

7120990001



**QP-990-U1 DPMR
Digital Two-Way Radio
USER MANUAL**

Quantun Electronics, LLC

THANK YOU

We are grateful you have chosen Quantun production. This Professional Digital two-way radio incorporates the advanced technology and craft, It is endowed all-round digital functions and remarkable quality to refresh your experience, You will be pleased with the quality and features of our product. Please read this manual carefully to ensure you know how to property operate the radio before use.

CONTENTS

User Safety Information

Compliance with RF Energy Exposure Standards

Precautions and notices

Product Inspection

Radio Overview

Parts of the Radio

The functions of the LEDs and Beeps Table

Programmable Auxiliary Functions

Radio embedded features

Getting Started

Battery

Antenna

Accessory Installation

Basic Operations

Call

VOX Operation

Troubleshooting

Care and Cleaning

Service

User Safety Information



READ THIS IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION BEFORE USING YOUR QUANTUN PORTABLE TWO-WAY RADIO.

Compliance with RF Energy Exposure Standards

Your **Quantun** two-way radio is designed and tested to comply with a number of national and international standards and guidelines (listed below) regarding human exposure to radio frequency electromagnetic energy. This radio complies with the IEEE (FCC) and ICNIRP exposure limits for occupational/controlled RF exposure environment at duty cycles of up to 50% talk-50% listen and should be used for occupational use only. In terms of measuring RF energy for compliance with the FCC exposure guidelines, your radio radiates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.

Note: The approved batteries supplied with this radio are rated for a 5-5-90 duty cycle (5% talk-5% listen-90% standby), even though this radio complies with the FCC occupational RF exposure limits at duty cycles of up to 50% talk.

Your Quantun two-way radio complies with the following of RF energy exposure standards and guidelines:

- United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J
- American National Standards Institute (ANSI)/Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1999 Edition
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Radio Frequency Electromagnetic Fields in the Frequency Range from 3KHz to 300GHz, 1999

- **EU Regulatory Conformance**

As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC. Please note that the above information is applicable to EU countries only.

Precaution and Notices

- Government law prohibits the operation of unlicensed radio transmitters. Illegal operation is punishable by fine or imprisonment Of both.
- To avoid problem caused by electromagnetic interference and electromagnetic compatibility, please turn off the transceiver at the sites where you are required, such as hospital, airplane etc.
- In the vehicle equipped with air bag safety, don't put the transceiver within the scope of the air bag inflation.
- Please turn off the transceiver before step into the inflammable and explosive places.
- Don't transmit for a long time, it may damage the transceiver or it may cause scald.
- Don't use the transceiver which antenna is damaged or else when the exposed metal touch the skin, it may cause scald also.
- Don't expose the transceiver to long periods of direct sunlight, nor place it close to heating appliances.
- If belt the transceiver on with belt clip, please notice that the distance Between body and antenna should be more than 5cm when transmitting.
- If an abnormal odor or smoke is detected coming from the transceiver, switch OFF the power immediately and remove the optional battery pack from the transceiver. Contact our dealer nearby.

Product Inspection

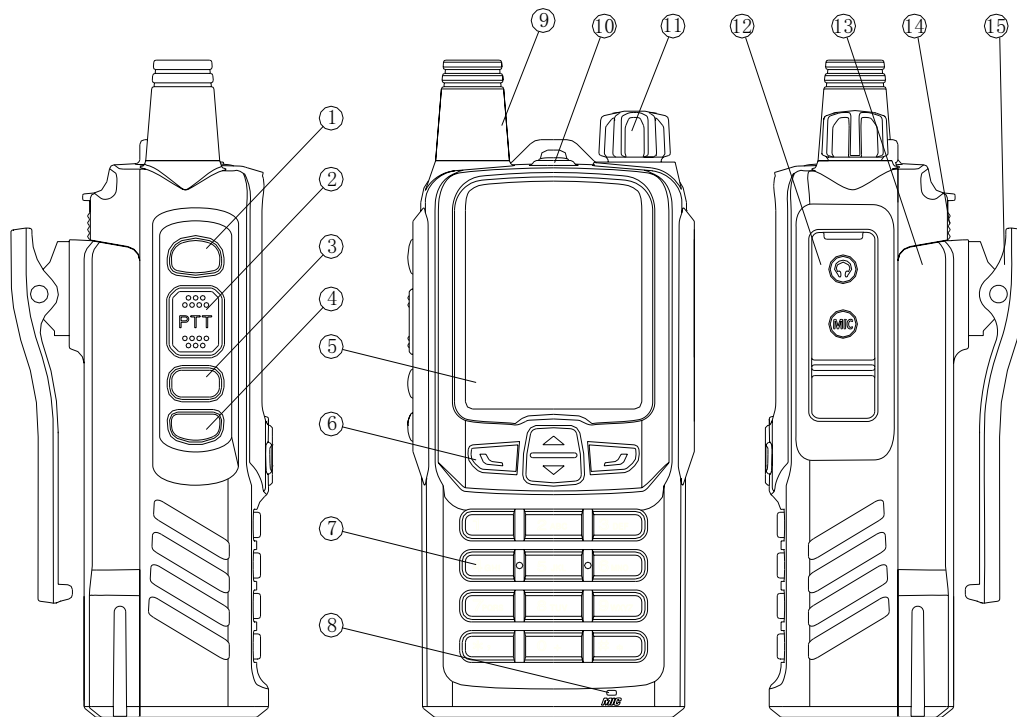
Please carefully take the transceiver out of the box. We recommend that you confirm the items listed in the following table are enclosed before discarding the box. If any items are missing or have been damaged during shipment, file a claim with the carrier immediately.

Available Accessories

Item	Qty. (Pcs.)
Antenna	1
Belt Clip	1
Battery	1
AC Adapter	1
Charger	1
User's Manual	1











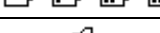




Radio Overview

Parts of the Radio



(1) SK1 (Programmable Side key 1)	(2) PTT Key	(3) SK2 (Programmable Side key 2)	(4) SK3 (Programmable Side key 3)
(5) LCD Display	(6) Menu operation key	(7) Numeric keypad	(8) Microphone
(9) Antenna	(10) Status Indicator	(11) Radio On-Off/ Volume Control Knob	(12) Accessory Jack
(13) Battery	(14) Battery Latch	(15) Belt Clip	(16)

LCD Icon

Icon Name	Icon	Radio status
RSSI		No signal
		More bars indicate better signal strength
Message		New message/unread message
		InBox is full
Scan		Scanning is in progress
		Scanning pauses on a non-priority channel
		Scanning pauses on Priority Channel 1
		Scanning pauses on Priority Channel 2
		
		
Battery Strength		More bars indicate more battery power
Monitor		The Monitor feature is active
Speaker		The speaker is unmuted.
Emergency		The Emergency mode (other than secret emergency) is active or an emergency message is received
Encrypt		The Encrypt feature is active
Operation Mode	DM	Direct Mode: Under this mode, radios communicate with each other directly
	RM	Repeater Mode: Under this mode, radios communicate with each other via a repeater

The functions of the LEDs and beeps Table

Power on	When the radio is turned on, the power on alert tone sounds and status Indicator flashes red. When the current channel is a blank channel, the radio sounds beep tone continuously.
Power off	When the radio is turned off, the power off alert is heard.
Low battery alert	Status Indicator flashes red, and a Di-Di-Di tone sounds at intervals of 10 seconds.

Transmitting	Status Indicator glows red when transmitting. When TOT timer expires, the radio sounds beep tone continuously. TOT pre-alert:: A beep is heard.
Receiving	Status Indicator glows green when carrier is present.
Call ended (within the presettime period)	LED glows orange
Scanning	Status Indicator flashes green once every 1 second, while scanning is in process. Scan Start Alert Tone (programmable by your dealer): A beep is heard. When signal is received on a certain channel, Status Indicator solidly glows green. Scan Exit Alert Tone (programmable by your dealer): Two beep is heard.
VOX	One beep sounds when the VOX feature is activated. Two beeps sound when the VOX feature is disabled.

Programmable Auxiliary Functions

The **SK** key is a programmable function button. Your dealer may assign any of the following auxiliary functions to a short or long programmable key-press.

- None
- Squelch Off
- Squelch Off Momentary
- Monitor
- Monitor Momentary
- Scan

- Channel Lock
- Battery Strength Indicator
- VOX
- Encryption

Radio embedded features

- Analog Digital Receive Automatically Identify
- Channel number Voice

- Selectable Squelch Level
- Busy Channel Lockout
- Tx time-out-timer
- CTCSS/CDCSS signalling
- Squelch Tail Elimination
- Battery Save function
- Low battery Alert

Getting Started

Battery

Safety Precautions

The battery is not fully charged at the factory. It is recommended to charge the new battery for 5 hours before using it. Also, batteries that may have set longer than 2 months since the last charge should be charged before using it. The battery capacity will be optimum after being charged/discharged two or three times. When the battery's charge is depleted, charge the battery or replace the battery with a new one.

Caution:

1. Do not short circuit the battery terminals or discard the battery in fire. Never attempt to disassemble the battery.
2. Never charge a battery that is wet. Please dry it with soft cloth prior to charge.
3. Do not return fully charged batteries to the charger for an "extra boost". This action will significantly reduce battery life.
4. Dispose of batteries according to local regulations (e.g. recycling). Do not dispose as household waste.

Battery Tips

1. The battery should be charged at 5°C ~ 40°C, temperature out of this range could result the battery not fully charged.
2. When charging a battery attached to a radio, turn the radio off to ensure a full charge.
3. Do not cut off the power supply or remove the battery when charging a battery.
4. The battery will eventually wear out. When the operating time (talk-time and standby time) is noticeably shorter than normal performance, it is time to buy a new battery.

To Prolong Battery Life

- ✧ Battery performance will be greatly decreased at a temperature -20°C below. Please use back-up battery in cold weather. The cold battery unable to work in this situation may work under room temperature, so keep it for later use.
- ✧ The dust on the battery contact may affect battery life. Please use clean dry cloth to wipe it before the attaching the battery to the radio.

Battery Storage

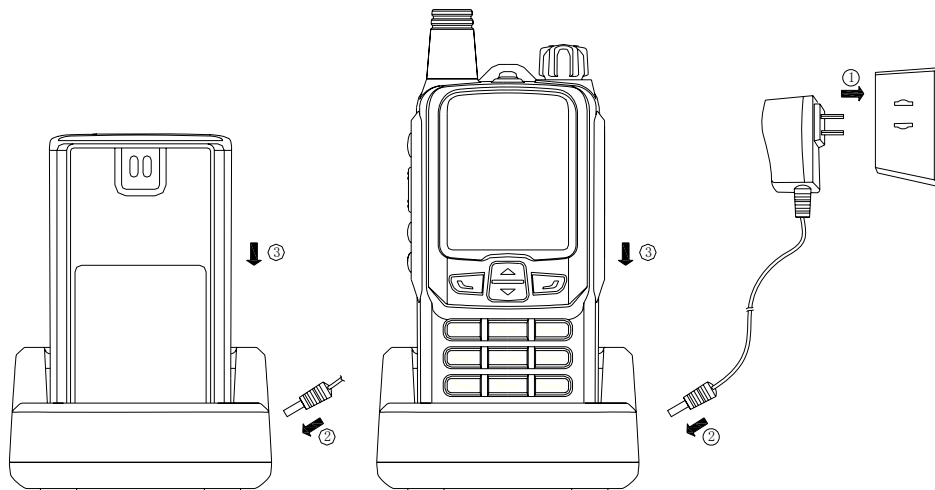
1. Considering the battery's self-discharge characteristics, fully charge the battery prior to long time storage, to avoid battery damage due to over-discharge.
2. Recharge the battery after 6 months' storage, to avoid reducing battery capacity due to over-discharge.
3. Notice the ambient humidity and temperature for the battery storage. Please store it in cool dry area under room temperature, to reduce self-discharge capacity.

Charging the Battery

When the radio top LED flashes red and three beeps sound every 10 seconds indicating the battery power runs low, please recharge the battery.

You are recommended to use Quantun authorized charger. Charger LED will indicate the charging status.

Please follow these steps to charge your radio using the switching power adapter or desktop charger:



1. Plug the AC connector of the switching power adapter into the AC outlet socket.
2. Plug the DC connector of the switching power adapter into the DC jack of the charger.
3. Place the radio with the battery attached or the battery alone in the charger.
4. The charging process initiates when LED glows red, and is completed when LED glows green.

Note: Make sure the radio is attached with a battery before charging, and is powered off during charging.

Antenna

Stubby antennas are ideal for communication within limited range. Fine and long antennas optimizes communication coverage, ideal when the radio is worn on the belt because they are flexible and soft.

Rainy days or forest locations may narrow your communication range, please repare in advance to avoid potential inconvenience.

Accessory Installation

Battery

Attaching the battery

1. Insert the battery into the bottom of the radio. See arrow ①.
2. Slightly press the top of the battery until a click is heard. See arrow ②.

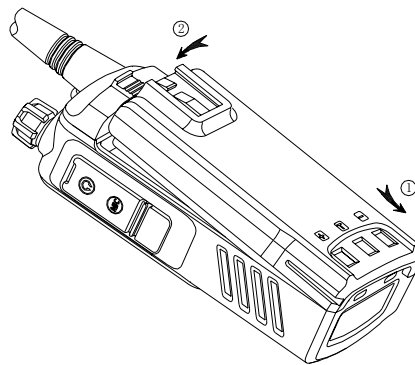


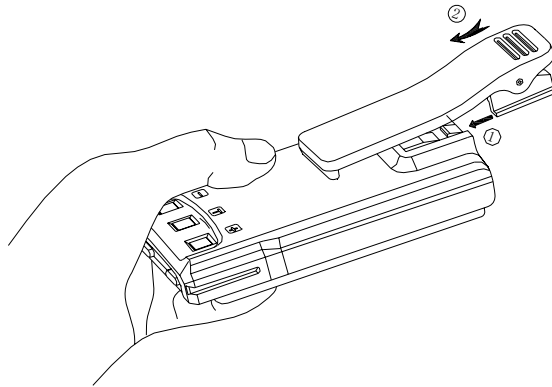
Figure 1

To remove the battery, turn off the radio first. Then slide the battery latch upwards to unlock the battery.

Belt Clip

Attaching the Belt Clip

1. Align the slot of the belt clip with the T-slot on the battery cover ,see arrow ①
2. Press the belt clip downwards until it is locked. See arrow ②



Antenna

Attaching the Antenna

1. Align the threaded end of the antenna with the radio's antenna connector.
2. Turn the antenna clockwise to fasten it, as shown in Figure 5.

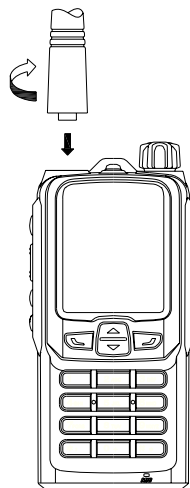


Figure 5

To remove the antenna, rotate it counterclockwise.

Attaching the Accessory

Open (not remove) the accessory cover, plug the audio accessory firmly into the accessory jack. as shown in Figure 8

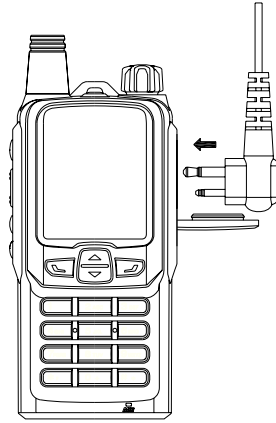


Figure 8

Note: Using the radio with audio accessory may affect the waterproof performance of the radio.

Basic Operations

Turn On/Off the Radio

Turning the Radio On/Off

Rotate the Radio On-Off/Volume Control knob clockwise/counterclockwise until a click is heard to turn the radio on/off.

Adjusting the Volume

Adjusting the Volume

After turning the radio on, rotate the Radio On-Off/Volume Control knob clockwise to increase the call volume, or counterclockwise to decrease it.

Selecting a Channel

Ensure the LCD Display is in the home screen, press the ▲ ▼ key to select a channel.

Call

To ensure optimal volume of the receiving radio, hold the radio approximately 2.5 to 5 centimeters away from your mouth.

Private Call

Transmitting a Private Call

You may transmit a Private Call through any of the following methods. When transmitting a Private Call, the private call icon will appear.

- Transmitting a call to the preset contact

In the home screen, hold down the PTT key to transmit a Private Call to the Private Call contact preset for the current channel.

Note: Your dealer may preset a contact for each digital channel. The preset contact could be a Private Call contact, a Group Call contact or an All Call contact.

- Transmitting a call through Contact List or Call Logs

1) Go to “Contact -> Contact List” , or go to “Call Logs” and access the Outgoing/Incoming/Missed list.

2) Use the Up/Down key to select the Private Call contact you want to call.

3) Hold down the PTT key to transmit the Private Call.

- Transmitting a call through Manual Dial

1) Go to “Contact -> Manual Dial” .

2) Input a Private Call number you want to call.

3) Hold down the PTT key to transmit the Private Call.

Receiving and Responding to a Private Call

When a Private Call is received, your radio will display the private call icon.

You may hold down the PTT key within the preset time period to call back. If you do not

respond to a received Private Call, your radio will display the missed call icon.

Group Call

Transmitting a Group Call

You may transmit a Group Call through any of the following methods. When transmitting a Group Call, the Group call icon will appear.

- **Transmitting a call to the preset contact**

In the home screen, hold down the PTT key to transmit a Group Call to the Group Call contact preset for the current channel.

- **Transmitting a call through Contact List**

- 1) Go to "Contact -> Contact List" .
- 2) Use the Up/Down key to select the Group Call contact you want to call.
- 3) Hold down the PTT key to transmit the Group Call.

Receiving and Responding to a Group Call

When a Group Call is received, you can listen to it without any operation, and you may hold down the PTT key within the preset time period to call back.

All Call

Transmitting an All Call

Methods are the same as those in Transmitting a Group Call.

When transmitting an All Call, the All Call icon will appear.

Note: You can transmit an All Call only when it is enabled by your dealer.

Receiving an All Call

When an All Call is received, your radio will display the All Call icon. You can listen to it without any operation.

Note: You cannot respond to an All Call.

VOX Operation

When hands-free operation is desired, your radio can be activated by voice alone using the VOX feature when you speak through an accessory that is connected to your radio.

- **Connecting a VOX Headset**

1. Turn off your radio.
2. Connect the VOX accessory to your radio and turn the radio on.

- **Enabling or Disabling VOX**

To enable or disable VOX operation, press the preprogrammed VOX button (see advanced operations)

Note: Pressing the PTT button disables VOX.

Troubleshooting

Trouble	Solution
Cannot power on the radio.	<ul style="list-style-type: none"> ● The battery has run out. Please recharge the battery or replace it with a new one. ● The battery may not be properly installed. Remove the battery and attach it again.
The operating time is noticeably shorter than normal performance, even though the battery is properly charged.	<ul style="list-style-type: none"> ● The battery has worn out, and it is time to buy a new battery. ● The battery is not fully charged. Make sure the charge indicators glow green.
Cannot talk to or hear group members.	<ul style="list-style-type: none"> ● Make sure all members are on the same digital/analog Channel setting. ● Make sure you are within their communication range.
Non-group members voice are present on the channel	<ul style="list-style-type: none"> ● Send the radio to your dealer to change your CTCSS/CDCSS settings, and so as your group members.
No voice or low voice while transmitting	<ul style="list-style-type: none"> ● Make sure the volume is turned up to its maximum value. ● Send the radio to your dealer for microphone examination.
Noise always on	<ul style="list-style-type: none"> ● Group members are too far away to receive their call. Please go within the communication range and re-power on the radio to try. ● Reset the Squelch Level by your dealer.

Care and Cleaning

- Do not place the radio in a dusty or dirty environment.
- Clean the radio with a lint-free cloth to remove dirt or grease, to avoid poor contact due to excessive dust.
- Clean the radio using a lint-free cloth moistened with clean water and a mild dishwashing liquid.
- Avoid subjecting the radio to corrosives, solvents or spirits.

Service

If you need service, contact your Quantun dealer. If you find it inconvenient to have service performed by your local dealer, you may contact Quantun below:

Quantun Electronics,LLC

14005 NW 8 Street Unit 2, Sunrise, Florida 33325 USA

Main line: 954-651-6300

Toll Free USA: 888-361-0521