

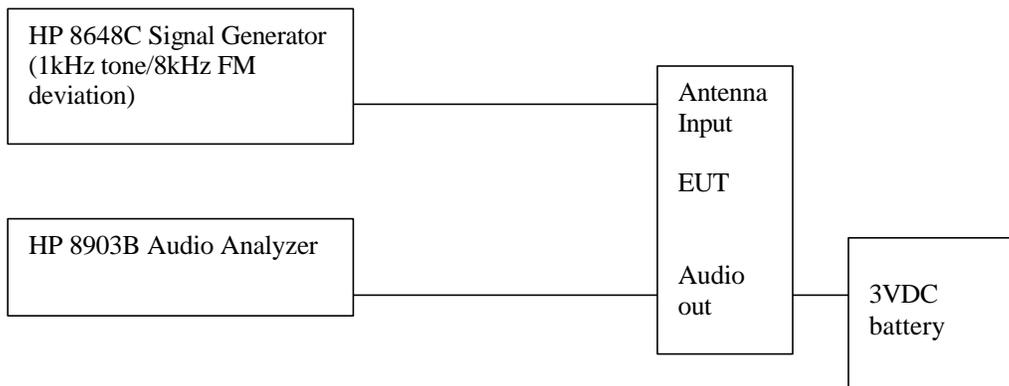


3.1 38dB Rejection Test

A signal generator was connected to the receiver under test, and the output of the receiver was connected to an audio analyzer.

A FM signal was applied to the receiver antenna input with a 1kHz tone modulated at 8 kHz deviation, and adjusted with the audio analyzer to produce a 12 dB SINAD. This was done across the receiver bands to determine a reference level. The reference level used was that with the highest sensitivity in all of the bands.

The output of the signal generator was then adjusted to a level 40 dB above the reference level established and set to a low, medium and high frequency in both the mobile and base cellular bands. (Mobile = 824.04 MHz through 848.97 MHz, Base = 881.50 MHz through 893.97 MHz). The squelch of the receiver was then set to a minimum threshold level and scanning began from the lowest to the highest channel. Whenever the receiver stopped and “un-squelched” that frequency was noted as a response. After all the frequencies of responses were noted, the signal generator was set to measure the sensitivity at each of these response frequencies. This measurement was the reference sensitivity for the particular received frequency measured. The audio analyzer measurement was used to measure the 12 dB SINAD and that is the spurious value. The difference between the reference sensitivity and the spurious value is the rejection ratio and must be at least 38 dB.



Frequencies used on the Signal Generator were 824.04, 836.50, 848.97 MHz for the Mobile and 869.04, 881.50, 893.97 MHz for the Base.

The VR-120 unit reference level used was -61.0 dBm from the signal generator, this was determined from the highest sensitivity from 780 MHz at -101.0 dBm measurement of 12dB SINAD. The VR-120 unit was scanned from 30.0 – 960.0 MHz for all channels (manufacturers spec.). Signals that were noted as responses were checked with the signal generator off and if they still existed as a response were determined as ambient signals and removed from the response list. . There was no signal available for the 38 dB rejection test requirements.



38dB Rejection

Cellular Band (869.04- 893.97)

Date: 12/05/00

Temp: 74°F

Humidity: 33%

Model: VR-120

Table 1

Frequency Injected 869.04MHz				
Frequency Detected (MHz)	Level 12dB SINAD at 869.04MHz	Level 12dB at frequency detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

Table 2

Frequency Injected 881.50MHz				
Frequency Detected (MHz)	Level 12dB SINAD at 881.50MHz	Level 12dB at frequency detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

Table 3

Frequency Injected 893.97MHz				
Frequency Detected (MHz)	Level 12dB SINAD at 893.97MHz	Level 12dB at frequency detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A



38dB Rejection

Mobile Band (824.04- 848.97)

Date: 12/05/00

Temp: 74°F

Humidity: 33%

Model: VR-120

Table 1

Frequency Injected 824.04MHz				
Frequency Detected (MHz)	Level 12dB SINAD at 824.04MHz	Level 12dB at frequency detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

Table 2

Frequency Injected 836.50MHz				
Frequency Detected (MHz)	Level 12dB SINAD at 836.50MHz	Level 12dB at frequency detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

Table 3

Frequency Injected 848.97MHz				
Frequency Detected (MHz)	Level 12dB SINAD at 848.97MHz	Level 12dB at frequency detected	Rejection	Margin
352.075	-70dBm	-117.5dBm	47.5dB	-9.5dB