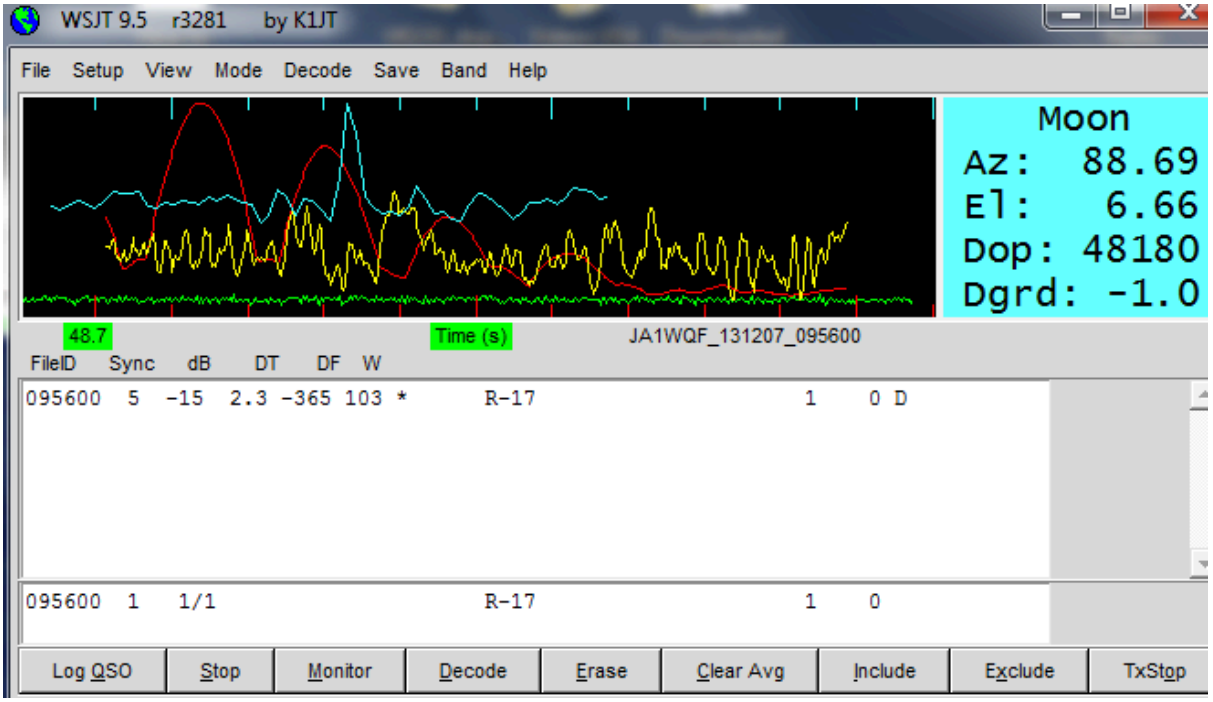
First message sent by JA1WQF @ 0948



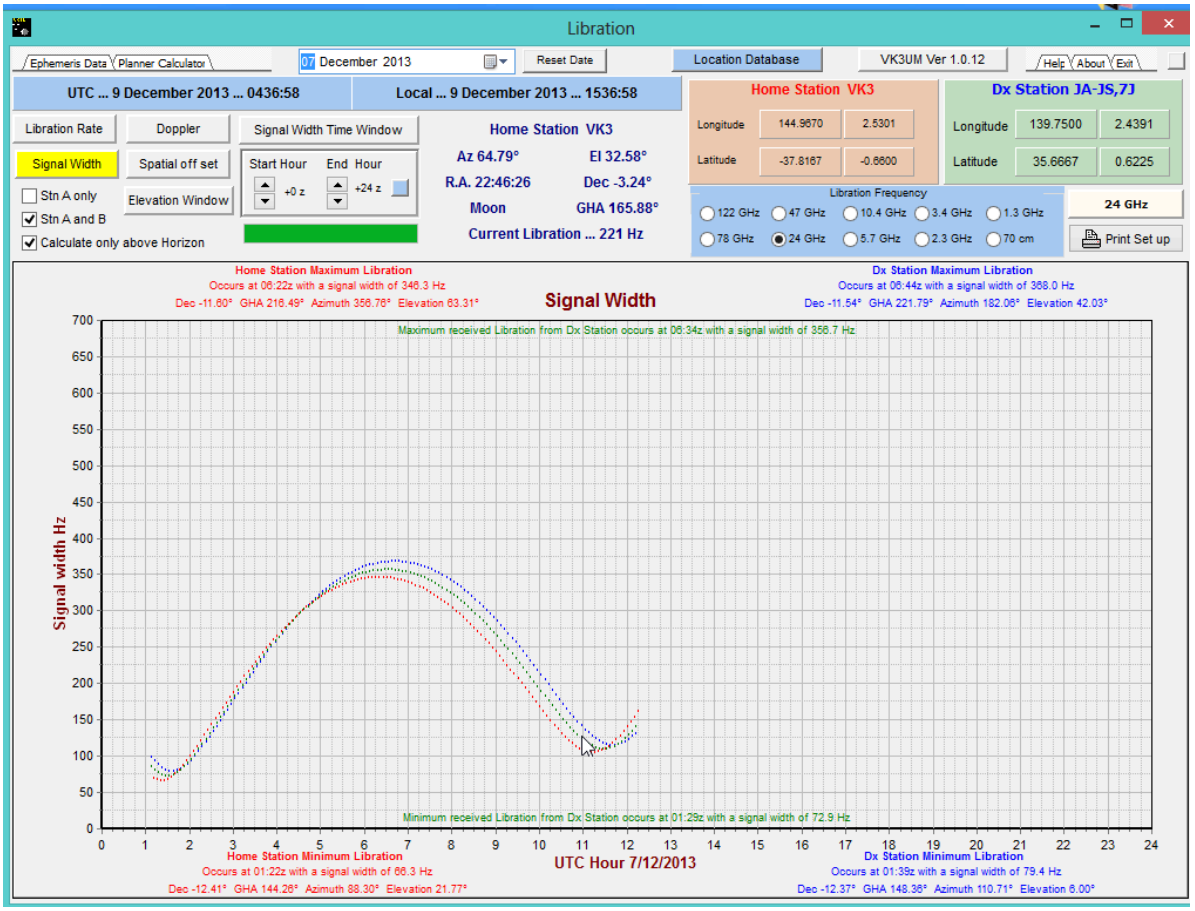
Decode of first Message. (Bin Width of “E” indicated by program for decode)



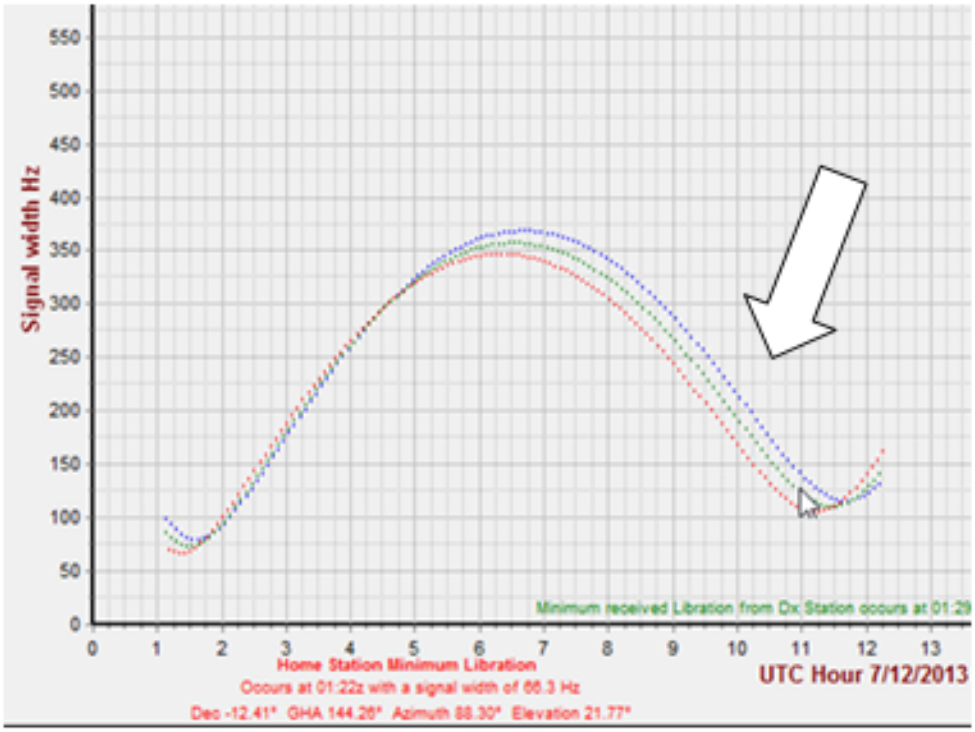
Signal at 0956

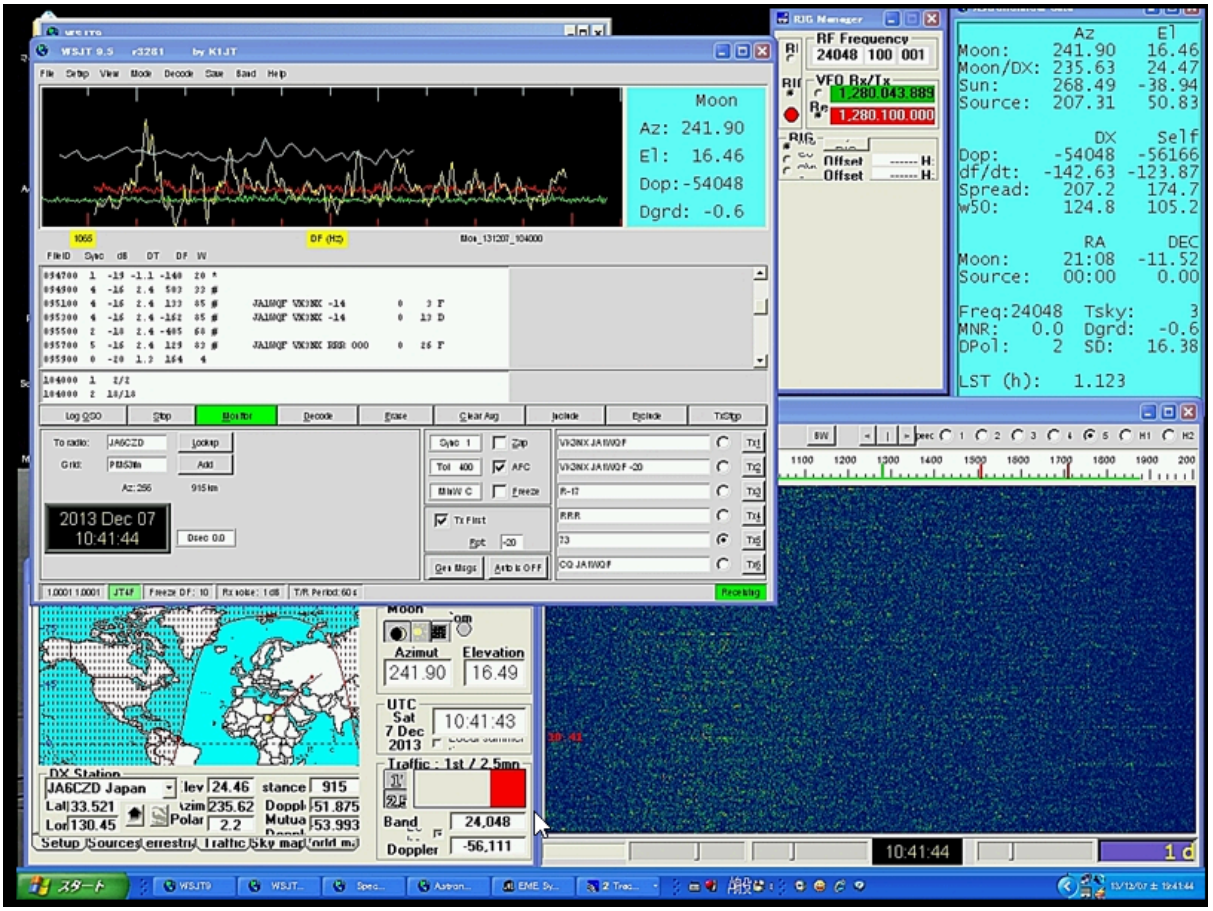


Decode @ 0956

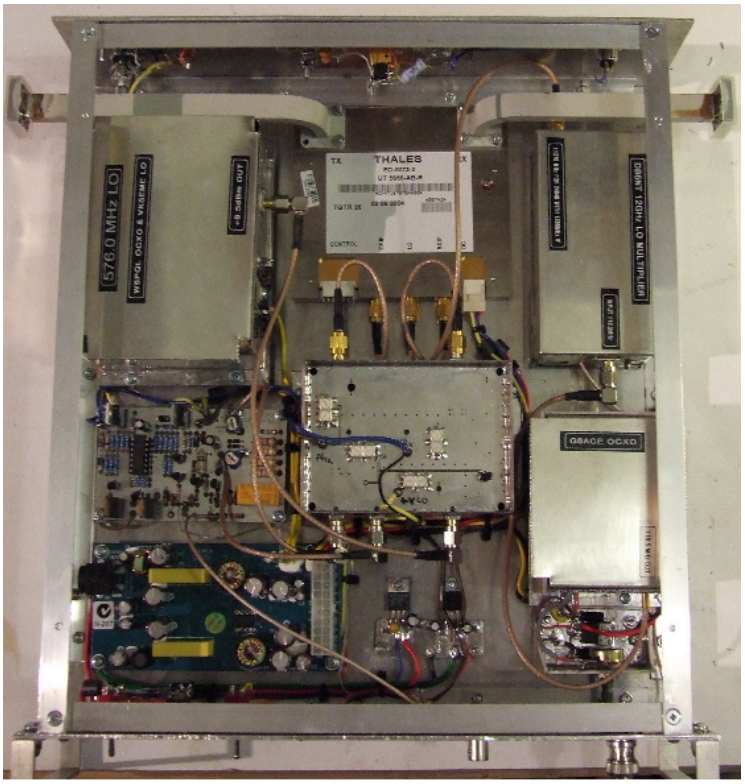


VK3UM Libration Calculator on day of sked of sked



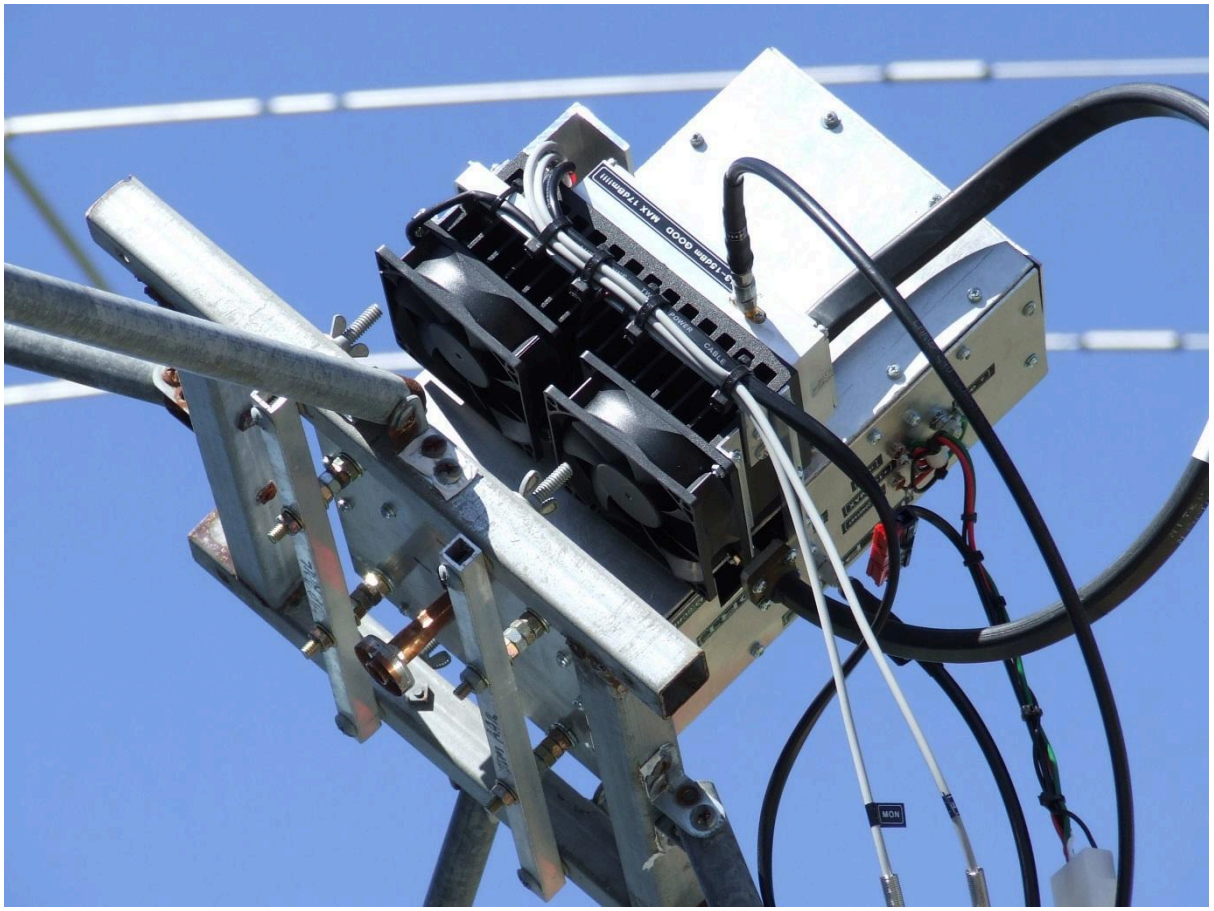


Screen shot from JA1WQF



Modified Thales xvtr at VK3NX

VK3NX 2.4m dish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