

VK3NX – DF1OI 24 GHz CW

1st VK-DL 24GHz CW QSO

16 194.8 km

Date: 10/10/2014

Report: DF1OI Received at VK3NX = O
VK3NX Received at DF1OI = M

Equipment at DF1OI

- 2.4 m offset fed
- Pwr 48 W
- At time of QSO... Moon noise = 1.3-1.5dB @ DF1OI
- Tracking moon noise and 12 bit encoders

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
 - o Kuhne 1.5dB NF 27 db gain + DB6NT design (homebrew) NF= Max 2.0dB Gain = 11.5dB
 - o 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)

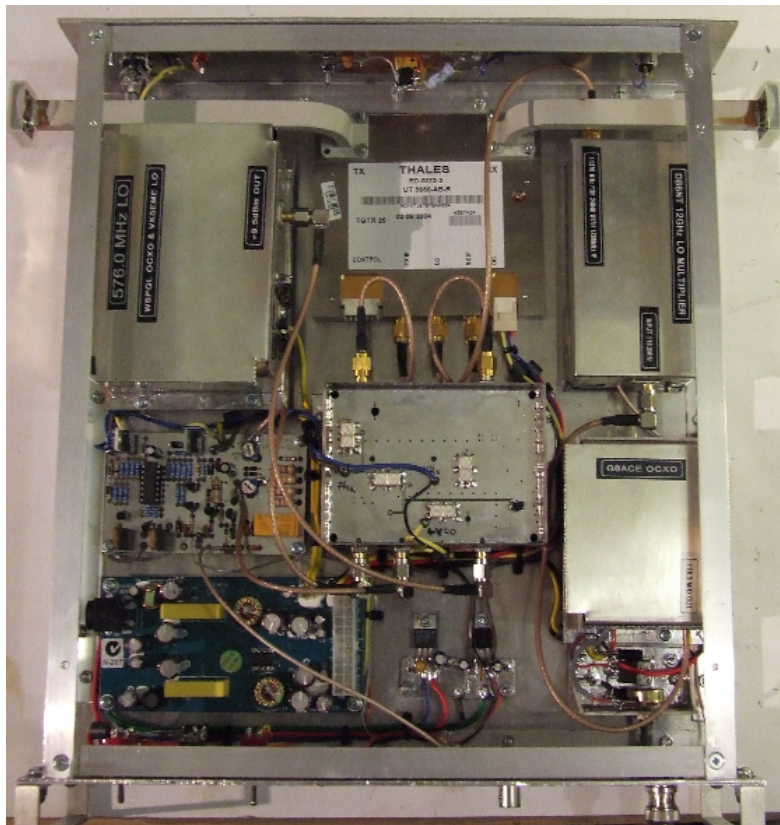
Performance of Rx at VK3NX

- Best Moon noise measured at 2.2dB
- Moon noise at time of sked = 2.0dB

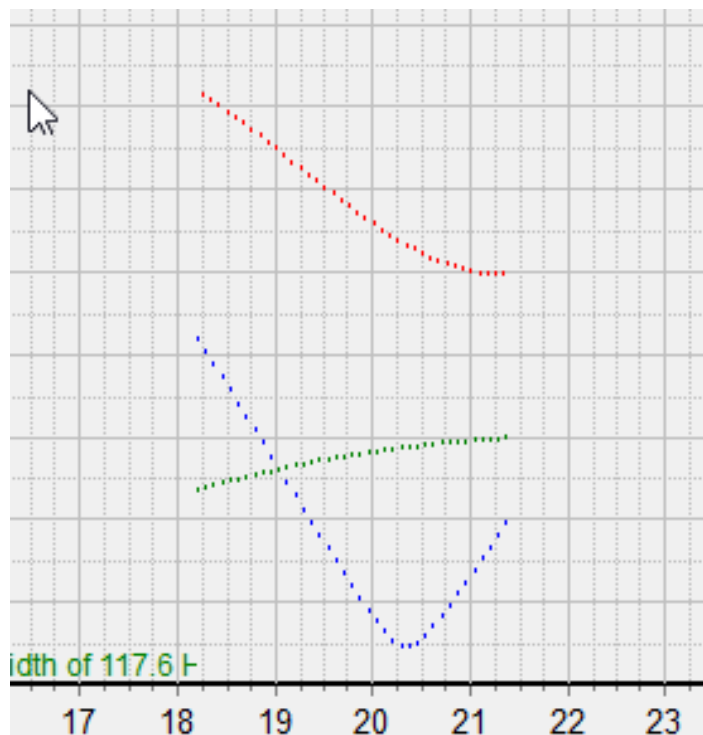
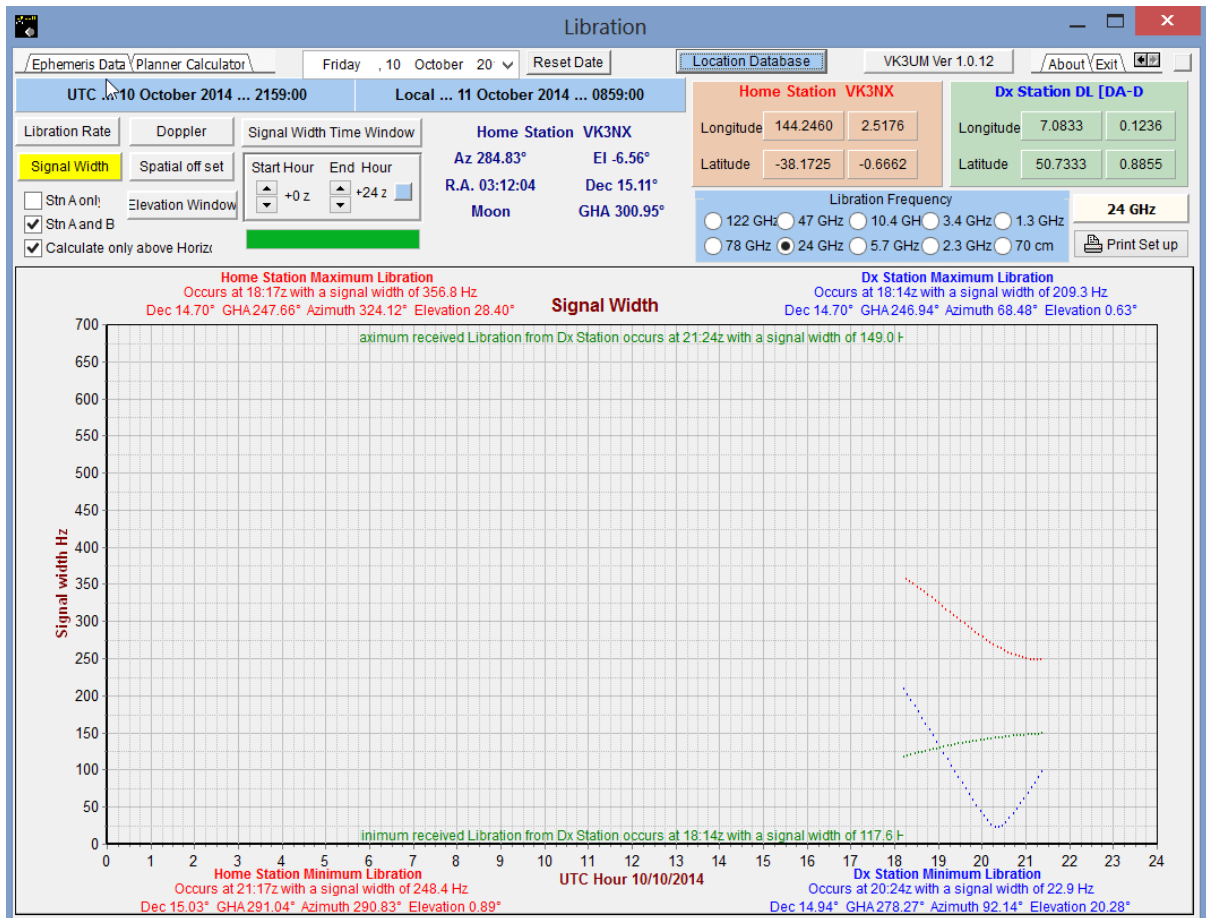
Condx at VK3NX on 10/10/2014 @ time of QSO

- Cloudy low level
- Humidity 74%
- Air temp 13 deg C
- Apparent Air temp = 11 Deg
- Dew point 9.0 Deg C
- Pw =

Pics of VK3NX equipment:



Various screen shots.....



VK3UM Libration Calculator