

# ***Radio Solutions, Inc.***

---

70 Accord Park Drive, Norwell, MA 02061 Tel: 781-331-1008 Fax: 781-561-7770

## **CONFIDENTIAL**

### FEDERAL COMMUNICATIONS COMMISSIONS

Authorization and Evaluation Division

7435 Oakland Mills Road

Columbia, MD 21046

August 16, 2017

Subject: Tune-up Procedure for **FCC ID: 2AHVPSB7800M2A**

The EUT is factory-set to specified frequencies, bandwidth, maximum gain and maximum output power. There are no field tunable components within the EUT.

To ensure FCC compliance, any changes to the above parameters must be done by the manufacturer.

If required, end user can reduce the device gain and maximum power by using the built-in control panel.

### MANUFACTURING PROCESS TUNING PROCEDURE:

#### Maximum Power Level Adjustment Procedure:

1. Make sure that the signal booster is fully assembled, verify all connections.
2. Power up the unit, verify the power supply and control voltages, check for any alarm conditions
3. Connect a calibrated spectrum analyzer thru a 30dB in-line attenuator (verify and calibrate the attenuator and interconnect cables with a VNA) to the D.A.S. antenna port. Set the spectrum analyzer to Fc frequency, Positive Peak Detector, RBW = 100KHz
4. Using a RF generator, send an unmodulated CW with -20dBm output level

5. Connect the generator to the spectrum analyzer thru the 30dB attenuator and measure the generator signal level to confirm the calibration of both the signal generator and the spectrum analyzer.
6. Connect the generator into the Donor Antenna Port and measure the signal level on the spectrum analyzer.
7. Using the serial terminal software and a programming interface cable connected to a PC USB port and the RF module data interface, adjust the power limiter inside the downlink ALC Amplifier module for output power of **30dBm with +0.5dB /- 1.5dBtolerance** (final measure with SA peak hold trace mode on)
8. Repeater the process in the opposite direction (D.A.S to donor antenna / Uplink)
9. Reduce the generator level to 0.5dB below the ALC threshold
10. Measure the signal level and verify that it is no more than 30 dBm peak
11. Let the BDA run for at least 60 minutes under a full load on both uplink and downlink
12. Repeat the steps 6-10 and verify that the maximum power level is still within the above specified limits

