

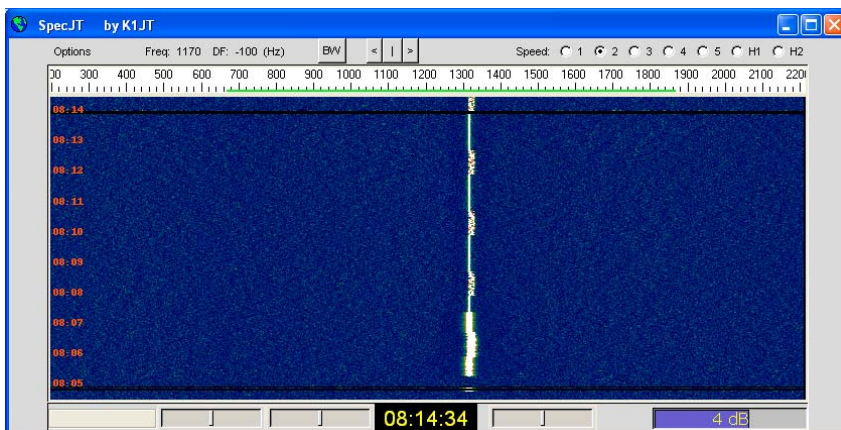
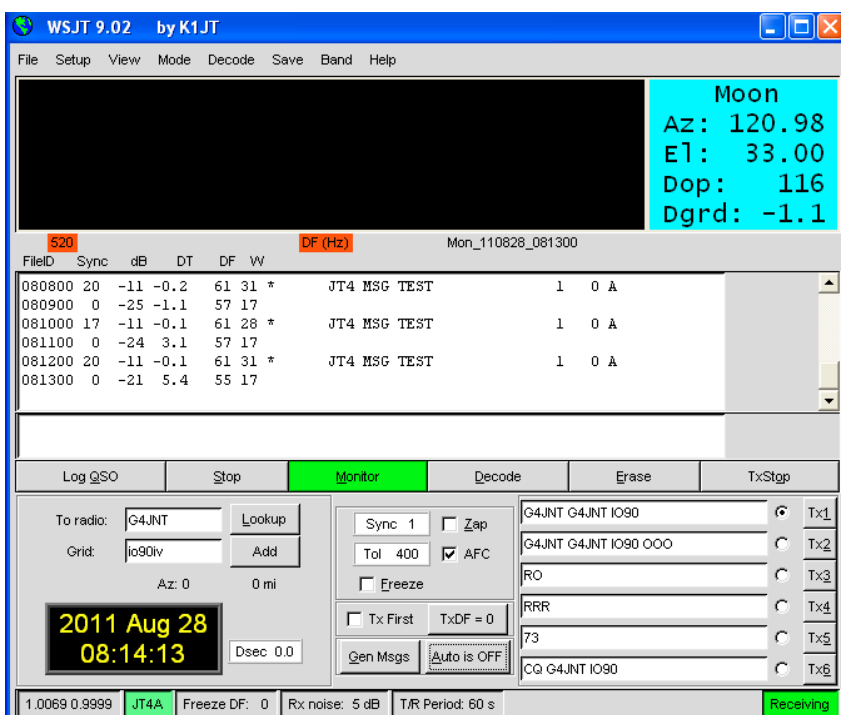
## Optical Comms with JT4A. First proving-test of equipment

Andy Talbot G4JNT 28/8/2011

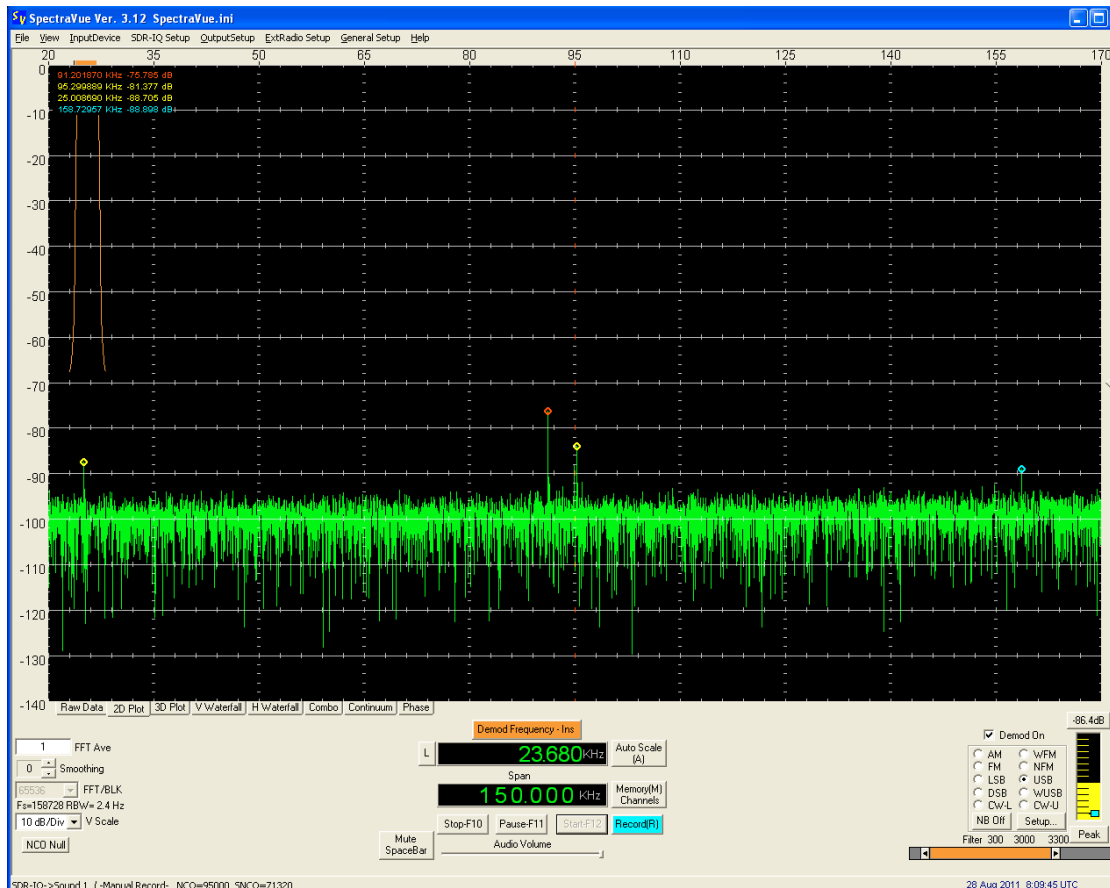
Tx 25kHz subcarrier generated by 16F628A PIC based DDS running *4FREQSOURCE* code. The four frequencies for a JT4A signal are prestored in the code, and selected depending on the state of two drive signals. Tx test source, high-brightness LED connected via 2k2 to OPamp filter output.

JT4A is generated by another 16F627A PIC running *JT4GEN* code. Timing generated from NMEA data supplied from a Garmin GPS module.

Daylight, conditions, receiver position adjusted to pick up just enough scattered light from the LED to give a barely detectable audio tone in the SDR-IQ (S/N 6dB in 2.4Hz) Audio wrapped round to decoder using WSJT 9.02



WSJT User screens, decoding the signal shown below



The 25kHz subcarrier is the small peak on the left, within the envelope of the filter shown (the two peaks in the middle are from the two LCD screens on this PC)



