Features

Base Information
- Full Keypad, Color Screen, 1024 Channels
- Analog and Digital Dual Mode
- BT(4.0) Audio
- BT(4.0) Data
- Integrated GPS
- Integrated GLONASS
- Pre-programmed Text Messaging
- Freeform Text Messaging
- Option Board
- Roaming
- Scan
- Voice Notify

Audio
- Auto Gain Control
- Audio Feedback Suppressors
- Three Band Equalize

Safety
- Emergency Alarm
- Dedicated Emergency Button
- Alert Call
- Man Down
- Lone Worker
- Basic Encryption
- Enhanced Encryption(40bit)
- Advanced Encryption(128/256bit)
- Multiple Key Encryption
- Priority Interrupt
- Remote Monitor
- Radio Enable/Disable
- Radio Check
- IP68 Dust and Waterproof
- Vibration
- Position SMS
- Position View

Systems
- Analog Conventional
- DMR Conventional
- IP Multi-site Connect
- DMR Simulcast System
- XPT Trunking
- DMR Trunking
- MPT Trunking

Advance Features
- Pseudo Trunk
- Telemetry
- Rent
- Phone Interconnect
- Full Duplex Call (DMR Tier 3 System)
- Full Duplex Call (DMR Conventional System)
- Single Frequency Repeater Mode
- Micro SD Card
- Smart Battery
- RTC

NOTES
- Standard feature
- Optional feature

Specifications

General

Frequency Range	UHFx: 350-527MHz UHF5: 806-941MHz VHF1: 136-174Mhz	
Channel Capacity	1024	
Zone Capacity	64 (maximum of 256 channels per zone)	
Channel Spacing	12.5kHz / 20kHz / 25kHz	
Operating Voltage	7.4V (rated)	
Battery	2000mAh (Li-ion Anti-fake or Smart Battery) 2500mAh (Li-ion Anti-fake or Smart Battery) 3000mAh (Li-ion Anti-fake or Smart Battery)	
Battery Life (S-5-90 Duty Cycle, High TX Power)	Digital: Analog: 19.5 Hours @2000mAh 14.5 Hours @2000mAh 24 Hours @2500mAh 18 Hours @2500mAh 27 Hours @3000mAh 21 Hours @3000mAh	
Frequency Stability	±0.5ppm	
Antenna Impedance	50Ω	
Dimensions (H × W × D) (with standard battery, without antenna)	131 x 54.5 x 36 mm (2000mAh) 131 x 54.5 x 41 mm (2500mAh) 131 x 54.5 x 41 mm (3000mAh)	
Weight (with antenna & standard battery)	350g (2000mAh), 361g (2500mAh), 366g (3000mAh)	
LCD Display	160 × 128 pixels, 65536 colors 1.8 inch, 6rows	

Receiver

Sensitivity	Analog	0.28μV (12dB SIN AD), 0.22μV (Typical) (12dB SIN AD) 0.4μV (20dB SIN AD)
	Digital	VHF: 0.22μV/BER5% UHF: 0.28μV/BER5%
Selectivity TIA-603 ETSI		60dB @ 12.5kHz / 70dB @ 20/25kHz (TIA-603) 60dB @ 12.5kHz / 70dB @ 20/25kHz (ETSI)
Spurious Response Rejection TIA-603 ETSI		70dB @ 12.5/20/25kHz (TIA-603) 70dB @ 12.5/20/25kHz (ETSI)
Hum and Noise		40dB @ 12.5kHz; 43dB @ 20kHz; 45dB @ 25kHz
Rated Audio Power Output		0.5W
Rated Audio Distortion		≤3%
Audio Response		+1 ~ -3dB
Conducted Spurious Emission		< -57dBm

Transmitter

RF Power Output	UHFx: 1W/4W; VHF1: 1W/5W; UHF5: 1W/3W (806-870MHz) UHF5: 1W/2.5W (896-941MHz)
FM Modulation	11KOF3E @ 12.5kHz 14KOF3E @ 20kHz 16KOF3E @ 25kHz
4FSK Digital Modulation	12.5kHz Data Only: 7K60FXD 12.5kHz Data & Voice: 7K60FXW
Modulation Limiting	±2.5kHz @ 12.5kHz ±4.0kHz @ 20kHz; ±5.0kHz @ 25kHz
FM Hum & Noise	40dB @ 12.5kHz 43dB @ 20kHz 45dB @ 25kHz
Adjacent Channel Power	60dB @ 12.5kHz; 70dB @ 20/25kHz
Audio Response	+1 ~ -3dB
Audio Distortion	≤3%
Digital Vocoder Type	AMBE+2™ SELP
Digital Protocol	ETSI-TS102 361-1,-2,-3

Environmental Specifications

Operating Temperature	-30℃ ~ +60℃
Storage Temperature	-40℃ ~ +85℃
ESD	IEC 61000-4-2（level 4） ±8kV (contact) ±15kV (air)
American Military Standard	MIL-STD-810 C/D/E/F/G
Dust & Water Protection	IP68 Standard
Humidity	Per MIL-STD-810 C/D/E/F/G Standard
Shock & Vibration	Per MIL-STD-810 C/D/E/F/G Standard

GPS

Accuracy specs are for long-term tracking (5 satellites visible at nominal -130dBm)	
TTFF (Time To First Fix) Cold Start	<1 minute
TTFF (Time To First Fix) Hot Start	<10 seconds
Horizontal Accuracy	<5m (50% probable) <10m (95% probable)

All specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

Optional Accessories

Remote Speaker Microphone (IP57) SM18N2	C-Earset EHN16	Swivel Earset EHN17	Earbud ESN12	3-Wire Surveillance Earpiece with Transparent Acoustic Tube (beige) EAN17	Receive-only Earpiece EA503	Six-Unit Switching Powe PS7002	Programming Cable (USB Port) PC38
Battery Optimizing System MCA05	MCU Multi-unit Charger (for Thick Battery) MCA08	3-wire Surveillance Earpiece with Transparent Acoustic Tube(Black) EAN18	2-wire Earpiece with Wireless Earphone and Neck Loop(Beige) EWN09	Receive-only Earpiece ESS10			

Pictures above are for reference only and may vary from actual products.

Contact your dealer for more accessories information.

ENRICHING YOUR DIGITAL EXPERIENCE
NEW MEMBER TO WORLD'S MOST COMPLETE DMR PORTFOLIO
PD98X
New Software! TDMA Direct Mode removed—high quality as always!

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Brand New Features

01
Micro SD Card

PD98X records and stores critical voice call or data in Micro SD card.

PD98X supports maximum 32G Micro SD card, and records record up to 576 hours digital/analog voice.

02
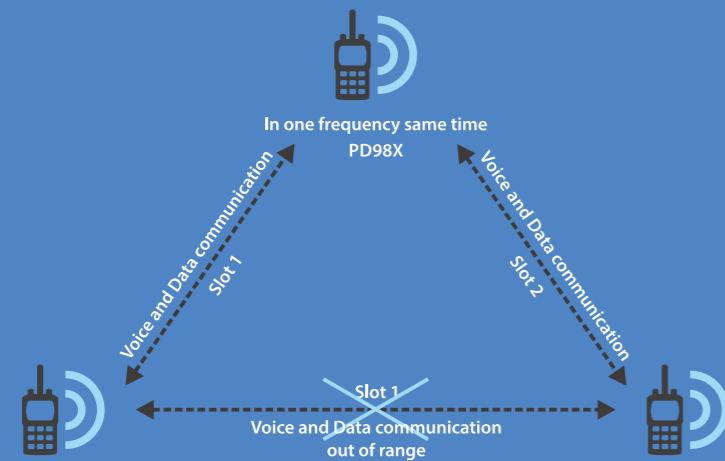### Single Frequency Repeater Mode

Based on Interference cancellation technique, PD98X can use one slot to receive signal and the other to transmit it in the same frequency at the same time in DMO mode to extend communication distance.

In one frequency same time
PD98X

Voice and Data communication
Slot 1

Voice and Data communication
Slot 2

Slot 1
Voice and Data communication
out of range

03
BT 4.0

PD98X has built in BT 4.0, which not only supports audio transmission, but also data transmission, such as programming via Bluetooth etc.

04
Full Duplex Call

PD98X can make full duplex call with PD98X, telephone or cell phone.

05
RTC

RTC allows the radio to display the accurate time of received message and call.

06
Smart Battery

PD98X support smart battery, which makes it easier to monitor the battery status, such as life time, charging time, etc. This also reduces the charging time dramatically.

Centered Antenna

Integrated GPS and RF antenna, more accurate positioning and receiving.

360 Degree Stepless Channel Knob

IP68 Protection

1.8' High Definition Display

Displaying clear contents.

Enhanced Voice Quality

Better Sensitivity and Frequency Stability

Longer Battery Life

BT 4.0 | Micro SD Card | Single Frequency Repeater Mode | Full Duplex Call | RTC | Smart Battery

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Hardware Advantages

Better Sensitivity and Frequency Stability

Advanced technology improves receiving performance to enhance communication distance and reliability.

Sensitivity 26%
Compared with PD78X, PD98X adopts brand new hardware design enhance +26% Sensitivity.

Longer Battery Life

PD98X adopts new battery saving technology to guarantee longer communication time.

Battery life 33%
Compared with PD78X, PD98X adopts new battery saving technology extending +33% battery life.

IP68 Protection

Ip68 Dust and Waterproof Standard ensures outstanding performance even in harsh environments.

360 Degree Stepless Channel Knob

With this kind of knob, user can change channel and zone easily and comfortably.

Enhanced Voice Quality

Maximum 2.5W output speaker and new noise cancelling technology ensure clear and loud voice.

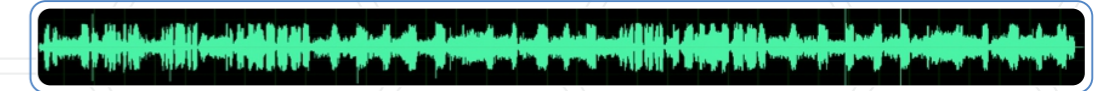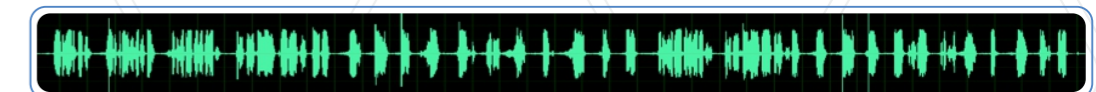**Noisy environment**

Figure 1 Without noise cancellation
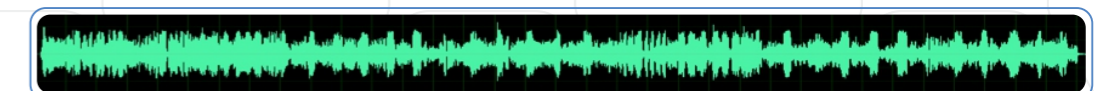
Figure 2 With noise cancellation

Windy environment

Figure 1 Without echo cancellation

Figure 2 With echo cancellation