## RT90

## DIIITAL MOBILE TWO-WAY RADIO

## Dual band, dual standby, dual display, dual time slot

- RT90 supports analog and digital mode, It provides dual band, dual standby, dual display, dual time slot, operating on both $400-480 \mathrm{MHz}$ UHF frequencies and $136-174 \mathrm{MHz}$ VHF at up to 50 watts VHF and 45 watts UHF.
- Using Time-Division Multiple-Access digital technology, AMBE++ vocoder, compatible with Mototrbo and DMR Tier I \&II.
- The RT90 supports 250 zones, 3000 channel, 10000 contacts, It has built-in CTCSS/DCS, channel scan, priority scan, short text message features, draft message edit, contacts check and edit, and encryption.
- RT90 has other function, including Private Call, Group Call and All Call, it also includes Lone worker mode, power save mode, low power alarm, an emergency alarm and VOX capability.



## Feature:

- Output power: 50W
- Use TDMA digital function
- Compatible with Mototrbo Tier I \&II
- Dual band, dual standby, dual display, dual time slot
- 250 zone, 3000 channel, 10000 contacts
- Digital mode and Analog mode
- Single call, group call and all call
- Emergency function
- Remote kill/stun/Activate
- Group match/single match
- Record function
- PC programmable function
- CTCSS.DCS encoding and decoding function
- PC password protection function
- Color LCD Display
- Programmable functional keys
- Low Voltage prompt
- Upgradeable by firmware
- TOT
- SQL Setting
- Scanning Function and priority scanning
- Monitor Function
- VOX Transmitting
- Lone Worker
- Time and zone setting


## Transmitter

| Audio Response | +1dB ~ -3dB |
| :---: | :---: |
| RF Power Output | L:25W H:50W (VHF) <br> L:25W H:45W (UHF) |
| Digital vocoder type | AMBE++ |
| FM Hum and Noise | $\begin{aligned} & -40 \mathrm{~dB} @ 12.5 \mathrm{KHz} \\ & -45 \mathrm{~dB} @ 25 \mathrm{KHz} \end{aligned}$ |
| Digital agreement | DMR |
| Modulation limited | $\begin{aligned} & +/-2.5 \mathrm{KHz} @ 12.5 \mathrm{KHz} \\ & +/-5.0 \mathrm{KHz} @ 25 \mathrm{KHz} \end{aligned}$ |
| Audio distortion | 3\% |
| Conducted/radiated emission | $\begin{aligned} & -36 \mathrm{dBm}<1 \mathrm{GHz} \\ & -30 \mathrm{dBm}>1 \mathrm{GHz}<4 \mathrm{GHz} \end{aligned}$ |
| Digital protocol | ETSI TS 102361-1,-2,-3 |
| Adjacent channel power | $\begin{aligned} & -60 \mathrm{~dB} @ 12.5 \mathrm{KHz} \\ & \text {-65dB @25KHz } \end{aligned}$ |
| FM Modulation | 12.5KHz:11KOF3E 25KHz:16KOF3E |
| 4FSK digital modulation | 12.5 KHz only date:7K60FXD 12.5 KHz date and audio:7K60FXE |

## General

| Frequency Range(MHz) | VHF: $136-174 \mathrm{Mhz}$ UHF:400-480Mhz |
| :--- | :--- |
| Channel | 3000 |
| PLL Channel Spacing | $6.25 / 12.5 / 25 \mathrm{KHz}$ |
| Voltage Rating | DC 13.8 V |
| Operating Temperature | $-30^{\circ} \mathrm{C} \sim+60^{\circ} \mathrm{C}$ |
| Storage Temperature | $-30^{\circ} \mathrm{C} \sim+85^{\circ} \mathrm{C}$ |
| Dimention | $143^{*} 50^{*} 175 \mathrm{~mm}$ |
| Compatible With American | (MIL-STD-810C/D/E) |
| Military Standard |  |

## Package includes:



Receiver

| Frequency stability $\left(-20^{\circ} \mathrm{C}+60^{\circ} \mathrm{C},+25^{\circ} \mathrm{C}\right)$ | $+/-1.0 \mathrm{ppm}$ |
| :--- | :--- |
| Digital Sensibility | $0.3 \mathrm{uV} /-117.4 \mathrm{dBm}$ (BER 5\%) |
|  | $0.7 \mathrm{uV} /-110 \mathrm{dBm}$ (BER 1\%) |
| Audio distortion @ rated audio | $\leq 3 \%$ |
| Analogue Sensibility | $0.35 \mathrm{uV} /-116 \mathrm{dBm}(20 \mathrm{~dB}$ SINAD) |
| Rated audio | $0.22 \mathrm{uV} /-120 \mathrm{dBm}(20 \mathrm{~dB} \mathrm{SINAD)}$ |
| Adjacent Channel Selectivity | 5 W |
| Co-Channel Rejection | TIA603C:60dB@ 12.5 KHz |
| Intermediation | $2 \mathrm{~dB} @ 12.5 \mathrm{KHz}$ |
| Audio response | TIA603C:65 dB |
| Spurious Rejection | ETSI:65dB |
| Audio response | $+1 \mathrm{~dB} \sim-3 \mathrm{~dB}$ |
| FM Hum and Noise | TIA603C:70dB |
| Spurious emission | ETSI:70dB |

