# Sherwood Engineering HF Test Results

Model: Lowe HF-235 Serial # 05004 Test Date 5/13/91

| | | | | |
|---|---|---|---|---|
| IF BW, Wide AM -6/-60, kHz: | 10.9/22.5 | Ultimate | 70 | dB |
| IF BW, Med AM -6/-60, kHz: | 7.8/12.7 | Ultimate | 80 | dB |
| IF BW, Nar AM -6/-60, kHz: | 5.8/9.9 | Ultimate | 85 | dB |
| IF BW, SSB -6/-60, Hz: | 2.3/3.7 | Ultimate | 90 | dB |

Front End Selectivity (A - F) D Octave

| | | | | |
|---|---|---|---|---|
| Image Rejection, 10 MHz (@ 455 kHz IF) | | 85 | dB | |
| First IF Rejection (@ 45 MHz IF) | | 82 | dB | |
| Dynamic Range @ 15 MHz, DR 20 kHz: | -20 | IP3 | 71 | dBm |
| **Dynamic Range @ 15 MHz, DR 5 kHz:** | **-28** | **IP3** | **66** | **dBm** |
| Dynamic Range @ 15 MHz. DR 100 kHz: | -1 | IP3 | 85 | dBm |
| Blocking at 100 kHz | | | 129 | dB |
| Phase Noise (normalized) @ 10 kHz offset: | | | 117 | dBc |
| Loops in synthesizer: | 2 | | | |
| Noise floor, SSB bandwidth @ 10 MHz | | | -126 | dBm |
| Sensitivity, SSB bandwidth @ 10 MHz | | | 0.35 | uV |
| Noise floor at 2 MHz | | -124 | dBm | |
| Sensitivity at 2 MHz | | 0.4 | uV | |
| Noise floor at 1 MHz | | -126 | dBm | |
| Sensitivity at 1 MHz | | 0.35 | uV | |
| Noise floor at 200 kHz | | -127 | dBm• | |
| Sensitivity at 200 kHz | | 0.28 | uV | |
| AGC Threshold at 3 dB: | | 0.8 | uV | |

Stability at 10 MHz after 10 second warm-up 20 Hz

Distortion AM, 60% modulation, narrow 4 kHz and wide 10 kHz bandwidths:

| | | | | |
|---|---|---|---|---|
| 100 Hz | 1.1 | % | 1.1 | %• |
| 200 Hz | 0.5 | % | 0.5 | % |
| 400 Hz | 0.4 | % | 0.4 | % |
| 1000 Hz | 0.4 | % | 0.3 | % |
| 2500 Hz | 0.3 | % | 0.15 | % |

Distortion SSB

| | | |
|---|---|---|
| 100 Hz | 3.0 | % |
| 200 Hz | 1.4 | % |
| 400 Hz | 3.5 | % |
| 1000 Hz | 0.1 | % |

| | | |
|---|---|---|
| 2000 Hz | 0.05 | % |
| Other | | % |
| Distortion, Synchronous AM, if available | | |
| 100 Hz | 3 | % |
| 200 Hz | 1 | % |
| 400 Hz | 0.5 | %• |
| 1000 Hz | 0.17 | % |
| 2500 Hz | 0.14 | % |
| 5000 Hz | | % |
| 4000 Hz | 0.2 | % |

| | |
|---|---|
| Is distortion similar at record jack as headphone output? | Yes |
| If uP software battery dependent? | No |
| Gain pots other than AF: RF or IF? | IF |

| | | |
|---|---|---|
| Attenuators . | 20 | dB |
| Preamp: | No | dB |

| | | |
|---|---|---|
| Audio notches• | | |
| Fixed frequency: | None | kHz |
| Variable, range: | None | kHz |

Comments:

Don't like vari speed tuning. Frequency makes unexpected jumps.

Moderate microphonics when tapping case.

Low frequency noise in 50 to 200 Hz range down about 45 dB in sync mode.

Ultimate in narrow two bandwidths limited by synthesizer spurs.

SSB distortion varies dramatically with frequency. •

May be microphonic interaction. Low frequency noise in 50 to 200 Hz •
range that is down about 35 dB