



## GENERAL RESEARCH OF ELECTRONICS, INC.

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February 06, 2012

Federal Communications Commission

Authorization and Evaluation Division

Laboratory Division

7435 Oakland Mills Road

Colombia, MD 21046

SUBJECT: REPORT FOR FCC RULE PART 15.121

Ref.: FCC ID: ADV0908900

This is to clarify that the above equipment is incapable of operating (tuning) or readily being altered by the user to operate, within the frequency bands to the Cellular Radiotelephone Service.

The frequencies in question are deleted from the ROM during manufacture, and cannot be restored through any readily available process or component such as: installation of cuts, jumper wires, resistors, diodes, or plug-in IC's; deletion of such items; or reprogramming via access codes or external devices such as a personal computer.

The receiver is incapable of converting digital cellular transmissions to analog voice audio.

### **Assessing the vulnerability of the receiver to possible modification**

The receiver has the possibility of reducing the threshold value to discern transmissions from the Cellular Radiotelephone Service by making modification such as adding jumper wire to the UHF RF tuning circuit and UHF mixer circuit.

### **Design features that prevent modification of the receiver to receive Cellular Service**

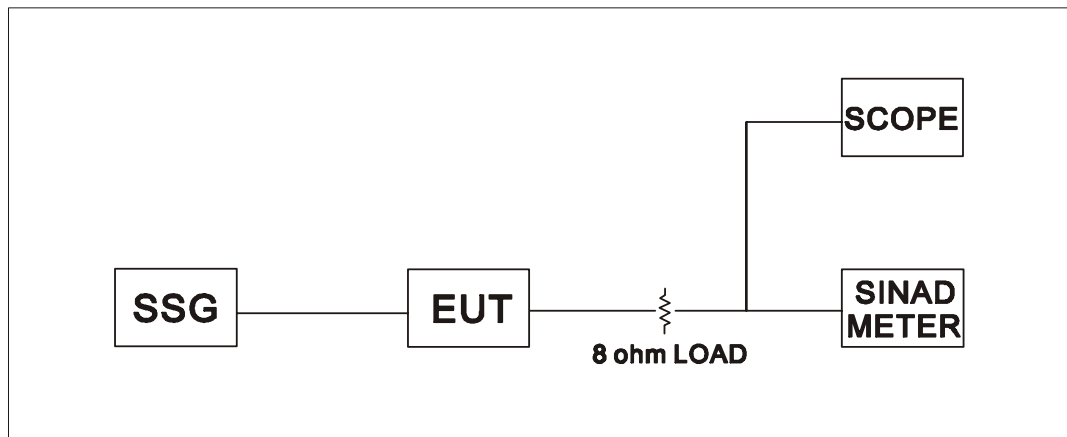
The scanning receiver is designed to prevent any attempt for the user to modify the receiver to receive transmissions from the Cellular Radiotelephone Service by using epoxy to cover the required parts of the UHF RF tuning circuit.

## **PRODUCT DEVELOPMENT & MANUFACTURING**

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### Testing method used to determine compliance with the 38 dB rejection ratio

Test set-up:



Equipment Setup Block Diagram

Test conditions:

AF Signal : 1 kHz

FM Deviation : 3kHz

Test frequencies: 824.00MHz, 832.03MHz, 840.06MHz, 848.09MHz  
869.00MHz, 877.03MHz, 885.06MHz, 893.09MHz

Measurement method

- (1) To perform initial screening, adjust EUT's for the slide switch low position of Squelched to suppress audio output.
- (2) Set SSG's frequency to a cellular band test frequency and apply 60dBuV RF level to EUT. (The 60dBuV signal level corresponds to approximately 66dB above the Squelch Threshold sensitivity of -6 dBuV.) This is approximately 66-38=28dB above the FCC limit.)
- (3) Turn EUT on and search cellular frequencies on all of the receiving ranges.
- (4) List all detected frequencies if EUT detects any.
- (5) Repeat the above procedure for each of the other cellular test frequencies.
- (6) To determine actual image rejection ratio for a detected frequency, perform the following steps.
- (7) Set both of EUT and SSG's frequency to the frequency gained by the above screening.

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- (8) Adjust SSG's RF output on EUT for 12dB SINAD and record the gained level. Note the gained SSG's level is EUT's receiving sensitivity.
- (9) Adjust SSG's frequency to the cellular frequency corresponding to the detected frequency gained in (5). Then adjust SSG's RF output on EUT for 12dB SINAD and record the gained level.
- (10) Cellular image rejection ratio is the ratio between the level gained in (8) and the level gained in (9).

Test Results: Spec. at least 38dB

Cellular frequency (MHz)	Image/Spurious frequency (MHz)	Cellular Image Rejection ratio (dB)
824.000	820.90000	62
	823.10000	55
	947.75000	65
	949.75000	59
832.030	808.56250	50
	923.78750	73
	951.56875	61
840.060	813.92500	53
	851.21250	62
	861.46250	52
	957.83750	62
848.090	819.27500	59
	859.23750	62
	900.07500	60
869.000	35.80000	58
	107.40000	58
	809.95000	55
	820.65000	53
	868.10000	55
	910.50000	55
	1260.50000	57
877.030	115.45830	51
885.060	41.16000	54
	123.54160	60
	896.21250	59
	906.46250	53
893.090	131.50000	51
	814.22500	60
	849.27500	61
	904.23750	60
	914.48750	52

The above test results confirm that all the signal rejection ratios for the Cellular Radiotelephone Service Band are higher than 38 dB.

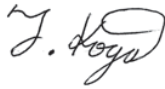
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**Label Requirement**

The scanning receiver has a label affixed to the product shown on the attached drawing of the model label, which reads as follows:

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR  
RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND  
FEDERAL LAW.

Based on the above, we hereby attest that the equipment in question compiles fully with the provisions of 15.121 of FCC Rules.

A handwritten signature in black ink, appearing to read "T. Koga", with a stylized flourish at the end.

Takayuki Koga  
Manager of the Engineering & Development Division