K4LED

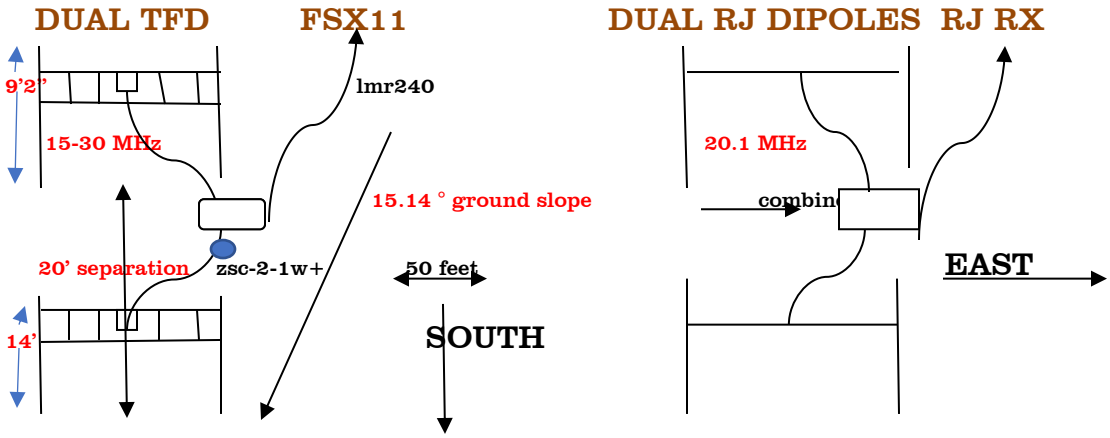
Georgia Amateur Radio Astronomy Observatory

Observatory Data 3-5-2017

Location: 623 Hawkins Ridge, Jasper, GA 30143
Lat 34.42322 N 34° 25' 23.592" N
Lon -84.49413 W -84° 29' 38.8674" W
477 MSL (1,565 feet) Grid: EM74sk

Operator: Larry E. Dodd, email: 101science@gmail.com
Phone: 706-669-5825 Web: www.101science.com

Antennas: Single Pair Typinski TFD Array, EW Plane, linear polarization, elements at 9' 2" & 14' height above ground, spaced 20', beam steering: 180° AZ, 50° EL, feeds FSX11 spectrograph, A standard RJ dual EW plane dipole array is attached to an RJ receiver.



NOTES: 12 #43 ferrite cores added to TFD dipole feed lines at the elements. South element height extended to level with north element to compensate for ground slope. Delay Line: Recalculated delay line (blue dot) to maintain a 50° beam to Jupiter. Ground is a very rocky side of a hill sloping downward toward the south.

Timing: Asus GL753VE Laptop, Windows 10, 1TB SSD, 4GB i7, 16 GB RAM, USB to RS232 Converter, PC clock Locked to a GPS receiver with NEMAtime2 software.

Receivers: 1@ FSX11 R. S. Flagg Spectrograph

2@ Radio Jove receiver (Flagg)

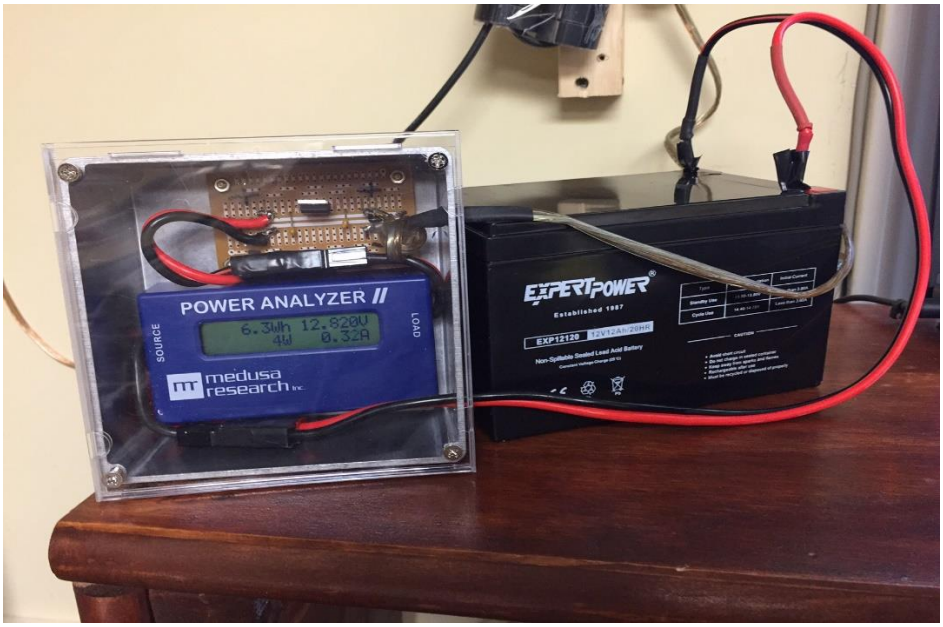
1@ Kenwood TS-2000

1@ Icom 7300 SDR

1@ ANAN 100D SDR

Internet: Telephone and Data Systems (TDS) 15 Mbps DSL

Power: **2 @ APC UPS and Gasoline 2 KW Generator (Various batteries)**

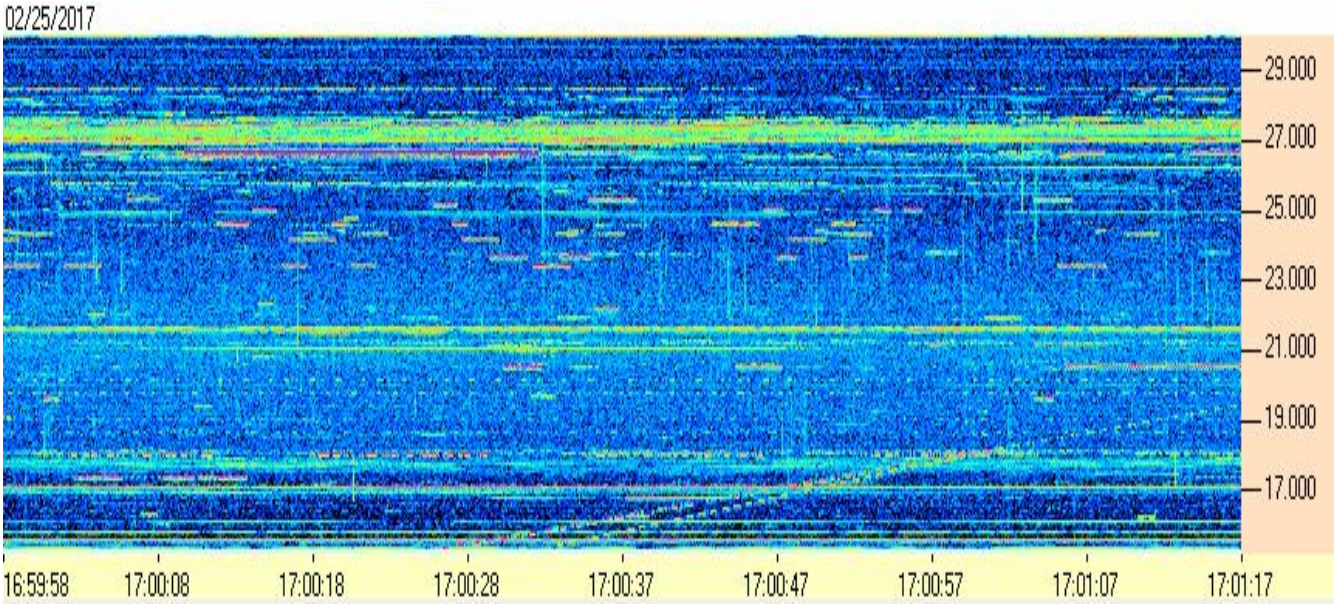


(NOTE: FSK11 draws 4 watts at .32 A. Battery system output is +11.88 volts) .

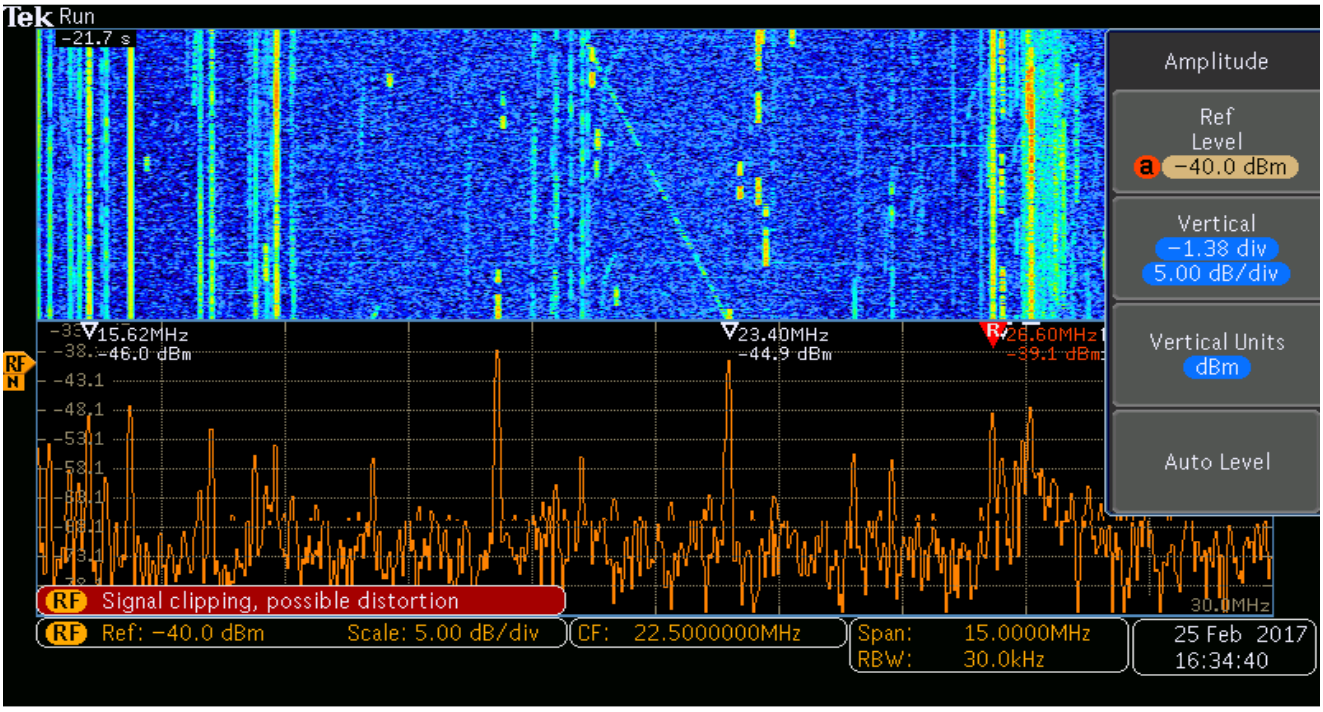
Test Eq: HP461A, Kay Attenuators, Tektronix MDO 3022 a Mixed Domain Oscilloscope features six integrated instruments, including a spectrum analyzer, function generator and more, various signal generators, RF-2080 calibrator, Etc.

Software: RSP and RSS. RSS settings are as follows; Channels 400, Displayed sweep 600, average sweep 10, color offset 2222, color gain 2, color multiply, color file AJ4CO Rainbow, mode stand alone, 15-30 MHz, 30 Khz BW.

Sample RSS Daytime spectrographs on a Dual Linear TFD antenna:
FSX-11

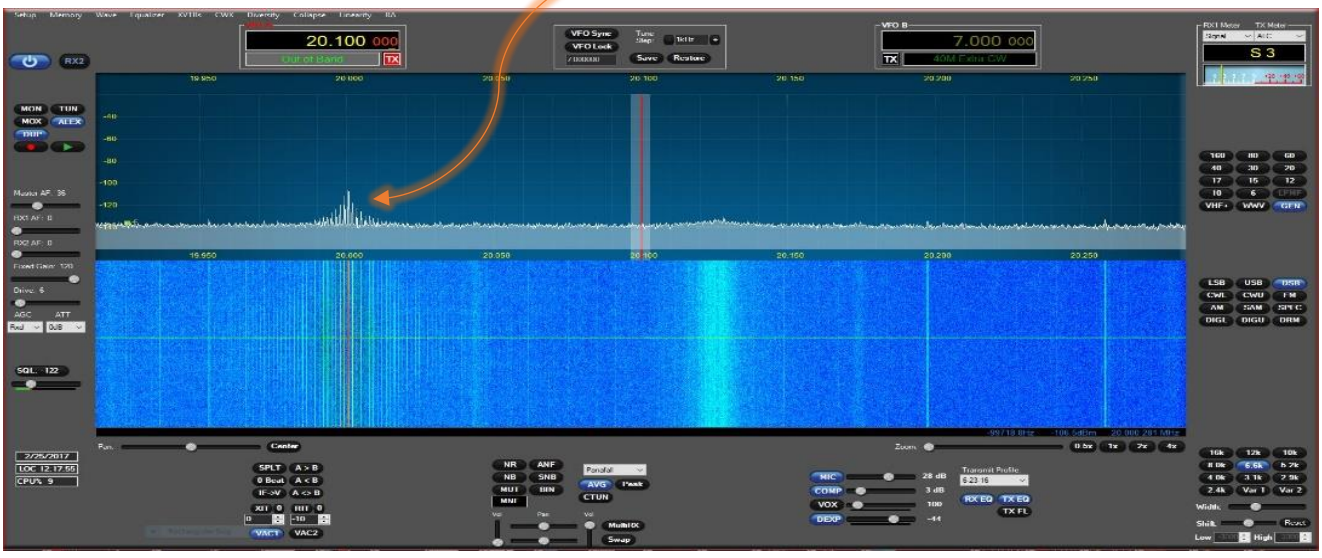


Tektronix 3022 in Spectrum Analyzer. (w/ 40 dB amplifier)



MDO3022 - 11:50:04 AM 2/25/2017

ANAN 100D SDR at 20.1 MHz (Note WWV at 20MHz)



Note: Station will be operational 24/7 except for local thunderstorms adjustments, maintenance and unforeseen circumstance.

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