### 1. Describe the operation of the device.

The EUT was supplied with DC 12V from adapter and battery And the FM Transmitter can be used to transmit audio as a radio signal that can be picked up on you card radio

## 2. Provide information on the device and its antenna.

This device is a FM transmitter operation at 88.1MHz to 107.9MHz. The EUT uses a permanently connected antenna.

-Antenna: N/A

-Antenna Type: Printed

-Connector Type: N/A

# 3. How is it installed?

Insert SD card into the connector on the top of the EUT. Play MP3 continuously by adapter, then place the whole set onto of the testing site for test.

# 4. Describe the test procedure used. (OAT's, In situ, etc.)

The device was only tested on a OAT's as the antenna is integral to the device (internal).

Radiated emissions were invested cover the frequency range from 30MHz to 1000MHz using a receiver RBW of 120KHz record QP reading, and the frequency over 1GHz using a spectrum analyzer RBW of 1MHz and 10Hz VBW record Average reading. (15.209 paragraph), the Peak reading (1MHz RBW/VBW) recorded also on the report.

The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance.

### bandwidth requirement

- a. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
- b. The resolution bandwidth of 10 kHz and the video bandwidth of 10 KHz were used.
- c. Measured the spectrum width with power higher than 20dB below carrier.
- 5. If tested in a care, describe how was it configured and tested.  $\ensuremath{\text{N/A}}$
- 6. At the present time, FM transmitters (subject to 15.239) tested in vehicles must also be tested on a table. Provide both sets of data. All data must be compliant.

The EUT was only performed on the test table. All the test data was complied with FCC 15. 239 requirement.

Please refer to Page 34 and Page 35 of the User's Manual.

7. Was the tuning range properly verified? The test lab should indicate in the report that the tuning controls were manually adjusted to verify maximum tuning range.

Yes. During the bandwidth test, the EUT was tested with the maximum audio input (800mVp-p).

8. Use a typical audio file from a typical device. E.g. do not use a 1KHz signal from a signal generator.

Audio input was generated from an SD card to the device and tested under normal operating conditions.

9. Provide the test report showing compliance with the rules.