MICOM-2BF is an advanced Ruggedized Digital Signal Processing transceiver, intended for very wide area radio communications. It provides excellent audio quality and high accuracy calibration of functions such as modulation, demodulation, squelch and noise blanking. Its software-driven approach optimizes current system application and accommodates infrastructure for future system enhancements.

MICOM-2BF with its compact size provides maximum ease of installation. The radio configured via a Radio Service Software (RSS) program for factory or field programming with a PC computer.

Features

- Enhanced features for better communications
- Ruggedized Mobile/fixed Transceiver
- Superb Human Engineering
- Advanced digital technology
- Conforms to MIL-STD 810 and EIA Specifications
- High MTBF
- Complies with ISO 9001 Requirements
- Voice activated digital squelch
- Programmable channel scan
- Digital noise blanking and clarifier
- Guard and Priority Channels
- Continuous duty operation (optional)
- BITE (Built-in Test)
- Meets FCC and EMC standards
- Enhanced Voice Quality
- Excellent frequency stability
- Small Size, Light Weight
- Selective calling system per FS-1045 and MIL-STD 188/141A or selective calling system based on CCIR recommendations 493-1
HF-SSB Mobile/Fixed Digital Signal Processing Radio
125 watt PEP/Average 1.6-30 MHz

**GENERAL**

**Model Number:** M70AMKXEV5-N

**Frequency Range:** 1.6-30 MHz Tx, 100 kHz-30 MHz Rx

**Number of Channels:** 100 Simplex or Half Duplex

**Sweeping:** 5 groups width up to 100 channels per group

**Frequency Stability:** 0.6 PPM

**Frequency Drift (Aging):** 1 PPM per year

**Synthesizer Lock Time:** 10 msec max

**Receiver Tuning Adjustments:** None

**Intermodulation Rejection:** -80 dB @ 100 kHz

**Cross Modulation Rejection:** -100 dB @ 100 kHz

**Undesired Sideband Suppression:** -55 dB @ -1 kHz

**Audio Distortion:** 2.5%

**Audio Power @ Speaker:** 5W @ 2.5% distortion

**Hum & Ripple:** -50 dB

**Reciprocal Mixing:** -100 dB @ 100 kHz

**Spurious Emissions:** -80 dB/P.E.P.

**Undesired Sideband Rejection:** -55 dB @ -1 kHz

**Audio Bandwidth Ripple:** 3 dB

**Squelch:** Constant SINAD (digital)

**Hum & ripple:** 50 mV (2 dB change in output level)

**Receiver Tuning Adjustments:** None

**Dimensions and Weight:**

<table>
<thead>
<tr>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>93 / 3.7</td>
<td>502 / 1.9</td>
<td>288 / 10.6</td>
<td>5.8 / 12.8</td>
</tr>
</tbody>
</table>

**TRANSMITTER**

**Output Power:** 125W PEP and average

**Reduced Power Levels:** 25W, 62W, 100W (RSS Programmable)

**Audio Bandwidth Ripples:** 3 dB

**Intermodulation:** -35 dB(P.E.P. @ 35 dB(P.E.P.), Typical. Note 1)

**Harmonic Emissions:** -64 dB(P.E.P.) @ 30 dB(P.E.P.), Typical. Note 1

**Spurious emissions:** -44 dB(P.E.P.) @ 70 dB(P.E.P.), Typical. Note 1

**Carrier Suppression:** -55 dB(P.E.P.)

**Undesired Sideband Suppression:** -55 dB(P.E.P.)

**Audio Distortion:** 5.5%

**12z Power Mic. Sensitivity:** 25 to 125 kHz (PMA/600 ohms)

**Hum & Ripple:** -50 dB

**RGC Range:** 5

**RGC Time Constants:**
- Voice: Attack time 10 msec, Release time 1500 msec
- Data: Attack time 10 msec, Release time 300 msec

**Military & Industrial Standards**

MICOM-2BF meets the following US military and industrial standard requirements for adverse environmental conditions (without the need of external shock mounts)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Vibration</td>
<td>Method 354.2</td>
<td>Method 354.3</td>
<td>Method 354.4</td>
</tr>
<tr>
<td>Shock</td>
<td>516.2</td>
<td>516.3</td>
<td>516.4</td>
</tr>
<tr>
<td>Rain</td>
<td>506.1</td>
<td>506.2</td>
<td>506.3</td>
</tr>
<tr>
<td>Dust</td>
<td>530.3</td>
<td>530.3</td>
<td>530.3</td>
</tr>
<tr>
<td>Salt Fog</td>
<td>509.1</td>
<td>509.2</td>
<td>509.3</td>
</tr>
</tbody>
</table>

The MICOM-2BF also meets the EIA-RS522B for shock, vibration and applicable test procedures, US FCC for channel occupancy, spurious interference and frequency tolerance. It is manufactured according to the demanding standards of ISO 9000 and EMC (Electromagnetic Compatibility).

**FCC Information:**
- Emissions: J3E, R3E, H3E, J2A, J2B, FCC
- Interference: EIA-RS232A
- Applicable Parts of Rules: 15, 80, 90
- FCC Type Acceptance Number: ABZQCC2305

**OPTIONS**

- RS232 Remote Control Interface
- Linear Amplifier Interface
- Phone Patch Interface
- Data/Fax modem interface
- Interlink Interface
- Interlink (FM-HF repeater)
- Automatic Antenna Tuner
- Continuous Duty Kit
- Automatic Tuning whip antenna
- AC Power Supply
- 3 kW Amplifier
- 400W Amplifier
- Antennas and grounding kit
- Data/FAX modem
- CR key & Headphones

**MAJOR ACCESSORIES**

- Phone Patch
- Interlink (PM-HF repeater)
- Automatic Antenna Tuner
- Interlink Interface
- Continuous Duty Kit
- Automatic Tuning whip antenna
- AC Power Supply
- 3 kW Amplifier
- 400W Amplifier
- Antennas and grounding kit
- Data/FAX modem
- CR key & Headphones

**RECEIVER**

**Sensitivity (SINAD) SSB:** 0.5 µV @ 10 dB SINAD

**Selectivity:** 40 dB @ 1000 Hz, 3000 Hz

**Image Rejection:** -80 dB

**IF Drift:** 45 dB

**Undesired Sideband Rejection:** -55 dB @ 1 kHz

**Spurious Rejection:** -80 dB

**Intermodulation Rejection:** -80 dB

**Cross Modulation Rejection:** -100 dB @ 100 kHz

**Reciprocal Mixing:** -100 dB @ 100 kHz

**Audio Power @ Speaker:** 5W @ 2.5% distortion

**RGC Range:** 5 VV (2 V change in output level)

**RGC Time Constants:**
- Voice: Attack time 10 msec, Release time 1500 msec
- Data: Attack time 10 msec, Release time 300 msec

**Squelch:** Constant SINAD (digital)

**Clarifier Range:** +200 Hz in 10 Hz steps

**Receiver Tuning Adjustments:** None

**Antenna Input Protection:** 20 kV maximum transient, 100V RMS for 2 minutes

**Note 1:** Values noted as typical are valid over 90% or more of the frequency range.

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