QC test procedure for Monster Model # 168008-00 FM Transmitter
Rev-1, July 7, 2004

Equipment needed:
1) Voltmeter
2) CRO (Cathode Ray Oscilloscope)
3) Audio signal generator
4) 12vdc power supply
5) FM Tester Receiver

Test setup:
1) Connect CRO ch-1 input to left audio output of FM test receiver.
2) Connect CRO ch-2 input to right audio output of FM test receiver.

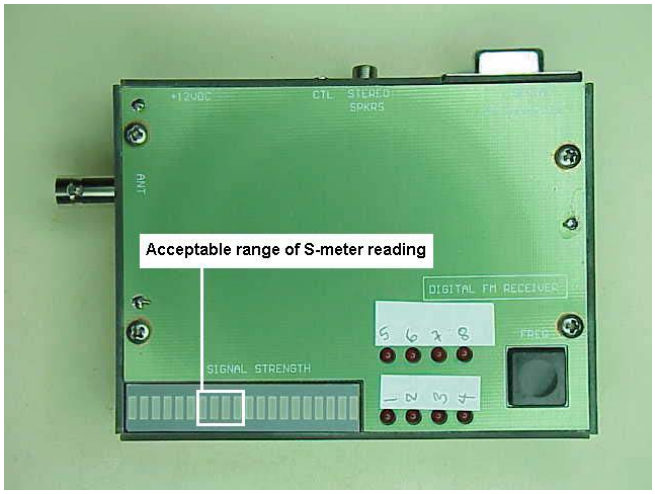
Test procedure:
Step 1: Connect 12v power source to UUT. When 12v power source is applied to UUT, check that the Power LED of the UUT goes ON.

Step 2: Measure 12v current draw of UUT. Expected reading is about 30ma @ 12vdc.

Step 3: Preset uut Channel selector switch to 88.1mhz. Preset FM Test receiver to 88.1 Mhz. Observe S-meter reading of FM Test receiver. Confirm that uut is transmitting at 88.1mhz.

Step 4: Connect DC Voltmeter to uut test point J5 via 10uh RF choke. Please ensure that the 10uh RF choke is located as close as possible to the uut J5. Observe voltage displayed by DC Voltmeter. Acceptable DC voltage reading is 1.0v to 3.0v. FAIL if voltage is outside this range. DC voltage should be steady. Fail if DC voltage is fluctuating or unstable.

Step 5: Observe S-meter reading on FM test receiver. Expected S-meter reading is between 6 and 11 as shown in picture of FM Test receiver below.



Step 6: Connect 1khz triangular waveform audio to Left audio channel input of UUT. Observe waveform displayed by CRO for Left channel output of FM Test receiver:

Check that there is no audio on Right channel.
Check that triangular waveform is not clipped or distorted.
Check that peak-peak audio level is within 1v pk-pk +/- 10%. Fail if audio level is outside of this range.

Step 7: Disconnect 1khz triangular waveform audio connection from left audio channel input of UUT. Connect 1khz triangular waveform audio to Right audio channel input of UUT. Observe waveform displayed by CRO for Right channel output of FM Test receiver. Check that there is no audio on Left channel. Check that level is the same as level observed from Left channel in the last step. Check that triangular waveform is not clipped or distorted.

Step 8: Set uut to 88.3mhz. Set FM Test receiver to 88.3mhz and confirm that uut is transmitting at 88.3Mhz. Check for erratic operation of uut channel selector switch.

Step 9: Set uut to 88.5mhz. Set FM Test receiver to 88.5mhz and confirm that uut is transmitting at 88.5Mhz. Check for erratic operation of uut channel selector switch.

Step 10: Set uut to 107.5mhz. Set FM Test receiver to 107.5mhz and confirm that uut is transmitting at 107.5Mhz. Check for erratic operation of uut channel selector switch.

Step 11: Set uut to 107.7mhz. Set FM Test receiver to 107.7mhz and confirm that uut is transmitting at 107.7Mhz. Check for erratic operation of uut channel selector switch.

Step 12: Set uut to 107.9mhz. Set FM Test receiver to 107.9mhz and confirm that uut is transmitting at 107.9Mhz. Check for erratic operation of uut channel selector switch.

Step 13: Measure input resistance of UUT audio input connector: Left channel = 33 ohms Right channel = 33 ohms, Ground to 12vDC input Ground = 0 ohms.

Final QC Check:
Connect DC input of uut to a 12v supply. Connect uut audio input to MP3 player with music playback. Listen to music on FM Test receiver. Check for distortion and loudness. Check proper operation of channel selector switch by testing on all channels. Confirm with FM receiver that uut is transmitting on correct frequencies.