



ROYAL COMMUNICATIONS
INTERNATIONAL

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MICOM-Z

Technologically advanced, cost effective long range communication solution





Software Defined Radio

MICOM-Z Radio's innovative software based design redefines flexibility. Excellent performance, dependable quality, and the highest accuracy calibration of all its functions make this radio ideal for every mission. The Digital Signal Processing is based on an open architecture, facilitating Future-proof upgrades and fast adaptations to specific requirements, now and tomorrow.

The market's most interoperable HF radio ensures fast and simple link set-up

MICOM-Z can simultaneously operate according to various wave form signaling standards, a unique feature that makes it the most practical HF radio for every operating application.

- ALE (Automatic Link Establishment) per MIL-STD-188-141B
- CCIR 493 – 4 & 6 Digit select call as per UN-WGET interoperability agreement.
- QuickNet – ALE Adaptive Multiple Networking, expanding the available capabilities:
 - adding centralized indexing to standard net-base ALE mode.
 - increasing net size up to 1000 stations and easy "phone book" style calling.

Voice that is loud & clear

- Voice-activated digital squelch.
- ClearCom – cutting edge built in de-noising algorithms and filters for exceptional voice communication clarity.
- Robust, Adaptive VOCODER (Optional) for the highest audio intelligibility and quality.

Wide selection of options & accessories

- antenna systems for fixed and mobile applications
- AC/DC power supplies
- Audio accessories
- Antenna Tuning Unit
- HF Data modems
- AES digital encryption
- And much more

Comprehensive communication & networking services

MICOM-Z supports a very broad range of communication solutions, including secure voice, e-mail and data transmission through the deployment of external modem and audio accessories

- AMD (SMS-like text messages) for pre-set or operator defined text messages point to point or point to multi point.
- Internal GPS for positional data, telemetry and AVL applications.
- Wide range of antenna systems for maximum reliability and performance.



Just 3 modules for easy, cost effective maintenance

- Designed and produced for efficient stock management, simplified logistics and minimal maintenance costs.
- Easily replaceable digital components for low MTTR.
- High MTBF, as with all MICOM radios.
- A comprehensive multilevel Built-in Test (BIT).

User Friendly

- Large Digital front panel display and Key board for easy programming.
- Intuitive, menu-driven MMI.
- User friendly Radio Control & Programming with single easy to use PC software.
- Versatile mounting configuration for fixed and mobile applications



Quality Assurance

- MICOM-Z complies with the most demanding international quality assurance standards. It is manufactured, inspected and tested for the highest level of component and workmanship quality.

Accelerated Life Test (ALT)

- Before being approved for production, MICOM-Z passed Rigorous Accelerated Life Testing. ALT is a comprehensive program of environmental, Electrical and operational abuse tests, simulating years of field stress. This ensures high product durability and many years of trouble free operations

Applicable MIL STD

Standard	MIL 8100 Methods/ Procedures	MIL 810E Methods/ Procedures	MIL 810F Methods/Procedures
Vibration	5143/ Procedure 1 Cat. 10	514.4/ Procedure 1 Cat. 10	514.5/ Procedure 1 Cat. 20/24 Figure 514 sc-1
Shock			516.5/Procedure 1

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All in one product

- Automatic Selection of multiple signaling standards
- Cutting edge digital signal processing for exceptional audio clarity
- Impeccable product Quality, simple to use and easy to maintain
- Up to 1000 ALE nets or Channels with phone book index style calling
- Cost effective radio package with flexible field mounting capabilities

MICOM-Z-HF-SSB Radio	
General Specifications:	
Frequency Range	1.6 to 30 MHz
Modulation	SSB ,USB, LSB (J3E), PILOT(R3E), AME(H3E), CW(J2E)
Digital Signal Processing	DSP chip and software performs modulation , filtering and advanced functions
Frequency Stability	0.6 PPM in temperature range
Tx Current	18A at 100W power and two tone
Harmonic Suppression	45 dB PEP min
Inter modulation Distortion	31 dB PEP min
Receiver Sensitivity SINAD	Better than 10dB at -113 dBm RF input level
Sensitivity: CW/MCW, SSB	Better than 10dB at -113 dBm RF input level
Spurious Rejection	Transmit : 64 db Receive : 80 db
Keying Speed	25 WPM by Morse Key & 300 bauds for packet modem
Side Tone level	Better than 0.1mW into 150 Ohms load for 150 mV of audio input at 1 KHz
Suppression of Carrier & Unwanted side band	45dB min for 15 W/100W
Audio Input Impedance (Mic)	600 ohm
Selectivity: CW, MCW, SSB	CW : For 6dB better than 300 Hz / For 60dB less than 2.5 KHz MCW : For 6dB better than 2.7 KHz / For 60dB less than 4.8 KHz SSB : For 6dB better than 2.7 KHz / For 60dB less than 4.8 KHz
Audio Response	350-2700Hz / 350-3300 (selectable)
Image & IF rejection	80 dB min
Audio Output	1W across loudspeaker, > 2.5mW across 150 Ohm Headphone
Squelch	Syllabic, Digitally implemented by DSP
Audio Distortion	Less than 5% at 1 KHz
Transmit power	125 Watts (Programmable)
Frequency Resolution	10 Hz
Antenna Impedance	50 Ohms (Nominal)
VSWR	Better Than 1.5 across 50 ohm
Operating Temperature Range	-30° to +60°C
Storage Temperature Range	-40° to +85°C
Humidity	Max. 95% @ 50°C
Modes of Operation	SSB(J3E), PILOT(R3E), AME(H3E), CW(J2E)
Operating Voltage	13.8 V DC ±20%, negative ground
ALE	Per MIL STD 188-141B
CCIR	493 4&6 Digits Per UN-WGT Interoperability agreement Supports Beacon Call & GPS Call
Size and Weight	Front mount radio WxHxD mm: 225x92x244.5; 4.0 Kg Trunk mount radio WxHxD mm: 225x92x239 ; 4.0 Kg Control head WxHxD mm: 188x72x61.8; 0.5 Kg

Optional vocoder and/or AES encryption are subject to export license.

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