

MICOM-2R Front Mount

**Ruggedized HF-SSB ALE Mobile/Fixed
Digital Signal Processing Radio
125 watt PEP/Average 1.6-30 MHz**



Features

- Enhanced features for better communications
- Ruggedized Mobile / Fixed Transceiver
- Front panel programming
- Advanced digital technology
- Conforms to MIL-STD 810 and EIA Specifications
- ALE per FED-STD-1045 and MIL-STD-188/141A
- High MTBF
- Complies with ISO 9001 Requirements
- Security access code
- Variable Bandwidth for optimal signal processing
- Voice activated digital squelch
- Programmable channel scan
- Digital noise blanking and clarifier
- Guard and Priority Channels
- Continuous duty operation (optional)
- Multi-language Liquid Crystal Display
- BITE (Built-in Test)
- Meets FCC and EMC standards
- Selectable front-end Attenuator
- Enhanced Voice Quality
- Excellent frequency stability
- Selectable Power Output
- Small Size, Light Weight
- Variable notch filter
- Sub-octave pre-selector
- Military type audio connectors
- Military type accessories
- Adaptable internal configuration options

MICOM-2R is an advanced Ruggedized Digital Signal Processing transceiver, intended for very wide area radio communications. It provides, Voice, Data, Fax and E-mail solutions with a high degree of sophistication, signal quality and reliability, while being very simple to operate.

MICOM-2R with its compact size provides maximum ease of installation. The Automatic Link Establishment-ALE (per FED-STD 1045 and MIL-STD 188/141A) is a STANDARD FEATURE of every MICOM-2R.



Communications

MICOM-2R Front Mount

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| GENERAL | | | | | |
|--------------------------|--|---------------|---------------|--------|--------|
| Model Number: | M85AMN0KV5-K | | | | |
| Frequency Range: | 1.6 MHz Tx, 100 kHz-30 MHz Rx | | | | |
| Number of Channels: | 200: User programmable; Simplex or Half Duplex | | | | |
| Scanning: | 5 groups with up to 100 channels per group | | | | |
| Frequency Stability: | 0.6 PPM, (0.1 PPM optional) | | | | |
| Frequency Drift (Aging): | 1 PPM per year | | | | |
| Synthesizer Lock Time: | 10 msec max. | | | | |
| Frequency Resolution: | 10 Hz | | | | |
| Audio Bandwidths @ -6dB: | Voice: 350 to 2700 Hz CW: 650 to 1150 Hz Low speed data: 1450 to 1950 Hz High speed data*: 350 to 3300 Hz | | | | |
| Operating Temp. Range: | -30° to +60°C | | | | |
| Humidity: | 95% @ 50°C | | | | |
| Operating Voltage: | 13.8 VDC ±20% Neg. Ground | | | | |
| ALE: | Per FED-STD-1045 and MIL-STD-188/141A | | | | |
| Current Drain | Receive | | | | |
| | Transmit | | | | |
| | Squelched | Full Audio | Voice | 2 Tone | 1 Tone |
| @ 13.8 VDC | 2.2A | 3A | 14A | 23A | 28A |
| @ 26.4 VDC | 1.3A | 1.8A | 8A | 13A | 16.A |
| Dimensions and Weight | Height mm/inch | Width mm/inch | Depth mm/inch | Weight | |
| | 92 / 3.7 | 302 / 11.9 | 285 / 11.3 | Kg | Lb |
| | | | 5.9 | 13 | |

*Optional, for authorized users only.

| RECEIVER | |
|-------------------------------|--|
| Sensitivity (SINAD) (Voice) | 0.5 µV for 10 dB SINAD (0.3 µV Typical. Note 1) 0.1-1.6 MHz - reduced performance |
| 1/2 Rated Power Sensitivity: | 1 µV for 2.5W audio @ speaker |
| Selectivity: | -6 dB @ 350 to 2700 Hz -60 dB @ -1 kHz, +4 kHz |
| Image Rejection: | -80 dB |
| IF Rejection: | -85 dB |
| Undesired Sideband Rejection: | -55 dB @ -1 kHz |
| Spurious Rejection: | -80 dB |
| Intermodulation Rejection: | -80 dB |
| Cross Modulation Rejection: | -100 dB @ 100 kHz |
| Desensitization: | -100 dB @ 100 kHz |
| Reciprocal Mixing: | 100 dB @ 100 kHz |
| Audio Power @ Speaker: | 5W @ 2.5% distortion |
| RGC Range: | 5 µV-1V (2 dB change in output level) |
| RGC Time Constants Voice: | Attack time 10 msec Release time 1500 msec |
| Data: | Attack time 10 msec Release time 10 msec |
| Squelch: | Constant SINAD (digital) |
| Clarifier Range: | ±200, Hz in 10 Hz steps |
| Receiver Tuning Adjustments: | None |
| Preselector Sections: | Sub-octave (1.6 MHz to 30 MHz range) |
| Antenna Input Protection: | 20 kV maximum transient, 100V RMS for 2 minutes |

| TRANSMITTER | |
|---------------------------------|---|
| Output Power: | 125W P.E.P. and average |
| Reduced Power Levels: | 25W, 62W, 100W (RSS Programmable) |
| Audio Bandwidth Ripple: | < 3 dB |
| Intermodulation: | -31 dB/P.E.P. (-35 dB/P.E.P. Typical. Note 1) |
| Harmonic Emissions: | -64 dB/P.E.P. (-70 dB/P.E.P. Typical. Note 1) |
| Spurious Emissions: | -64 dB/P.E.P. (-70 dB/P.E.P. Typical. Note 1) |
| Carrier Suppression: | -50 dB/P.E.P. |
| Undesired Sideband Suppression: | -55 dB/P.E.P. |
| Audio Distortion: | 2.5% |
| 1/2 Power Mic. Sensitivity: | 25 to 125 mV (RMS)/600 ohms |
| Hum & Ripple: | < 50 dB |
| Inband Noise: | -60 dB (30 Hz BW) |
| Tx/Rx Switching Time: | 10 msec |
| Tx Tuning Adjustments: | None |

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

| MILITARY & INDUSTRIAL STANDARDS | | | |
|--|----------------------|----------------------|----------------------|
| MICOM-2R meets the following US military and industrial standard requirements for adverse environmental conditions (without the need of external shock mounts) | | | |
| Environmental Condition | US Military STD 810C | US Military STD 810D | US Military STD 810E |
| Vibration | Method 514.2 | Method 514.3 | Method 514.4 |
| Shock | 5 1 6 . 2 | 5 1 6 . 3 | 5 1 6 . 4 |
| Rain | 5 0 6 . 1 | 5 0 6 . 2 | 5 0 6 . 3 |
| Dust | 5 1 0 . 1 | 5 1 0 . 2 | 5 1 0 . 3 |
| Salt Fog | 5 0 9 . 1 | 5 0 9 . 2 | 5 0 9 . 3 |
| The MICOM-2R also meets the EIA-RS152B 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 Applicable Parts of Rules: 15, 80, 90 FCC Type Acceptance Number: ABZ9QCC1635 With High Stability Option: ABZ9QCC1634 | | | |

OPTIONS

- RS232 Remote Control Interface
- Linear Amplifier Interface
- Phone Patch Interface
- Data/Fax Modem interface
- Interlink Interface
- 24 VDC Operation
- RSS for PC (Radio and ALE)
- High (0.1 PPM) Frequency stability

MAJOR ACCESSORIES

- Phone Patch
- Interlink (FM-HF repeater)
- Automatic Antenna Tuner
- Continuous Duty Kit
- Military Audio Accessories
- Automatic Telephone Interconnect
- AC Power Supply
- 1 kW Amplifier
- 400 w Amplifier
- Antennas and Grounding kit
- Data/Fax Modem
- CW Key & Headphones

Specifications subject to change without notice.



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