



FW-981

PoC Mobile Radio
User Manual



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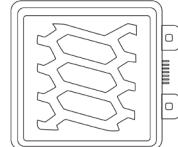
Note: Feature availability may vary by model and change with future updates.

Package contents

Carefully unpack your radio and check the items listed below before disposing of the packaging. If any items are missing or damaged, please contact your carrier immediately.



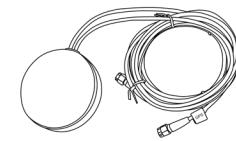
FW-981



Smart Companion
(optional)



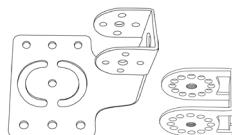
Wireless Finger PTT
(optional)



GPS and LTE 2-in-1 Antenna (1.8 m)



3-Conductor Power Cable (2 m)



Mounting Brackets



Screws

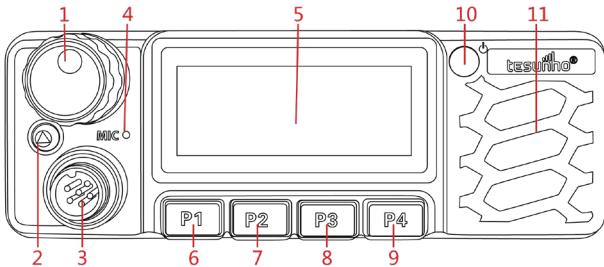


Fuse

Item	Quantity
FW-981	1
GPS and LTE 2-in-1 Antenna (1.8 m)	1
3-Conductor Power Cable (2 m)	1
Mounting Brackets	2
Screws	7
Fuse	1
Smart Companion (optional)	1
BLE PTT Button (optional)	1

Get started

Radio overview and controls



1. Rotary Push-Button Encoder (menu/navigate/confirm & volume control)

Enter menu: From the standby or menu screen, press the encoder.

Navigate menu: From the menu screen, rotate the encoder clockwise to scroll down, or counterclockwise to scroll up to the desired item.

Confirm: From the options screen, press the encoder.

Adjust volume: From the standby screen, rotate the encoder.

2. SOS Button

Send an SOS: Press and hold the SOS button to send an SOS alert to your current group (SOS mode must be enabled).

Play previous PTT record: Press the SOS button to play back the previous PTT record (PTT Records must be enabled).

3. Handheld Microphone/Programming 6-Pin DIN Connector

4. Microphone

5. 2.2-inch TFT LCD

6. P1 Button

Enter Choose Group: From the standby screen, press/press and hold the P1 button.

Monitor groups: From the Choose Group, press the P1 button.

Delete PTT records: From the PTT Records, press and hold the P1 button.

Refresh the menu and synchronize data: From the menu, press and hold the P1 button or the # key on your handheld microphone.

Enable or disable volume operations: From the volume control screen, press the P1 button to enable or disable.

7. P2 Button

Enter Friend List: From the standby screen, press/press and hold the P2 button.

8. P3 Button

Enter User List: From the standby screen, press/press and hold the P3 button.

9. P4 Button

Acquire APRS: From the standby screen, User List, or Friend List, press/press and hold the P4 button.

Remote upgrade: From the Remote Upgrade, press the P4 button.

10. Illuminated Push-Button Switch (power/back button & status indicator)

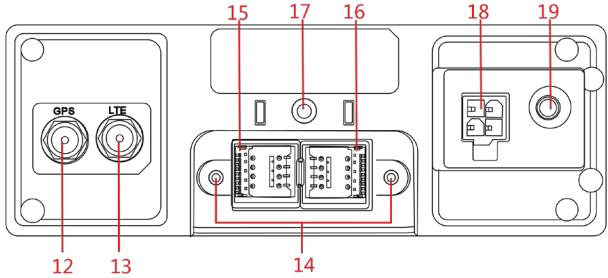
Lights up red during transmission, lights up blue during reception.

Back: From the menu, press the switch.

Power on or off: Press and hold the switch (requires the power-on or power-off mode to be set to button).

Enter PTT Records: From the standby screen, press the switch (requires a PTT record).

11. Speaker



12. GPS Antenna Connector

13. LTE Antenna Connector

14. SIM Card Protective Cover and Fixing Screw Holes

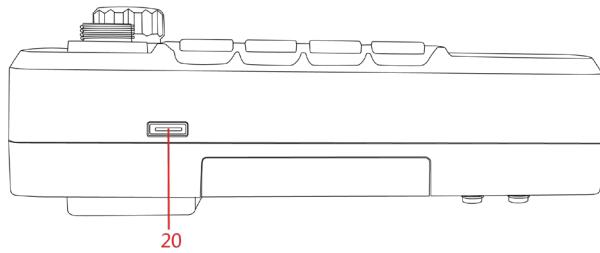
15. Sim 1 Card Slot

16. Sim 2 Card Slot

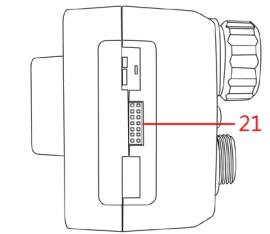
17. Bracket Mounting Hole

18. 4-Pin ATX 12V Power Connector

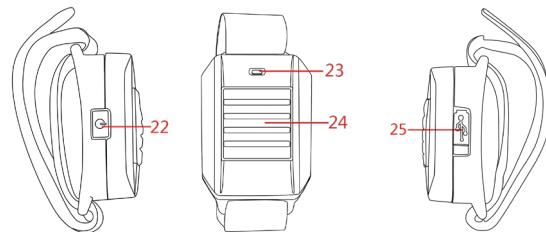
19. 3.5 mm Audio Jack



20. 5V USB-C Power Port



21. Expansion Port



22. Wireless Finger PTT Power Button

Power on or off: Press and hold the power button.

23. Wireless Finger PPT Indicator

24. Wireless Finger PTT Button

25. Wireless Finger PTT Charging Port

Status icons

Icon	Name	Description
	Cellular Network	The radio is connected to a cellular network. The number of bars indicates the signal strength of your cellular service.
	Wi-Fi Network	The radio is connected to a Wi-Fi network. See Connect to Wi-Fi on page 9.
	BLE	The radio is connected to a Wireless Finger PTT via BLE. See Connect to Wireless Finger PTT via BLE on page 8.
	GPS	The first icon indicates that the radio is not being located. The second icon indicates that the radio is being located. No icon indicates that GPS is not enabled.
	SOS	The radio is sending or receiving an SOS alert. See SOS Mode on page 14.
	Missed Call	No response after being selected for a call. See Missed Call Alert on page 10.
	Dispatcher Messages	The radio has received a new dispatcher message, or a dispatcher message has not been viewed. See Dispatcher MSG on page 11.
	Monitor	The group is being monitored. See Use Monitor on page 9.
	Keyboard Lock	The radio's keyboard is locked. See Auto Lock on page 14.
	SIM Not Recognized	A SIM card has been inserted but is not recognized.

Basic operations

Power on or off

Power on.

- Power cord with ACC and Power On Mode set at ACC. Plug in the power cord to automatically power on your radio.
- Power cord with ACC and Power On Mode set at Key. Plug in the power cord and press and hold the power switch to power on your radio.
- Power cord without ACC. Plug in the power cord and press and hold the power switch to power on your radio.

Power off.

- Power cord with ACC and Power Off Mode set at ACC. Unplug the power cord to power off your radio.
- Power cord with ACC and Power Off Mode set at Key. Press and hold the power switch to power off your radio.
- Power cord without ACC. Press and hold the power switch to power off your radio.

Transmitting and receiving

Transmitting. Press and hold the PTT button on your handheld microphone or your Wireless Finger PTT to transmit. The indicator light turns red during transmission. Please maintain a distance of at least 5 cm from the microphone.

Receiving. The indicator light turns red during reception. And the transmitter's name is displayed on the screen.

Volume controls

Adjust volume. From the standby screen, rotate the encoder to enter the volume control screen, then rotate the encoder to adjust the volume.

Lock volume. From the standby screen, rotate the encoder to enter the volume control screen. Press the P1 button to switch to Volume Locked, then press the encoder to confirm and lock the current volume level. Once set up, rotating the encoder will not adjust the volume.

Unlock volume. From the standby screen, rotate the encoder to enter the volume control screen. Press the P1 button to switch to Volume Unlocked, then press the encoder to confirm.

Advanced features

AI Noise Cancellation

AI noise Cancellation (Env Optimize, Environmental Optimization) has four working modes: Normal, Quiet, Noisy, and Manual. You can select the appropriate optimization direction based on your environment to effectively filter noise, background noise, and other noises.

Enable AI Noise Cancellation. Go to Audio Settings > Env Optimize, then select the desired mode.

- Normal/Quiet/Noisy: The parameters of MIC Gain, SPK Gain, AI Noise Cancel, and RX Noise Supp on your radio are automatically set to the corresponding preset parameters and cannot be manually modified.
- Manual: You can manually set the parameters of MIC Gain, SPK Gain, AI Noise Cancel, and RX Noise Supp on your radio according to your personal needs.

Connect to Wireless Finger PTT via BLE

Press and hold the power button to turn on Wireless Finger PTT. When an active Wireless Finger PTT is within range, your radio automatically connects to it. If multiple Wireless Finger PTT are detected, your radio connects to another only after the current one disconnects. Once connected, press the PTT button on the Wireless Finger PTT to initiate a call.

Connect to Wi-Fi

Configure Wi-Fi. You can configure Wi-Fi networks and add them to your Favorite List using the following three methods:

- Configure Wi-Fi on your radio. Go to WLAN Settings > Scan. Search and select the desired SSID. Press the P1 button to open the on-screen keyboard, then use the encoder to select and enter the password. When finished, select the checkmark ✓ to confirm and save your settings.
- Configure Wi-Fi via programming software. From the programming software, go to the WLAN Settings, then enter the corresponding SSID and password. When finished, click Write to save your settings.
- Configure Wi-Fi via RealPTT Dispatcher. From the RealPTT Dispatcher, right-click on the user of your radio and click Send Message, then send the corresponding SSID and password to your radio. The message format is SSIDPAS:account,password

Select working mode. Go to WLAN Settings > Work Mode, then select the desired mode.

- Off: The networks cannot be connected automatically, only manually from the Favorite List.
- WLAN-Manual: The networks in the Favorite List can only be switched manually.
- WLAN-Auto: When the current network signal is weak, your radio automatically switches to a stronger network in the favorites list.

Choose a network. Go to WLAN Settings > Favorite List, then use the encoder to select and connect to the desired Wi-Fi network.

Talk Back

While monitoring multiple other groups, you can reply directly to the group that called earlier within a preset time, without switching your group.

Use Monitor. From the Choose Group, select the desired group, and press the P1 button to monitor. A headset icon will appear before the name of the group being monitored. Press the P1 button again to cancel monitoring.

Use Talk Back. From the Talk Back, set the Talk Back timer to 3/5/10/20/30 seconds. When a user in the monitored group initiates a call, you can directly reply to the monitored group by pressing the PTT button within the preset time.

Quick Call

You can define objects on the P1 to P4 buttons for quick access. Each button can only be set for one object.

Define objects. From the Choose Group, Friend List, or User List, select the desired object, then press and hold the P1/P2/P3/P4 button to define it.

Make a quick call. From the standby screen, press the P1/P2/P3/P4 button to quickly access the defined object, and then initiate a Quick Call.

Selective Call

Make a single-member Selective Call. From the Friend List or User List, select a single friend or user, press the PTT button to create a temporary group, and press and hold the PTT button to initiate a Selective Call.

Make a multi-member Selective Call. From the Friend List or User List, select multiple friends or users, press the PTT button to create a temporary group, and press and hold the PTT button to initiate a Selective Call.

Create a temporary group. A group that is temporarily formed to initiate a Selective call.

Missed Call Alert

Activate Missed Call Alert.

- When you initiate a Selective Call to a friend or user, and the call is not answered within 20 seconds, the radio automatically sends a Missed Call Alert to that person.
- When you initiate a Selective Call to a friend or user, you can press the SOS button to manually send a Missed Call Alert to that person.
- If someone initiates a Selective Call to you and you exit the Selective Call mode without responding, your radio receives a Missed Call Alert. You can cancel this alert by pressing any button. A Missed Call icon appears on the status bar to indicate that a Selective Call was not answered. To view the PTT Records, press the Back button from the standby screen.

Deactivate Missed Call Alert.

- If someone initiates a Selective Call to you and you respond within 20 seconds, your radio will not receive any alert unless that person manually initiates a Missed Call Alert.
- When you receive a Missed Call Alert, press the PTT button to deactivate it.

Wireless Audio

For detailed instructions, refer to the related documentation.

Menu reference

Main menu	Submenu	Options	Description
Choose Group			Choose a group.
Friend List			Select one or more online friends for a private call.
User List			Select one or more online users for a private call.
Dispatcher MSG			View the received dispatcher messages.
PTT Records			View the existing PTT records. You can press and hold the P1 button to delete all records.
WLAN Settings	WLAN Status		View the signal strength, name, IP address, and MAC address of the currently connected WLAN.
	Work Mode	Off	The networks cannot be connected automatically, only manually from the Favorite List.
		WLAN-Manual	The networks in the Favorite List can only be switched manually.
		WLAN-Auto	When the current network signal is weak, your radio automatically switches to a stronger network in the favorites list.
	Favorite List		View saved networks.
	Scan		
	Accessible only if Work mode is set to WLAN-Manual or WLAN-Auto.		Find nearby networks.

GPS INFO			View the latitude and longitude for your radio's location.
Audio Settings	Sound Quality	HQ Mode	Enable high-quality audio for both transmission and reception.
		STD Mode	Enable standard audio for both transmission and reception.
	MIC Select	Auto	Automatically select the MIC on your radio or on your handheld microphone for transmission.
		Ext MIC	Only use the MIC on your handheld microphone for transmission.
		Int MIC	Only use the MIC on your radio for transmission.
	Env Optimize	Normal	Automatically set the parameters of MIC Gain, SPK Gain, AI Noise Cancel, and RX Noise Supp to suit a normal environment. And these parameters do not allow manual modification.
		Quiet	Automatically set the parameters of MIC Gain, SPK Gain, AI Noise Cancel, and RX Noise Supp to suit a quiet environment. And these parameters do not allow manual modification.
		Noisy	Automatically set the parameters of MIC Gain, SPK Gain, AI Noise Cancel, and RX Noise Supp to suit a noisy environment. And these parameters do not allow manual modification.
		Manual	Allow manual modification of the parameters of MIC Gain, SPK Gain, AI Noise Cancel, and RX Noise Supp.
	MIC Gain Accessible only if the Env Optimize is set to manual.	-2/-1/Standard/+1/+2	Adjust the volume of the microphone.
	SPK Gain Accessible only if the Env Optimize is set to manual.	-2/-1/Standard/+1/+2	Adjust the volume of the speaker.
	AI Noise Cancel Accessible only if the Env Optimize is set to manual.	Off	Disable AI noise cancellation.
		Weak	Set the AI noise cancellation level to weak.
		Medium	Set the AI noise cancellation level to medium.
		Strong	Set the AI noise cancellation level to strong.

ADV Settings	RX Noise Supp Accessible only if the Env Optimize is set to manual.	Off	Disable RX noise suppression.
		Weak	Set the RX noise suppression level to weak when receiving.
		Medium	Set the RX noise suppression level to medium when receiving.
		Strong	Set the RX noise suppression level to strong when receiving.
	TX Audio Opt	Off	Disable TX audio optimization.
		Bass Boost	Boost the bass of the audio when transmitting.
		Midrange Boost	Boost the midrange of the audio when transmitting.
		Treble Boost	Boost the treble of the audio when transmitting.
	MIC AGC-D	Off	Do not compress your voice when speaking into the MIC.
		On	Compress your voice when speaking into the MIC from a distance, making it sound like you are speaking at close range.
	Duplex Suppression	Off	Disable noise suppression during duplex communication.
		On	Enable noise suppression during duplex communication.
	Network Mode	Auto	Automatically select a network with a better signal to log in to your radio.
		3G Only	Only use a 3G network to log in to your radio.
		4G Only	Only use a 4G network to log in to your radio.
	Dual SIM	SIM 1	Use SIM 1 to log in to your radio.
		SIM 2	Use SIM 2 to log in to your radio.
	Talk Back	Off	Disable Talk Back.
		3s/5s/10s/20s/30s	After receiving a call from a monitored group, you can directly reply to the monitored group within 3/5/10/20/30 seconds.
	PWR On Mode	ACC	Your radio powers on automatically when a power cord with ACC is connected.
		Key	Press and hold the power switch to power on your radio when a power cord with ACC is connected.
	PWR Off Mode	ACC	Your radio powers off automatically when a power cord with ACC is disconnected.
		Key	Press and hold the power switch to power off your radio.
	Rotate	Normal	Normal screen orientation.
		Inverse	Rotate the screen orientation 180° for the inverted mounting of your radio.

Settings	SOS Mode	Off	Disable SOS.
		Normal	Press and hold the SOS button to send an SOS alert to your current group.
		HOT MIC	Press and hold the SOS button to send an SOS alert to your current group and automatically initiate a call. This alert lasts for 10 seconds, repeats every 20 seconds, and repeats two calls in total. Press and hold the SOS button again to cancel the SOS alert (icon disappears), and the repetition will stop.
	Record Control	Off	Disable recording of transmitted and received content.
		On	Enable recording of transmitted and received content.
	Time Zone	UTC-12 to UTC+14	Select the desired time zone for the time on your radio.
	PoC Update		Remotely upgrade your radio's PoC version.
	Backlit Mode	Open	The backlight is always on.
		Auto	When a key is pressed or when your radio is transmitting or receiving, the backlight turns on automatically. The backlight turns off automatically after 10 seconds of inactivity.
		Key	When a key is pressed, not including your device transmitting or receiving, the backlight turns on automatically.
	Backlight Color	White/Red/Blue/ Green/Magenta/ Yellow/Cyan	Set the backlight color to white/red/blue/green/magenta/yellow/cyan.
	Brightness	1 to 9	Adjust the screen brightness when the backlight is on.
	Quick Definition	P1 Delete to P4 Delete	Delete the defined object on the P1/P2/P3/P4 button.
		Numkey Delete	Delete all defined objects on the numeric keys on your handheld microphone.
	Auto Lock	Off	Press and hold the Back button on your handheld microphone to lock/unlock the keys on your radio.
		On	The keys automatically lock after 10 seconds of inactivity. In the key lock mode, only the keys on your handheld microphone except PTT and SOS buttons are locked, and the buttons of your radio are not locked.

	Language	CHS	Set the language to Simplified Chinese.
		CHT	Set the language to Traditional Chinese.
		English	Set the language to English.
		Spanish	Set the language to Spanish.
	Key Tone	Off	Disable the Key Tone.
		On	Enable the Key Tone to indicate the completion of the operation.
	Roger Beep	Off	Disable the Roger Beep when pressing and releasing the PTT button.
		On	Enable the Roger Beep when pressing and releasing the PTT button to indicate the start and end of a call.
	Device Name		View the username of the account currently logged in on your radio.
	Version		View your radio's software version, network mode, and IMEI.