



PDC580 Multi-mode Radio

Release Notes

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Documentation Information

This section describes the audience, conventions, and revision history of this document.






Audience

This document is intended primarily for the following audiences:

- Sales and marketing engineers
- Users
- Technical support engineers

Documentation Conventions

Instruction Conventions

Icon	Description
 TIP	Indicates information that can help you make better use of your product.
 NOTE	Indicates references that can further describe the related topics.
 CAUTION	Indicates situations that could cause data loss or equipment damage.
 WARNING	Indicates situations that could cause minor personal injury.
 DANGER	Indicates situations that could cause major personal injury or even death.

Notation Conventions

Item	Description	Example
Boldface	Denotes menus, tabs, parameter names, window names, dialog names, and hardware buttons.	To save the configuration, click Apply .
		The Log Level Settings dialog box appears.
		Press the PTT key.
" "	Denotes messages, directories, file names, folder names, and parameter values.	The screen displays "Invalid Battery!".
		Open "PSS.exe".
		Go to "D:/opt/local".
		In the Port text box, enter "22".
>	Directs you to access a multi-level menu.	Go to File > New .

Item	Description	Example
<i>Italic</i>	Denotes document titles.	For details about using the DWS, refer to <i>Dispatch Workstation User Guide</i> .
Courier New	Denotes commands and their execution results.	To set the IP address, run the following command: vos-cmd - m name IP

Revision History

Document Version	Application Version	Release Date	Description
00	V1.0	March 2024	Initial release.

1. Product Information

Firmware Version

Model	Version
PDC580	HyTalk: V1.0.20.040_V1.0.18.023.9R01

Application Version

Application	Version
Customer Programming Software (CPS)	V1.0.17.003

2. Released Features in V1.0

2.1 Radio

2.1.1 Common Features

Work Mode

The radio can operate in the following modes:

- Broadband mode
- Narrowband mode
- Broadband & Narrowband mode
- Repeater mode



NOTE

Repeater mode requires License. In Repeater mode, the radio can relay audio between public network and private mobile radio (PMR) network.

Language

Simplified Chinese and English are available on the radio.

Programmable Key

For convenience, you can assign the following keys as shortcuts to radio features.

- **Auxiliary PTT** key
- **SK2** (short press and long press)
- **SK3** (short press and long press)

Backlight

When the ambient light is dim, you can turn on the backlight to illuminate the screen and keypad for easier operation.

Keypad Lock

When the keypad is idle, you can lock the keypad to avoid misoperations.

- **Auto lock**
If the radio remains idle beyond the preset auto lock time, the keypad will be locked automatically.
- **Manual lock**
You can press the key combination to lock the keypad manually.

Low Battery Alert

When the battery power is insufficient, the radio audibly alerts you to charge the battery or replace the battery.

Noise Suppression

Noise Suppression allows the radio to automatically filter out ambient noise so that the receiving party can hear you clearly.



NOTE

This feature can reduce call volume. It is recommended that you turn on this feature only when you're in noisy environments.

Three-band Equalizer

Three-band Equalizer allows the radio to balance frequency components of the audio signal upon receiving voice. This optimizes the quality of the received voice to meet user demands in different scenarios.

Auto Alert

Auto Alert allows the radio to automatically remind you with an audible alert if you do not transmit voice within preset time.

RX Priority

RX Priority allows you to set the receiving priority when the radio receives push-to-talk over cellular (PoC) call and PMR call simultaneously in Broadband & Narrowband mode.

- PoC Call: The radio receives the PoC call first.
- PMR Call: The radio receives the PMR call first.
- FCFS: The radio receives the call that comes first.

Simulcall

Simulcall allows you to press the **Primary PTT** key to initiate a PoC call and a PMR call simultaneously in Broadband & Narrowband mode.



NOTE

This feature requires License.

Voice Notification

Voice notification allows the radio to audibly notify channel number or battery power when you do any of the following:

- Turn on the radio.
 - Switch the channel through **Channel Selector** knob, **Left** key or **Right** key.
-

- Press the preprogrammed **Battery Power Check** key.

Call Recording

Call recording allows the radio to record both PMR calls or PoC calls. The recorded audio files are stored for future search or management.



NOTE

This feature requires License.

Recording Playback

When you press the preprogrammed **Recording Playback** key, the radio automatically plays the latest call recording, and then plays all call recordings in turn.

When you press the preprogrammed **Recording Playback** key again, the radio stops playing.

2.1.2 PoC Features

PoC Call

You can initiate a PoC call through broadband network.

Airplane Mode

When you are in an airplane or in an area with radio restrictions, you may be required to turn off your radio or make your radio enter the airplane mode. In airplane mode, your radio automatically disables the mobile network.

Positioning

The radio supports GPS and BDS. This facilitates dispatch for better use of resources and higher dispatch efficiency.

2.1.3 PMR Features

2.1.3.1 Mobility Management

CH Display

CH Display allows you to set the information to be displayed on the home screen, including channel number, channel alias, or frequency.

Scan

Scan allows you to listen to activities on other channels, keeping track of your team members.

Talkback

When the radio stays on a channel during scanning, the radio transmits voice and data on this channel. When the radio is scanning, the radio transmits voice and data services on the channel that is set for scanning mode.

Talk Around

Talk Around allows you to continue communication in direct mode when the repeater malfunctions or the radio is out of the coverage of the repeater.

Power Level

Power Level allows you to set the TX power level to high or low.

- High power enables communication with radios far away from you but consumes more battery power.
- Low power enables communication with radios close to you and saves battery power.

Time-out Timer

Time-out timer (ToT) allows the radio to stop transmitting when the **PTT** key is pressed and held over a preset period. This prevents any user from occupying a channel for an extended period.

2.1.3.2 Voice Services

Group Call

Group call is a half-duplex call from one user to all the other members in the group.

All Call

All call is a call from one user to all the other users on the current digital channel. All call is only enabled for users with high permission.

Private Call

Private call is a call from an individual user to another individual user.

Call with Acknowledge (Private Call Only)

Call with Confirmation allows the radio to confirm whether the receiving party is available when you initiate a call. If the receiving party is available, the call will be established. Otherwise, the call will not be established, and the radio notifies "No Acknowledge".

Throughout this process, the receiving party will not be notified or required to take any action.

Call Log

Call Log allows the radio to record historical digital calls.

2.1.3.3 Security

Emergency Service

Emergency Service allows you to seek help from your companion or the control center in case of an emergency. You can initiate an emergency service with the highest priority even when your radio is transmitting or receiving.

2.1.3.4 Analog Features

Time-out Timer

Time-out timer (ToT) allows the radio to stop transmitting when the **PTT** key is pressed and held over a preset period. This prevents any user from occupying a channel for an extended period.

Scan

Scan allows you to listen to activities on other channels, keeping track of your team members.

Monitor

Monitor allows the radio to receive more signals including weak signals, and helps you to monitor other radios.

Pre-emphasis/De-emphasis

Pre-emphasis/De-emphasis allows the radio to enhance audio quality and reduce noise. Pre-emphasis is used to filter out TX signal, and de-emphasis is used to filter out RX signal.

Compressor

Compressor allows the radio to compress the voice signal when transmitting and decompress the voice signal when receiving, so as to improve the voice quality.

Scrambler

Scrambler allows the radio to invert the frequency spectrum of transmitted audio signals. Only the receiving radio with the same Scrambler settings can restore the audio signals. This prevents eavesdropping and ensures communication privacy.



NOTE

This feature requires License.

Squelch Level

Squelch Level allows you to adjust the squelch level of the radio. The squelch level refers to the squelch threshold required for the speaker of the radio to be turned on. The higher squelch level requires a stronger signal.

CTCSS/CDCSS

CTCSS/CDCSS allows the radio to add signaling with a frequency lower than that of the audio to the carrier. The communication can be established only when the CTCSS/CDCSS received by the receiving party matches that transmitted by the transmitting party.

Emergency Service

Emergency Service allows you to seek help from your companion or the control center in case of an emergency. You can initiate an emergency service with the highest priority even when your radio is transmitting or receiving.

2.1.3.5 Quick Operations

One Touch Call

One Touch Call allows you to quickly initiate a call to the preset contact by pressing the preprogrammed **One Touch Call** key.

Specified Zone/Channel After Power-on

Specified Zone/Channel After Power-on allows the radio switches to the specified zone and channel after being turned on.

2.2 Applications

CPS

CPS is a radio programming software. Only after programming, the radio can be normally used.

2.3 Important Notes

None.

3. Abbreviations

Abbreviation	Full Name
BDS	BeiDou Navigation Satellite System
CDCSS	Continuous Digital Controlled Squelch System
CH	Channel
CTCSS	Continuous Tone-Coded Squelch System
CPS	Customer Programming Software
FCFS	First Come, First Served
GPS	Global Positioning System
PMR	Private Mobile Radio
PoC	Push-To-Talk over Cellular
PTT	Push to Talk
RX	Receiving
ToT	Time-out Timer
TX	Transmitting



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