

8800SX Cable Calibration Procedure

Best Practices

8800SX Cable Calibration Procedure

Items Required for Cable Calibration

Item	Qty	Description
1	(2)	Type N-(M) to BNC (F) adapters (Provided with the 8800SX)
2	(1)	BNC (F) to BNC (F) barrel adapter Cobham (PN: 20335)
3	(1)	10 dB attenuator (BNC)
4	(1)	3 ft. BNC (M) to BNC (M) double shielded RG-223 "Reference Cable" Cobham (PN: 63351)
5	(1)	3 ft. BNC (M) to BNC (M) double shielded RG-223 "Test Cable" Cobham (PN: 63351)

Interconnect

- Connect Type N adapters
- Connect 1 of the adapters to the 8800SX GEN Port
- Connect the other adapter to the 8800SX ANT Port
- Connect the 10 dB Attenuator
- Connect the 10 dB Attenuator to the N adapter on the 8800SX ANT Port



8800SX Initialization

- From the System Menu, select the “Sys Reset” Button



- Select the Yes button when you receive the prompt: “Do you want to restore factory defaults?”



8800SX Initialization

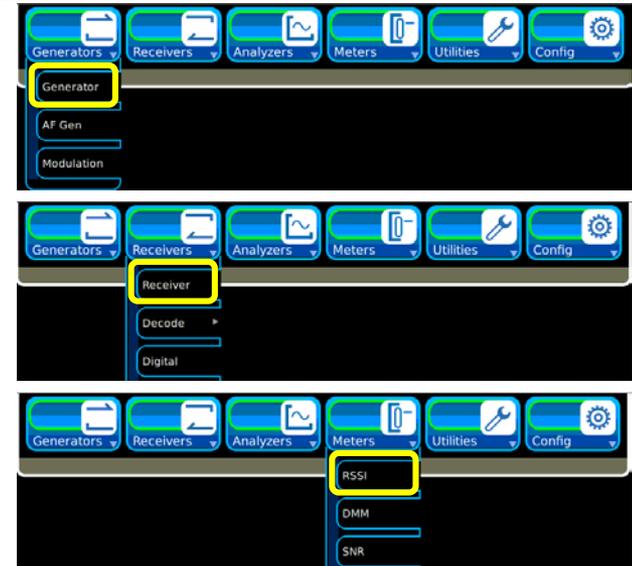
- From the Utilities Menu, select Presets>Clear Display.
 - Note: Touch the grey bar at the top to access the menu bar.

- This will remove any tiles that may have been previously displayed.



8800SX Initialization

- Select the following files to be displayed:
 - Generators – Generator
 - Receivers – Receiver
 - Meters – RSSI



8800SX Initialization

- Maximize the Generator and Receiver Tiles.



8800SX Initialization

- Configure the RF Generator Tile.

- Port: GEN
- Enable: ON
- Level: -12 dBm



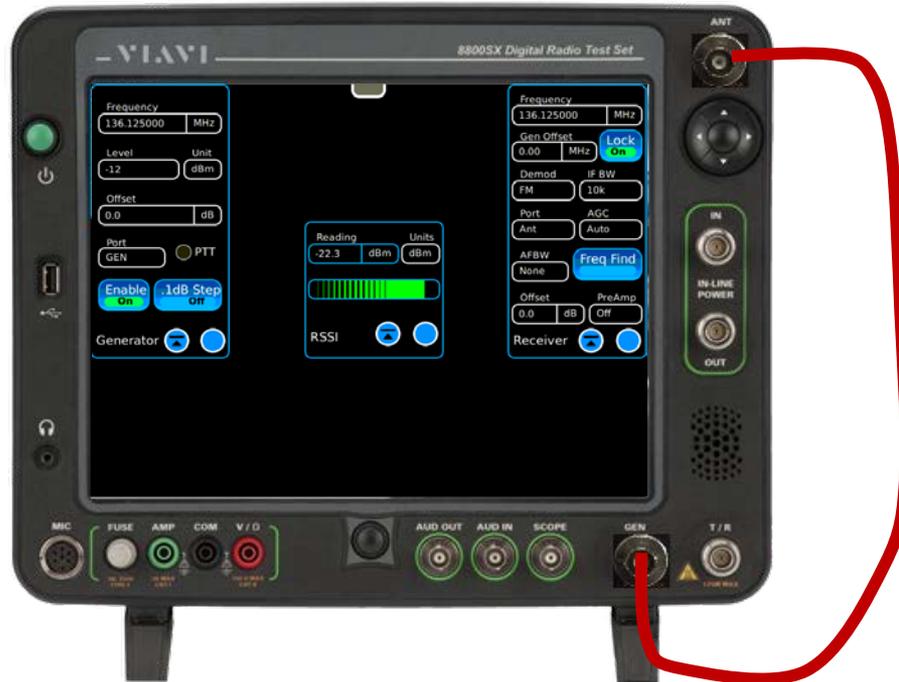
- Configure the RF Receiver Tile.

- Frequency: 136.125 MHz
- Lock: ON
- IF BW: 10 kHz
- Port: ANT
- AGC: Auto



Procedure

1. Connect the Reference cable.
 - Connect the Reference cable from the 8800SX GEN Port to the attenuator on the 8800SX ANT Port.



Reference Cable

Procedure

2. Set the Receiver AGC.

- Note the level displayed on the RSSI Meter. Example: -22.3 dBm

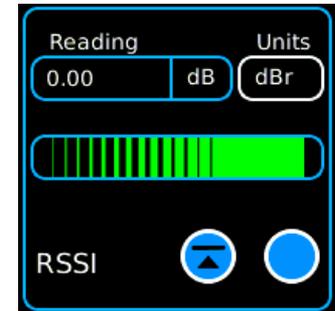
3. Change the Receiver Tile AGC setting from auto to manual -20 dBm.

This value is set to be the next higher value than what is indicated by the RSSI Meter. Setting the AGC to a fixed range prevents automatic ranging from choosing a different setting.



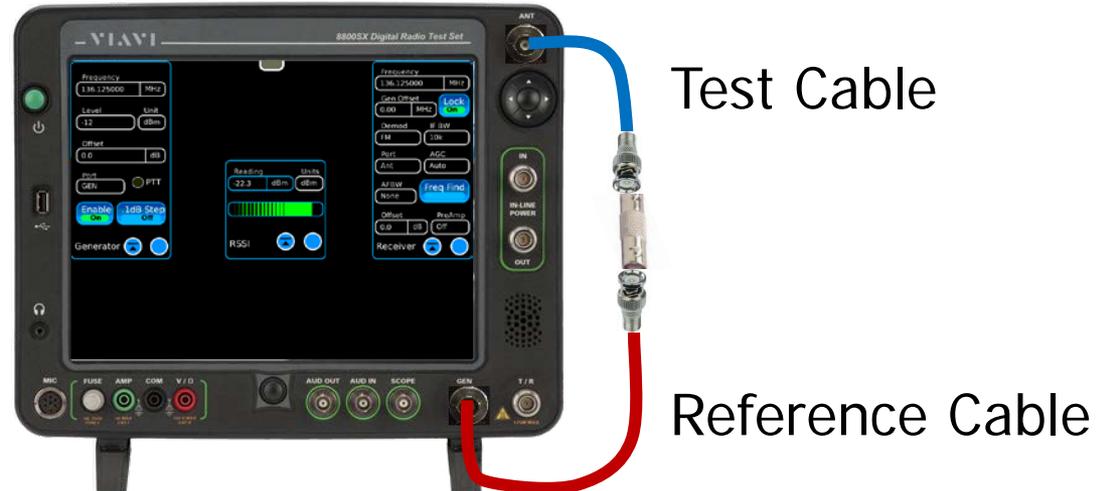
Procedure

4. Establish a zero dB Reference (dBr).
 - Change the RSSI Meter units control from dBm to dBr.
 - Note that the meter now reads 0.00 dBr.



Procedure

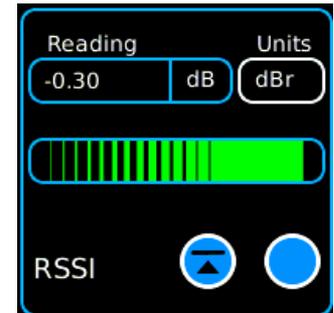
5. Add the test cable in-line with the reference cable.
 - Disconnect the reference cable from the 10 dB Attenuator on the 8800SX ANT Port. (Leave the attenuator on the 8800SX ANT Port.)
 - Using a BNC barrel connector, connect the test cable to the reference cable as shown.
 - Connect the other end of the test cable to the 10 dB Attenuator on the 8800SX ANT Port.



Procedure

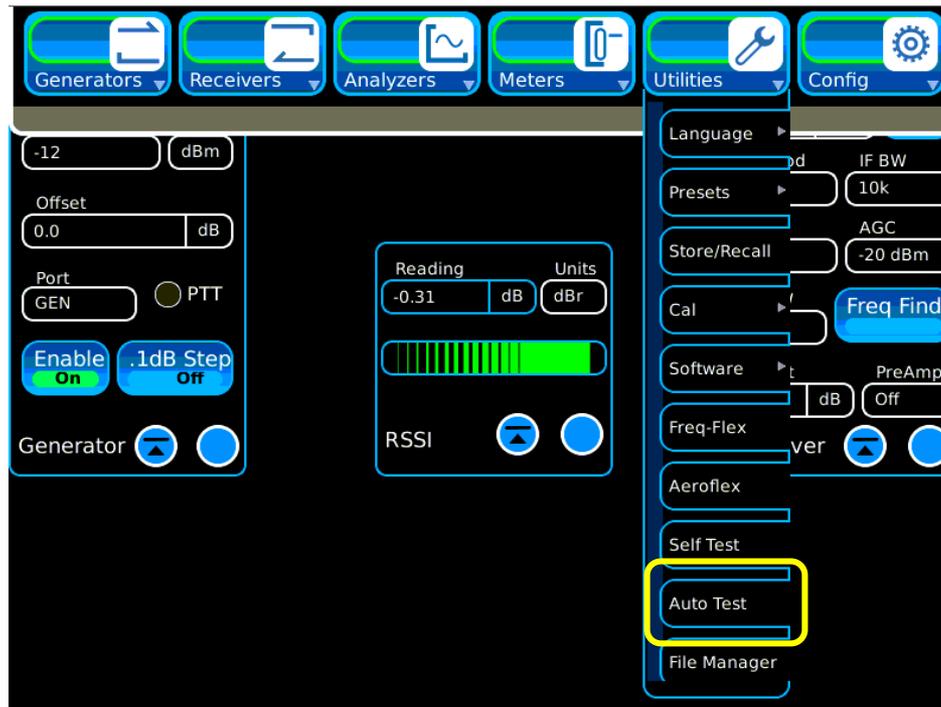
6. Record the measured Cable Loss of the test cable.
 - The RSSI Meter now indicates the amount of insertion loss of the test cable at this frequency.
 - Record the loss factor for this frequency.
 - Set the RSSI Meter units back to dBm.

7. Repeat Section 1 procedure for the following frequencies:
 - 440.125 MHz
 - 810.125 MHz



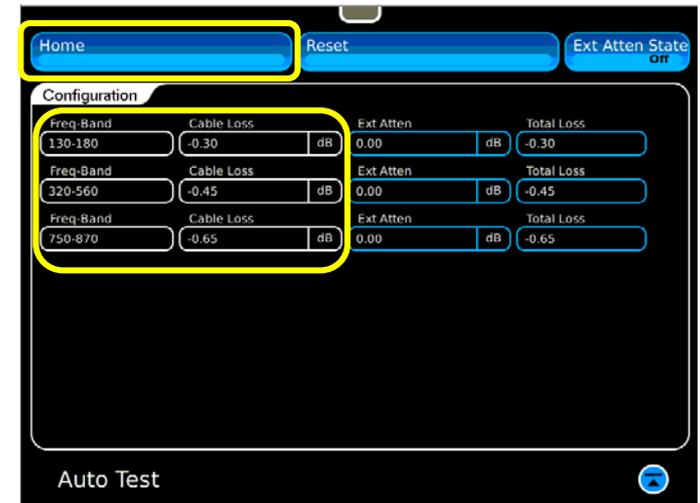
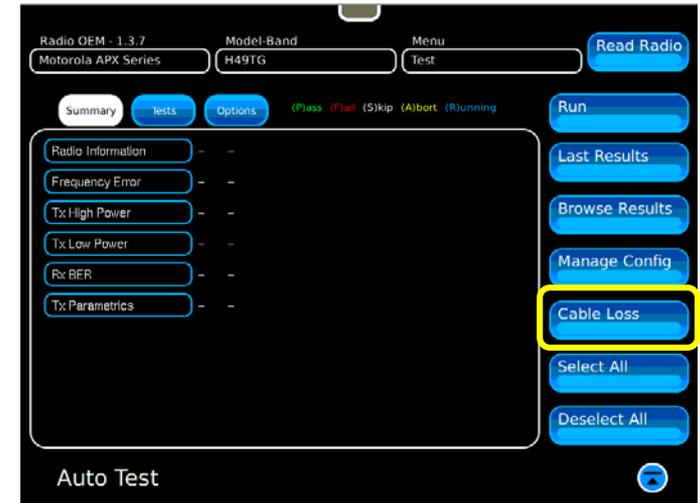
Configure Auto-Test

1. From the Utilities menu, choose Auto-Test.



Configure Auto-Test

1. Select the Cable Loss function button.
2. Enter the recorded loss values into the appropriate frequency band areas on the Cable Loss Screen.
3. Press the Home Button when complete.



Procedure is Complete

The cable calibration is now complete. The Auto-Test application will use the entered values to correct the measured power meter readings by the amount of the cable loss.

8800 Options and Accessories

8800SX Options and Accessories

139942 8800SX Digital Radio Test Set

Standard Accessories

Fuse, 5 A, 32 V, Mini Blade	Power Supply
AC Power Cord - USA	AC Power Cord - China
AC Power Cord - Europe	AC Power Cord - UK
Adapter, N(m) to BNC(f), Qty 3	Front Cover
Internal Battery	

Options

113334	8800OPT01 DMR
113335	8800OPT02 dPMR
113336	8800OPT03 NXDN
113337	8800OPT04 P25
138895	8800OPT05 P25 Phase 2
140215	8800OPT06 DMR Repeater Test
113338	8800OPT09 ARIB T98
113339	8800OPT10 Tracking Generator
113340	8800OPT11 Occupied Bandwidth
113309	8800OPT12 Internal Precision Power Meter (Meter + Sensor)
113342	8800OPT13 External Precision Thru-Line Meter (for use with Bird WPS Sensor)
113343	8800OPT14 PTC
113344	8800OPT15 AAR Channel Plan
139836	8800OPT20 R&S NRT-Z Power Sensor Support
139837	8800OPT21 Selectable Notch Filters
139838	8800OPT22 SNR Meter
138525	8800OPT101 Kenwood NXDN Auto-Test
138526	8800OPT102 Kenwood 5X20 P25 Series Auto-Test
138527	8800OPT103 Motorola APX Auto-Test
138528	8800OPT104 Motorola MOTOTRBO™ Auto-Test
139315	8800OPT105 Motorola ASTRO® 25 XTS®/XTL™ Auto-Test

Languages

113350	8800OPT300 Simplified Chinese
113351	8800OPT301 Traditional Chinese

113352	8800OPT302 Spanish
113353	8800OPT303 Portuguese
113354	8800OPT304 Malay/Indonesian
113355	8800OPT305 Korean
113356	8800OPT306 Arabic
113357	8800OPT307 Polish
113358	8800OPT308 Russian
113359	8800OPT309 Japanese
113360	8800OPT310 German
113361	8800OPT311 French
139625	8800OPT312 Italian

Accessories

138313	Calibration Certificate - 8800 Series
82560	AC27003 Attenuator - 20 dB/150 W
67076	Spare Internal Battery
114479	External Battery Charger
114477	Hard Transit Case
114478	Soft Carrying Case
114475	Antenna Kit
114348	Precision DTF/VSWR Accessory Kit for 8800
63927	AC25081 Site Survey Software
92793	5017D Bird Power Sensor
114312	Mounting Bracket
112861	Microphone
62404	DC Cord/Cigarette Adapter
63936	AC24009 DMM Test Leads
112277	10 AMP Current Shunt, 0.01 Ohm
67411	Scope Probe Kit

Extended Warranties

114481	Extended Standard Warranty 36 Months
114482	Extended Standard Warranty 60 Months
114483	Extended Standard Warranty 36 Months with Scheduled Calibration
114484	Extended Standard Warranty 60 Months with Scheduled Calibration

Select 8800SX Accessories Overview

Soft Case 114478

The soft case allows full operation of the 8800SX while inside the case. The laptop style design is lightweight and provides extra protection during field operation. Storage pockets provide extra space for spare batteries, test cables, etc.



Hard Transit Case 114477

The hard transit case features form-fitted slots for the 8800SX, protective cover, precision VSWR/DTF Kit, power supply, 150 W attenuators, spare battery, and more.



Precision DTF/VSWR Accessory Kit 114348

This accessory kit provides all items necessary for accurate and VSWR, Return Loss, and Distance-to-Fault measurement. The kit includes a case, return loss bridge, power divider, 50 Ω calibrator, and two N-type test cables specifically designed for the 8800SX.



Bird 5017D Thru-Line Power Sensor 92793

The 8800SX also supports the Bird 5017D Thru-Line Power Sensor as an external power meter for users that already have the 5017D. This capability requires 88XXOPT13 and provides simultaneous forward and reverse power measurements up to 500 W and VSWR measurements that are displayed on the 8800SX screen.



Questions or Comments?

Contact Information

For information about pricing for our products, contact the sales office by calling VIAVI Solutions at (800) 835-2352 or emailing AvComm.Sales@viavisolutions.com.

For technical/product support, calibration, maintenance and general customer service inquiries, you can contact our help desk by [clicking here](#), calling (800) 835-2350, or emailing AvComm.Service@viavisolutions.com.

[Click here](#) for more information on the 8800SX and latest software versions and training materials.