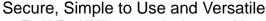


Q-MAC Electronics VHF-90M Low Band VHF Transceiver

Tactical Communications







The VHF-90M Military transceiver is a state of the art communication device specifically designed for tactical military applications. It is an extremely compact and light weight unit, featuring only essential controls to ensure ease of operation.

The radio is available with three modes of communication:

- Analog Fixed Frequency (F3E Stanag 4204 ANPRC 77 Compatible)
- Secure Digital Fixed Frequency
- Secure Digital Frequency Hopping



Designed for Tactical Use

The VHF-90M addresses two roles. When used with a short antenna, it is an ideal squad/platoon level communicator which is light and simple to operate.

When fitted with a full length tactical whip antenna, it becomes capable of use at company/battalion/brigade level where longer ranges are required.

In both roles, the ECCM capability ensures low probability of intercept. The dual role capability simplifies equipment logistics and renders the VHF-90M a capable replacement of the PRC-77 and equivalents.

The VHF-90M has a simple user interface which provides infantrymen sure and dependable communication in tactical conditions. Only essential controls are included on the front panel for simple operation in battlefield conditions. Advanced programming functionality is available in sub-menus. The VHF-90M can be either field or PC programmed.

The VHF-90M is solidly constructed and designed to withstand rigorous military use. Emphasis in the design of the VHF-90M has been placed on value engineering to ensure low cost of ownership over a long service life. This is achieved by utilising SMD components from generic, multi-sourced families.

In short, this revolutionary new transceiver incorporates the very latest in RF and DSP design technology. The VHF-90M is the most cost effective, compact, versatile, high performance VHF transceiver available in the tactical military market today.

Features

- Manpack Performance in Holster Size
- ECCM Capability
- Low Cost
- Light Weight 1Kg complete with battery
- Immersible, Vibration & Temperature rated to Mil-Std 810F
- 5 Watt
- 2320 Channels
- 10 Programmable Channels
- Selective/Group & Broadcast Calling
- Low Current Consumption
- 10 Minute MTTR
- 8000 Hours MTBF



AGEMENT SYSTEM





Q-MAC Electronics VHF-90M Low Band VHF Transceiver



Actual Size

30-88MHz

25kHz

12V DC

Options

10 Minutes

8000 Hours

F3E (Stanag 4204

AN PRC-77 Compliant)

Selcall and Group Call

5W 1.5A (subject to

Less than 150mA

Less than 20mA

pre-set power output)

DTMF and Non DTMF

Handset and Headset

Via Front Panel & DTMF

Microphone/Handset or IBM PC 57600,8,1,N

Micro, Rx, Tx Tests

1kg with Battery Pack

- Aluminium Extrusion

- Pressure Diecast Aluminium

5/16" 25 TPI Screw Thread

(Compatible with AN PRC-77)

Digital Voice, Free Channel

Search, Frequency Hopping, Data Transmission,

2320 (10 Pre-programmable)

Specifications Tactical VHF Radio VHF-90M 30-88MHz Voice Encryption

Frequency Hopping

GENERAL

Frequency Range Modes of Operation

Number of Channels **Channel Resolution** Supply Voltage **Power Consumption** - Transmit

- Receive

- Standby

Antenna Connector

Handsets and Headset

Programming

BITE MTTR MTBF

PHYSICAL CHARACTERISTICS

Weight

- Construction
- Radio Body
- Front Panel - Battery

Dimensions



- High Density Injection Moulded Plastic 82 x 223 x 54mm (With Battery Compartment)

Optional Accessories Hand Crank Generator, Solar Panel Charger, Antennas, AC/DC Chargers, Headsets, Amplifiers, Vehicular Docking Unit

TRANSMITTER

Power Output **Frequency Stability** Deviation Modulation Harmonic Radiation Spurious Emission

RECEIVER

Sensitivity Blocking Adjacent Channel Selectivity Image Suppression Intermediate Frequencies **Spurious Suppression** AF Output Squelch

ECCM PARAMETERS (Optional)

Mode

5W / 500mW / 50mW (selectable) ±2.5ppm Factory Selectable ± 3kHz to ± 7kHz FM (F3E) in Legacy Mode -40dB -50dB

-116dB for 12dB SINAD >85dB >70dB 80dB 130.050MHz and 455kHz >50dB 250mW @ 2% Distortion

Hop Rate Hop Sequence Hop Algorithm

ENVIRONMENTAL

Operating Temperature Storage Temperature **Environmental Rating**

-30°C to +65°C -30°C to +80°C

DES Engine

100 Hops per Second Pseudo-random

Complies with MIL-STD 810F Immersion, Drop, Temperature, Shock & Vibration

Frequency Hopping

Free Channel Search





AGEMENT SYSTEM

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Specifications are subject to change without notice. FILE: VHF-90M Tactical Manportable Communicator, Jan 06.cdr, DATE: JAN 06

