LABORATORY TESTING PROCEDURES
LXT500/535

UNIT TEST - (UNIT ASSEMBLED)

TEST PREPARATION

1) Install 4 “AAA” alkaline batteries (observe polarity markings).
   - Left bottom terminal is the system plus polarity
   - Right upper terminal is the system minus polarity.

2) Press the power button.

SYSTEM TEST

1) Radiated Transmit and Receive performance may be observed.

2) Audio out & Audio in are available at the Headset jack.

LABORATORY TEST - (UNIT UN-ASSEMBLED)

TEST PREPARATION

1) Disassemble unit (4 screws - 2 behind batteries). Remove the PCB from the cabinet.

2) Remove the antenna and install a 50 ohm coax cable in its place.

3) Either clip alligator leads or solder test leads to the power supply connections. The positive terminal is the lower left PCB mounting hole. The negative terminal is the lower right PCB mounting hole top of the 20.95MHz X-tal. (battery side view)

4) Connect 6VDC power source to the terminals, observing correct polarity.

5) Connect an 12-ohm load through the Headset jack (3.5mm mono-phone plug).

6) Connect a audio generator with 10uF coupling capacitor through the Headset jack (2.5mm mono-phone plug).

7) Select desired channel 1- 22 using CH up/down keypad switch. The rubber keypad may be removed from the front cabinet and used directly on the PCB.

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SPECIFIC TEST METHODS AND GUIDANCE

Modulation Characteristics - ***(paragraph 2.1047(a) of the Rules)*** FOR

TX AUDIO FILTER RESPONSE

1. Connect audio generator with 10uF coupling capacitor to microphone input jack. Press PTT button.
2. Connect RF output with modulation meter. (Filters of modulation meter should be set to a 50Hz to 15KHz.)
3. Adjust audio generator about 5-6mVrms for 0.75KHz modulation.
4. While transmitting, sweep generator and note measurement.
5. Please compensate the back-ground noise level.

Modulation Characteristics - ***(paragraph 2.1047(b) of the Rules*** FOR

TX AUDIO LOW PASS FILTER RESPONSE.

1. Connect audio generator with 10uF coupling capacitor to microphone input jack. Press PTT button.
2. Connect AC voltmeter or other test equipment via jumper wire to TP-9.
3. Adjust audio generator for 200mV.
4. While transmitting, sweep generator and note measurement.

Occupied Bandwidth - ***(paragraph 2.1049(c) of the Rules)***

1. Connect an audio frequency sweep generator with 10uF coupling capacitor to microphone input jack.
2. Adjust audio generator to a frequency of 2500Hz and a level of 100mV rms (+16dB above 10-12mV per FCC).
3. With a spectrum analyzer, transmit the radio and monitor the transmitter though an antenna.
4. Note required measurements per FCC.

Output power

1. Set the power supply voltage(DC 6 V) and select the operation channel.

2. Press & hold the PTT button.

3. Transmitter power(High/GMRS) should normally be between 0.8 W to 1.0 W(Conducted)

4. Transmitter power(Low/GMRS) should normally be between 0.3 W to 0.5 W(Conducted)

5. Transmitter power(FRS) should normally be between 0.3 W to 0.5 W(Conducted)