



Flagler County Emergency Services

Radio Room Work Log

Date: 11-April-2010

Attendees:

- Phil McElrath (K5BBC)
- Charlie Kunz (AA5QJ)
- Eddie Cail (KJ4LRB)
- Mike Lee (WB6RTH)

- Frank Sanita (AF4FS – EOC)
- Bob Pickering (KB4RSY – EOC)
- Troy Harper (EOC Chief)

Scope of Work:

- Re-wire all DC power connections to utilize PowerPole for quick-disconnect
- Performance check all radios to manufacturer's specification, note anomalies
- Sweep all antenna connections, note anomalies and take corrective action
- Install flexible "pig-tails" on all hardline connections to radios

All work was successfully performed within a 2-1/2 hour timeframe with no adverse results. All power connections are now ARES standard PowerPole, all Hardlines are now terminated with flexible pig-tails using RG-142 double-shield, Teflon cable and all performance parameters for antennas and radios have been measured and input to the "Baseline" for future comparison.

Equipment Used / Consumables:

- Anritsu Sitemaster S113 Transmission System Analyzer
- IFR-500 Service Monitor
- Rohde Schwarz FSH-313 Spectrum Analyzer
- Anderson PowerPole Crimper
- Soldering Iron(s), miscellaneous hand tools

- Anderson PowerPole (30A) connectors (8 pairs)
- Ring terminals, 30A (4 units)
- UHF Connectors w/ RG8x collets (6 units)
- UHF Barrel connectors (3 units)
- 5' RG-142 Teflon, Double Shield Cable

PowerPole all DC Power Connections:

Protocol:

The Ham power supply unit was fitted with two (2) pigtails made of 12ga bi-colored wire fitted with 30A ring terminals on the power supply end (screw terminals) and 30A PowerPole connectors on the “load” side. Pigtails are approximately 12 inches in length. Radios on the Ham side were fitted with 30A PowerPole connectors and were trimmed to length with plenty of slack. All loose cable was neatly dressed and tie-wrapped to prevent accidental disconnect.

The GMRS power supply was fitted with two (2) pigtails made from 12ga bi-colored wire fitted with 30A PowerPole connectors on the “load” side. The supply side of the wire was stripped and inserted into the retaining receptacle of the switching power supply, then the screw-downs were tightened.

Radio Checks:

Protocol:

Standard tests were run on each of the 4 radios (2-GMRS and 2-Ham) on each of their capable bands (VHF/UHF) on representative frequencies (including GMRS) to include:

- Receive Sensitivity – at approximately 12db SINAD
- Transmit Frequency Accuracy
- Transmit Power at all available settings

Findings:

No anomalous results were observed. The details of the test results for each of the radios is in the following table:

Date:	11-Apr-10						
Technician:	M.Lee						
Test Equip:	Anritsu S113						
Radio	Band / Freq	Rx Sensitivity	Accuracy	Low	Tx Mid-1	Mid-2	High
React FT-8800	146.625	.17 uv	+0 hz	5.5	11	22	60
	462.675	.20 uv	+0 hz	5	10	15	50
React Alinco DR	147.3	.22 uv	-100 hz	6	N/A	N/A	45
	462.6	.30 uv	-250 hz	3	N/A	N/A	30
Ham FT-880	147.3	.15 uv	-100 hz	6	11	20	55
	447.32	.20 uv	-150 hz	5	10	15	48
Ham D-Star D880	146.58	.15 uv	-0 hz	5.5	15	N/A	60
	447.32	.20 uv	-0 hz	5	10	N/A	50

Antenna Sweeps:

Protocol:

Antenna systems are swept with an Anritsu SiteMaster S113 at the termination of the Hardline (no jumpers). The calibrated Anritsu cable is used, although the S113 does not need to be calibrated for amateur use (only for Cell site certification).

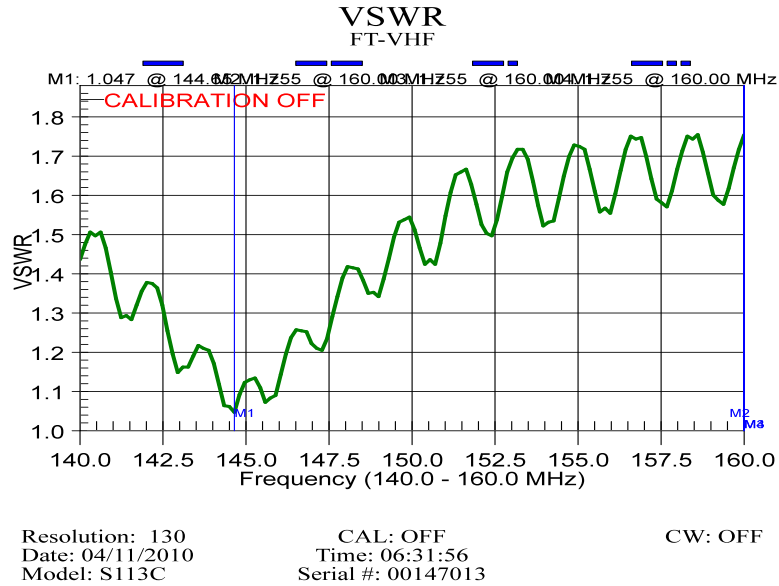
Findings:

No anomalous results were observed. All antennas within acceptable limits with the following observations:

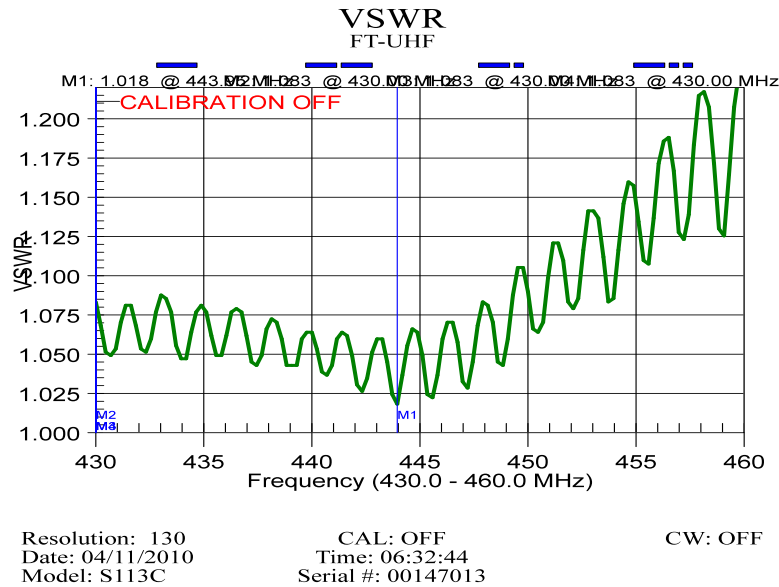
- The antenna used for the REACT FT-880 exhibited acceptable VSWR on both VHF (1.1:1 or less) and UHF (1.08:1 or less on Ham, 1.25:1 or less on GMRS). No issues at this time.
- The antenna used for the REACT Alinco DR radio exhibited acceptable VSWR on both VHF (1.4:1 or less) and UHF (1.1:1 or less on Ham, 1.25:1 or less on GMRS). No issues at this time.
- The antenna used for the HAM FT-8800 exhibited acceptable VSWR on both VHF (1.4:1 or less) and UHF (1.2:1 or less on Ham, 1.3:1 or less on GMRS). No issues at this time.
- The antenna used for the Ham D-STAR radio (ID-880H) exhibited acceptable VSWR on both VHF (1.55:1 or less) and UHF (1.32:1 or less on Ham, 1.25:1 or less on GMRS). No issues at this time.

Anritsu SiteMaster Results:

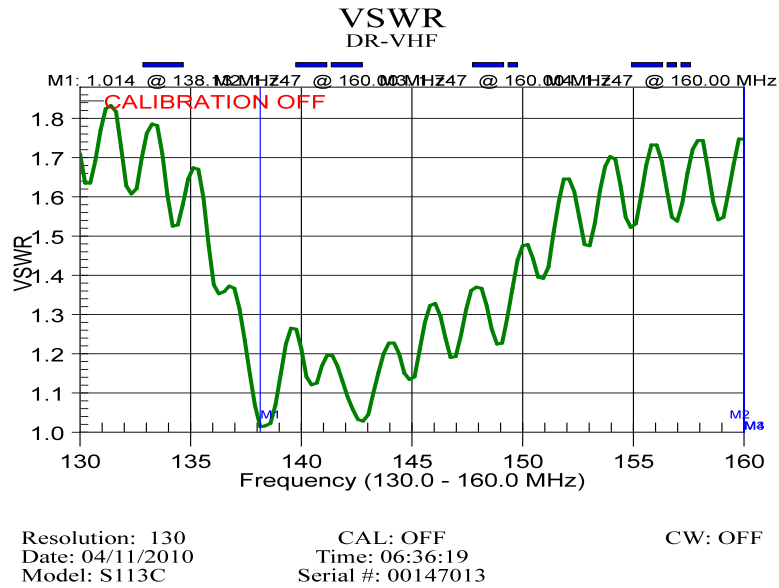
- REACT - FT-8800 (VHF)



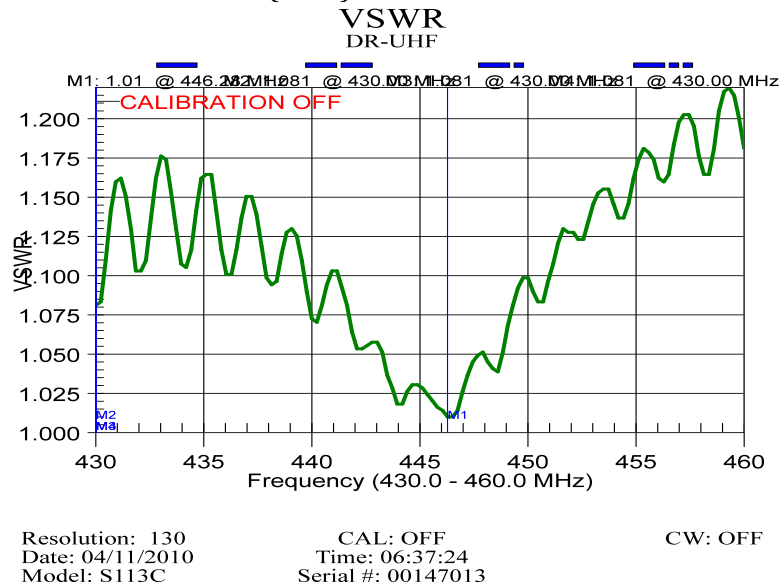
- REACT - FT-8800 (UHF)



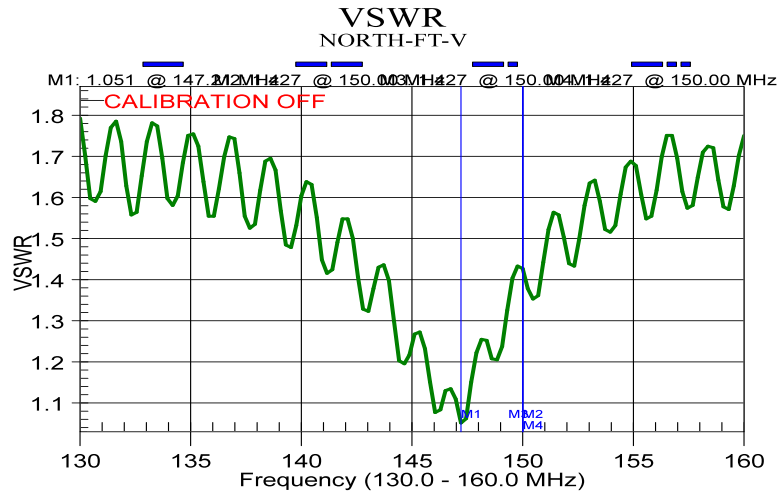
- REACT – Alinco DR (VHF)



- REACT – Alinco DR (HHF)



- Ham - FT-8800 (VHF)

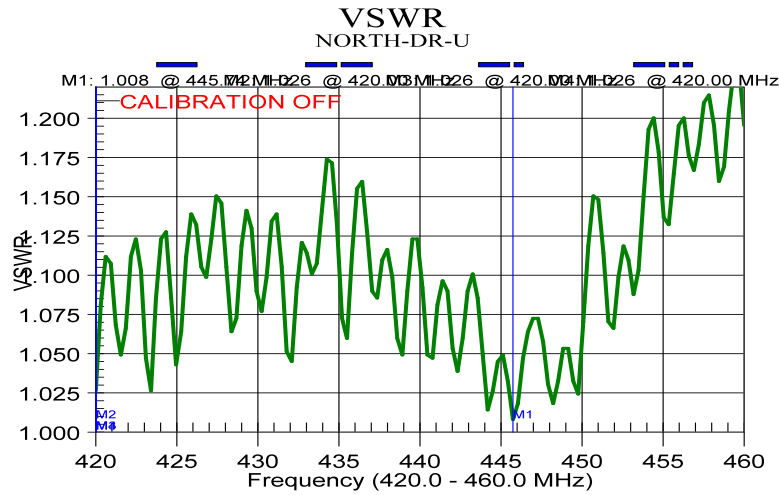


Resolution: 130
Date: 04/11/2010
Model: S113C

CAL: OFF
Time: 06:41:54
Serial #: 00147013

CW: OFF

- Ham - FT-8800 (UHF)

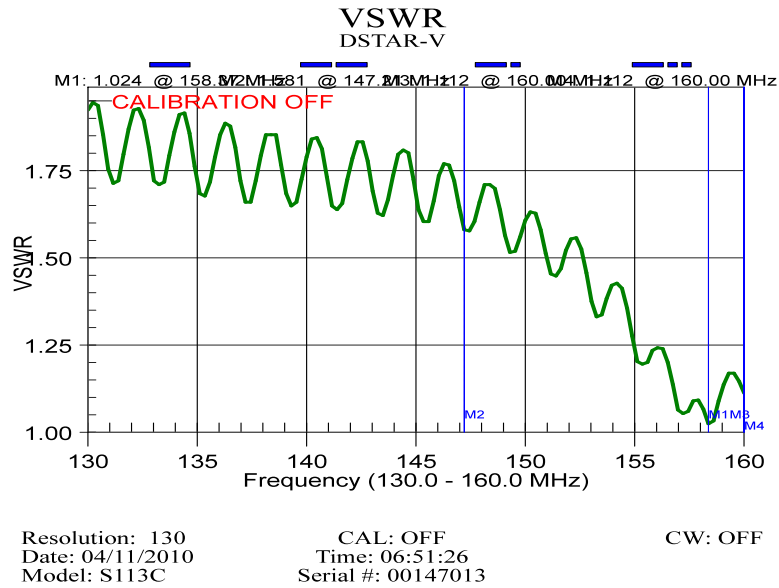


Resolution: 130
Date: 04/11/2010
Model: S113C

CAL: OFF
Time: 06:43:22
Serial #: 00147013

CW: OFF

- Ham – D880 D-STAR (VHF)



- Ham – D880 D-STAR (UHF)

