

## DR7810s series

## DMR Two-way Radio

IP67

- \* Easy Trunking
- \* Roaming
- \* TDMA Direct Mode
- \* Transmit Interrupt
- \* Mixed Channel
- \* 2/5-tone, MDC, DTMF
- \* Voice Record, Voice Status
- \* Bluetooth (Option)
- \* GPS (Option)
- \* Man-Down (Option)
- \* Vibration (Option)



**DR7810S**



**DR7610S**



**DR7510S**

DR7810S series adopts the latest digital technologies, which results in a high quality product which is easy to use and very cost effective.

# DR7810S series DMR Two-way Radio

## Key Feature

### Easy Trunking

DR7810S series could be set to work under a group of repeaters, each repeater could provide 2 logical channels. When DR7810S was set in Easy Trunking mode, it will listen to all the logical channels preset by an advance scan algorithm, or if PTT pressed, it will find a free logical channel to transmit. In order to get a short delay on TX/RX, it is better to use no more than 4 repeaters, i.e. 8 logical channels. There is no special requirement or settings for the repeaters used.

### Roaming

DR7810S series could be used under multi-sites which could cover a large range. The radio will find a best or better site preset to use automatically, this feature is useful for IPSC application.

### TDMA Direct Mode

DR7810S series could support two kinds of TDMA Direct Mode:

1)Free mode, 2)Alignment mode

Free Mode: DR7810S will detect the synchronization signaling and TX freely, this could ensure 2-slot communication anytime.

Alignment Mode: DR7810S working in this mode, will need a strict synchronization signaling before realizing a real 2-slot direct Mode.

### Transmit Interrupt

DR7810S series in TX state could be stopped by a Transmit Interrupt command from another terminal or a dispatch. This feature is useful when an urgent call needing a free logical channel to use.

### Mixed Channel

DR7810S series working in Mixed Channel, could recognize the incoming analog carrier or digital carrier automatically and reply in the same way, or a default analog/digital way to set up a new call.

### Voice Record

DR7810S series could record the TX/RX voice about 2 hours.

### Voice Status

DR7810S series could send a voice status to for the RX radios to playback the corresponding voice message pre-record.

### Wide Band

Allows the radio to be programmed in a wide frequency range. VHF:136-174MHz and UHF:400-527MHz

### Bluetooth

### GPS

### Man-Down

### Vibration

## GPS Specifications

Sensitivity	Tracking: -164dBm Cold Start: -147dBm
Acquisition Time	Host Start(Open shy): 1s (typical) Host Start(Indoor): <30s (typical) Cold Start(Open shy): 33s (typical) w/o AGPS <15s(typical) with AGPS
Position Accuracy	2.5m(typical)
Max. Altitude	<18,000m
Max. Velocity	<515m/s

## Specifications

### General

Power Supply	7.5V Dc±20%
Frequencies-Full Bandsplit	136~174MHz, 400~527MHz
Number of Channels	2000 Channels
Maximum number of Zones	250 Zones (LCD)/ 2 Zones (Non-LCD)
Maximum number of Channels Per Zone	160/16
Channel Spacing	12.5/25kHz
Operating Temperature	-30°C~+60°C
Dimensions: HxWxD (mm) With Standard Li-ion battery (2000mAh)	130.5X56X36
Weight: (gm) With Standard Li-ion battery	330g
Average Battery Life 5/5/90 Cycle With Standard Li-ion battery	16h Digital Mode 12h Analog Mode

### Transmitter

Frequency Stability (-30°C to 60°C, 25°C Ref)	1.0 ppm
Power Output	1W (L), 4 (H), 5W (H)
Modulation Limiting	±2.5kHz@12.5kHz/±5kHz@25kHz
FM Hum & Noise	-40dB@12.5kHz/-45dB@25kHz
Conducted/Radiated Emission	-36dBm<1GHz, -30dBm>1GHz
Adjacent Channel Power	-60dB@12.5kHz
Adjacent Transient Channel Power	-70dB
FM Modulation Mode	12.5KHz: 11K0F3E/25KHz: 16K0F3E
4FSK Digital Mode	12.5KHz (data only) : 7K60FXD 12.5KHz (data+voice) : 7K60FXE
4FSK Modulation Accuracy	5%@25°C, 10%@extreme temperature
Audio Response (300-3000Hz)	+1~-3dB
Digital Protocol	ETSI TS 102 361-1, -2, -3
Audio Distortion	<3%
Vocoder	AMBE+2™
Ext. Microphone Connector	Compatible with MOTO XPR7550

### Receiver

Analog Sensitivity	0.35 μV/-116dBm (20dB SINAD) 0.22 μV/-120dBm (12dB SINAD)
Digital Sensitivity	0.3 μV/-117.4dBm (BER 5%) 0.7 μV/-110dBm (BER 1%)
Intermodulation	TIA603 70dB; ETSI 65dB
Adjacent Channel Selectivity	TIA603C 70dB; TESI: 65dB@25kHz TIA603C 60dB; TESI: 60dB@12.5kHz
Spurious Rejection	TIA603C:75dB; ETSI: 70dB
Blocking	84dB
Rated Audio/MAX Audio	750mW/1000mW
Audio Distortion@Rated Audio	3%
Audio Response (300-3000Hz)	+1~-3dB
Conducted Spurious Emission	-57dBm<1GHz, -47dBm>1GHz ETS300086

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