

Antenna and Station Design

21 August 2017

Solar Eclipse QSQ Party (SEQP)

Station: WB0IXV

Operator: David O'Farrell

Operator Class: Extra

Grid Square: DN70fi

Mode: WSPR

Version: WSPR 2.12_r3617

Frequency: 10.140026

Operating times: 21 Aug 2017 1400 - 2200 UTC

Equipment: Yaesu FT-840, Signalink USB, MFJ-929 antenna tuner

Power Output (measured) 4.8 to 5.1 watts, use average 4.95 watts in calculations

Antenna: Radio Works Carolina Windom 80 Special, 100 feet RG-8X Feed line

SWR @ 10.14 Mhz = 1.8:1 = 8.2% Loss

Antenna Tuner Insertion Loss = .13 dB

Line Loss of RG-8X = 1.0 dB

Gain of dipole = 2.12 dB

ERP (isotropic) = 5.72 watts

ERP (dipole) = 3.27 watts