

PAGE NO. 6 of 7. AMENDED April 13, 2000

NAME OF TEST: Scanning Receivers Cellular Band Rejection

SPECIFICATION: FCC: 47 CFR 15.121(b)

TEST EQUIPMENT: As per attached page

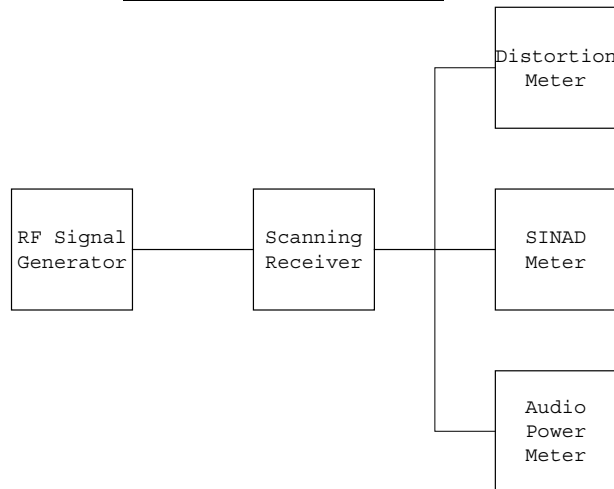
GUIDE: 47 CFR 15.121(b): Except as provided in paragraph (c) of this section, scanning receivers shall reject any signals from Cellular Radiotelephone Service frequency bands that are 38 dB or higher based upon a 12 dB SINAD measurement, which is considered the threshold where a signal can be clearly discerned from any interference that may be present.

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

MEASUREMENT PROCEDURE

1. Equipment was connected as illustrated in the block diagram.
2. A standard signal was applied to the receiver input terminals.
3. Receiver output audio output was adjusted for rated output and with distortion no greater than 10%.
4. The RF Signal generator was adjusted to produce 12dB SINAD without the audio output power dropping by more than 3dB.
5. This was repeated at three frequencies across all bands to establish a reference sensitivity level. The reference sensitivity taken was the lowest, or worst-case sensitivity for all of the bands.
6. The output of the signal generator was then adjusted to a level of +60dB above the reference level sensitivity established in step 5 and set to the first of three frequencies in the cellular subscriber transmit band.
7. Receiver squelch threshold, the signal level required to open the squelch, should be set to open no greater than +20dB above the reference sensitivity.
8. The receiver was then put in the scanning mode and allowed to scan across it's complete receive range.
9. If the receiver unsquelched or stopped on any frequency, the displayed frequency was recorded. The signal generator was then adjusted in output level until a 12dB SINAD from the receiver was produced. The signal generator level associated with this response was also noted.
10. This procedure was repeated for three frequencies in the cellular base station transmit band.
11. The difference in between the signal generator output for any response recorded and the reference sensitivity is the rejection ratio.

SCANNING RECEIVER:



Reference Level Sensitivity measured in step 5 =

SUSPECT FREQUENCIES:

| | | | | |
|---------|---------|---------|----------|----------|
| 110.060 | 193.335 | 586.250 | 894.165 | 1010.640 |
| 113.700 | 205.245 | 586.400 | 938.600 | 1010.645 |
| 120.070 | 207.750 | 586.425 | 938.655 | 1010.675 |
| 160.010 | 249.600 | 657.250 | 966.355 | 1021.730 |
| 170.550 | 303.200 | 682.200 | 988.200 | 1027.735 |
| 181.200 | 305.100 | 693.250 | 988.225 | 1027.500 |
| 181.320 | 316.300 | 753.250 | 988.230 | 1027.525 |
| 192.000 | 341.100 | 760.800 | 993.860 | 1027.555 |
| 193.245 | 481.000 | 849.700 | 998.055 | 1046.675 |
| 193.260 | 513.250 | 851.760 | 1001.300 | 1077.100 |
| 193.275 | 569.900 | 860.485 | 1002.100 | 1103.300 |
| 193.290 | 585.250 | 868.885 | 1010.480 | 1103.325 |
| 193.305 | | | | |

TEST RESULTS:

| DISPLAYED FREQUENCY | IMAGE FREQUENCY | P _{REF} (dBm) | P _{SPUR} (dBm) | REJECTION (dB) |
|------------------------|--------------------|---------------------------|----------------------------|-------------------|
| 993.860 | 824.04 | -120 | -77 | 43 |
| 1002.100 | 836.40 | -120 | -76 | 43 |
| 1010.480 | 848.97 | -120 | -77 | 43 |
| 1023.860 | 869.04 | -120 | -77 | 43 |
| 1032.100 | 881.40 | -120 | -78 | 42 |
| 1040.480 | 893.97 | -120 | -77 | 43 |

ALL OTHER RESPONSES MORE THAN 16 dB ABOVE LIMIT

SUPERVISED BY:

William H. Graff, Director
of Engineering