



OWNER'S MANUAL

RPU4200A

FM HANDHELD TRANSCEIVER



NOTE



OWNER'S MANUAL

RPU4200A

FM HANDHELD TRANSCEIVER

We are very grateful for your purchasing RELM brand two-way radios produced by Relm Wireless Corporation.

We believe RELM two-way radio, which always incorporates the latest technology, can bring great convenience to your life and work;

we also believe that the quality and function of RELM two-way radio can meet your demands for reliable communication.

PRECAUTIONS

Please observe the following precautions to prevent fire, personal injury, and radio damage.

Do not operate your radio in an explosive atmosphere (petroleum fuels, solvents, dust, etc).

Do not operate the transmitter in close proximity to blasting caps.

Do not expose the radio for a long period to direct sunlight, nor place the radio close to heating appliances.

Do not place the radio in excessively humid areas or on unstable surfaces.

Do not modify this radio for any reason.

Refer service to qualified licensed or certificated technicians only.

Notice to the User:

- Government laws prohibit radio communication without permission in government districts.
- Illegal operation is subject to punishment by fine and/or imprisonment.
- Refer service to the well-trained professional technicians only.

Safety

It is important that the user is aware of and understands hazards common to the operation of any radios.

Warning!

Turn off your radio before entering any area with a potentially explosive atmosphere (where the air contains gas, dust and smog, etc.), such as while taking on fuel, or while parking at a gasoline service station.

Precautions in Use

Please comply with the following attentions to avoid fire, bodily injury and damage to the radio.

- The radio is recommended to transmit for 1 minute and

receive for 4 minutes. Long time transmitting or continuous working in high power mode will make the rear side of the radio generate heat.

- Please don't disassemble or assemble the radio under any circumstances.
- Please don't expose the radio to direct sunlight for a long time; don't place the radio near any heating devices, either.
- Please don't put the radio in extremely dusty, moist or dabbling places; don't place it on any unstable surfaces, either.
- If the radio emits smoke or strange odors, turn it off and remove the battery from the radio and promptly contact your local authorized RELM dealer.

CONTENTS

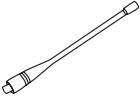
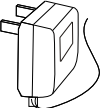




| | |
|---|----|
| ■ UNPACKING AND CHECKING EQUIPMENT..... | 1 |
| ■ SUPPLIED ACCESSORIES | 1 |
| ■ PREPARATION..... | 2 |
| ● CHARGING THE BATTERY PACK | 2 |
| ● INSTALLING/REMOVING THE BATTERY PACK..... | 3 |
| ● INSTALLING THE ANTENNA..... | 4 |
| ● INSTALLING THE OPTIONAL SPEAKER/MICROPHONE..... | 4 |
| ● INSTALLING/REMOVING THE BELT CLIP..... | 4 |
| ■ RADIO OVERVIEW..... | 5 |
| ■ BASIC OPERATION..... | 6 |
| ■ SCAN FUNCTION..... | 7 |
| ● STARTING SCAN..... | 7 |
| ● STOPPING SCAN..... | 7 |
| ■ AUXILIARY FUNCTIONS..... | 10 |
| ● TIME-OUT TIMER..... | 10 |
| ● BATTERY SAVING..... | 10 |
| ● LOW BATTERY WARNING..... | 10 |
| ● MONITOR..... | 10 |
| ● CTCSS/DCS | 11 |
| ● VOICE ANNUNCIATION OF CURRENT CHANNEL NUMBER..... | 11 |
| ● WIRED CLONE..... | 12 |
| ● EMERGENCY ALERT..... | 12 |
| ■ TROUBLESHOOTING GUIDE | 13 |
| ■ SETTINGS | 14 |

■ UNPACKING AND CHECKING EQUIPMENT

Carefully unpack the radio. We recommend that you identify the items listed in the following table before discarding the packing material. If any damage has occurred during shipment, please contact the dealer immediately.

■ SUPPLIED ACCESSORIES

| ITEM | QUANTITY |
|---------------------|----------|
| Antenna | 1 |
| Power adapter | 1 |
| Belt clip | 1 |
| Charger | 1 |
| Hand strap | 1 |
| Li-ion battery pack | 1 |
| Instruction manual | 1 |

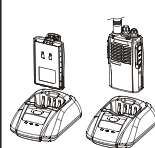
| | | |
|---|---|---|
|  |  |  |
| Antenna | Power Adapter | Belt clip |
|  |  |  |
| Charger | Hand Strap | Battery |

■ PREPARATION

● CHARGING THE BATTERY PACK



A new battery or a battery whose power appears low (power indicator displays one bar or no bar) needs charging before using.



1) Plug the adapter into an AC wall outlet; connect the power adapter with the battery charger, and then the indicator lights yellow.

2) Place the battery or radio into the charger slot. Make sure the battery is well connected with the charger. Charging will start automatically and the indicator light is red. Charging time is approximately 5 hours. When the battery is fully charged, the indicator light turns green.

For best battery performance, keep the battery in the charger for 1-2 hours after the charging indicator turns green. Remove the AC adaptor from the outlet when not charging the battery.

Notice:

- * The battery is not fully charged in the factory. Before the initial use, please charge the new battery.
- * RELM BPRP1250 Li-Poly battery is supplied.
- * When charging the battery for the first time after purchase or long-time storage (over 2 months), please repeat charging several times to resume the battery normal capacity.

- * Do not charge the battery again if it has been fully charged or it is not in the low battery warning state, otherwise, its life will be shortened or it will be damaged.

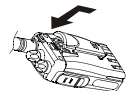
- * Remove the battery from the charger after charging.

- * If the battery has been depleted, the red indicator will light approximately 1 minute after the battery is placed in the charger.

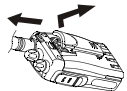
● INSTALLING /REMOVING THE BATTERY PACK



Match the guides of the battery pack with the corresponding grooves in the bottom of the radio, and insert the battery in.



Press downward the battery pack until the release latch locks.



To remove the battery pack, push the release latch upwards and then slide the battery pack away from the radio.

Notice:

- * Do not short-circuit the battery terminals or dispose battery in fire.
- * Do not disassemble the battery casing.

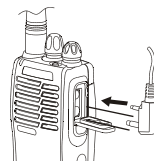
● INSTALLING THE ANTENNA

Screw the antenna into the connector at the top of the radio by holding the bottom of the antenna and turn it clockwise until secure.



● INSTALLING THE OPTIONAL SPEAKER /MICROPHONE

Insert the Speaker/Microphone plug into the jacks of the versatile connector.



Note:

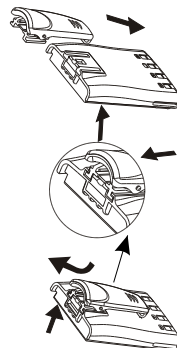
When use the optional Speaker/Microphone, the radio will not be waterproof.

● INSTALLING /REMOVING THE BELT CLIP

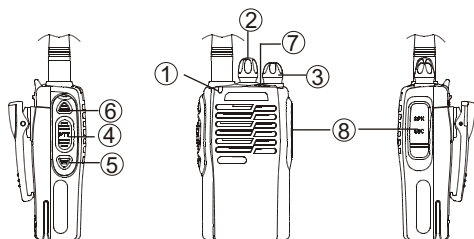
Match the grooves of the belt clip with those on the rear of the battery.

Then press the belt clip downwards to lock it in place.

To remove the belt clip, use your nail or a tool to lift the metal spring. Carefully slide the belt clip away from the battery.



RADIO OVERVIEW



① LED Indicator

Lights red while transmitting; lights green while receiving a signal. Flashes red while in low battery power.

② Channel Selector

Rotate to select channel 1-16.

③ Power/Volume Switch

Turn clockwise to switch on the radio.

Turn counterclockwise till a click is heard to switch off the radio.

Rotate it to adjust the volume after turning on the radio.

④ PTT (Push-to-talk)

To make a call, press and hold the PTT button, then speak into the microphone in normal voice.

Release the PTT button to receive a call.

⑤ Monitor Button

Press to disable the SQUELCH, and enable the SQUELCH again.

⑥ Channel Annunciation Button

Press it in standby state, and the channel number will be annunciated. If press and hold this button, and at the same time switch on the radio again, the type of voice annunciation of

channel number will be changed.

⑦ Emergency Button

Press and hold this button for over 2 seconds to activate warning tone. Press it again to exit the emergency alert state.

Note:

When warning tone sounds, all of the buttons are disabled.

⑧ Microphone/Speaker Jacks

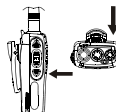
For connecting external Microphone/Speaker.

BASIC OPERATION

Switch On

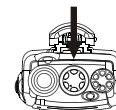


Switch on the radio by turning the Power/Volume switch clockwise till a click is heard, then the radio will be in the state of stand by and you will hear a beep if the dealer has set it. And then you will hear voice annunciation of the current channel number.



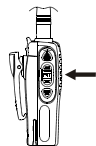
Adjust Volume

Press the monitor button to listen to the background noise and rotate the Power/Volume switch to adjust volume.



Select Channels

Rotate the channel selector to select channels. You will hear voice from the speaker while receiving proper signals. If voice annunciation of channel number has been set, the radio will annunciate the current channel number.



Make a Call

To make a call, select the desired channel, press and hold the PTT button, and speak in normal voice. Please keep your mouth 1-2 in. away from the microphone.

Receive a Call

Release the PTT button to receive a call. Select the desired channel and adjust the volume to a proper level.

■ SCAN FUNCTION

(See your dealer for setting-up the Scan List and Scan Functions.)
There must be at least two channels added in the scan list and the scan function has been activated before the radio can start scanning.

● STARTING SCAN

When switching to channel 16, the radio will begin to scan, and pause after receiving signals.

● STOPPING SCAN

When switching to channel 1-15, the radio will stop scanning.

Introduction:

1. Dealer can set the following two ways to restart scanning after its pause:

1) Time-control

The radio will restart scanning after pausing for some time while

receiving signals. The pausing time can be preset from 0.5 to 5 seconds.

2) Carrier wave control

The radio will pause scanning after receiving signals and will restart scanning 3 seconds after the signal disappears.

2. The working channel of the radio will respond to the following channels automatically when pressing PTT button during scanning. The dealer can select one among the following six ways.

1) Last called

When pressing PTT button, the radio will transmit from the last channel that received a call.

2) Last used + currently working channel

When pressing PTT button during the scanning, the radio will transmit from the last channel that received a call. When pressing PTT button during the scanning pause, the radio will transmit from the currently working channel.

3) Selected channel

When pressing PTT button, the radio will transmit from the first channel of the scanning list.

4) Selected channel + currently working channel

When pressing PTT button during scanning, the radio will always transmit from the first channel in the scanning list. When pressing PTT button during the scanning pause, the radio will always transmit from the currently working channel.

5) Priority channel

The radio will transmit signals from the priority channel in the scan list when pressing PTT button.

6) Priority channel + currently working channel

When pressing PTT button during scanning, the radio will always transmit from the priority channel. When pressing PTT button during

the scanning pause, the radio will transmit from the currently working channel.

Note:

* Currently working channel means the channel in which the radio holds on under the following four conditions.

- 1) After receiving the signals, the radio will still stay in the current channel before restarting the scan.
- 2) When receiving signals during scanning, the radio will pause on the current channel and will keep staying on it for 3 seconds after the signals disappears.
- 3) Radio will stay on the current channel when pressing PTT during scanning.
- 4) When the radio transmitting ends by releasing PTT button, within the transmitting pause time preset by the local dealer, the radio will stay in the current channel.

* Selected channel: The first channel in the scanning list set by the dealer.

* Priority channel: The prior channel in the scanning list set by the dealer.

* Only when priority channel has been selected, the options of priority channel and priority channel + currently working channel in Revert Channel are available.

■ AUXILIARY FUNCTIONS

● TIME-OUT TIMER

Time-out timer can prevent the user from continuously talking overlong and prevent the radio from heating due to continuous transmitting.

If you continuously transmit longer than the time limit preset by the dealer, the radio will stop transmitting and warning tone sounds, and to stop the warning tone please release the PTT button. Pressing the PTT button again will resume transmitting.

● BATTERY SAVING

The automatic battery saving function decreases the power consumption when no signal is received and no operation is conducted.

If the battery saving function is activated, 10 seconds after the radio doesn't receive any signals or no operation is being conducted, the radio enters battery saving mode. When a signal is received or any operation occurs, it exits battery saving mode automatically.

● LOW BATTERY WARNING

When the battery voltage drops too low while transmitting, the LED flashes red, Low battery warning tone sounds, and the radio stops transmitting. You need to recharge or change the battery.

● MONITOR

Off: When this function is selected, no operation is performed.

Monitor Momentary: Press and hold the monitor button to un-mute the audio. Release it to mute the audio and return to normal operation.

Monitor Lock: Press the monitor button once to mute the audio. Press it again to mute the audio and return to normal operation.

SQ Off: When there is no signal received, the squelch circuit of the radio will automatically mute the speaker, so you will not hear the background noise. Press the MONI key to un-mute the audio.

● CTCSS/DCS

CTCSS/DCS tones may have been pre-programmed on some channels. A CTCSS/DCS tone is a sub-audible tone, which allows you to ignore (not hear) calls from other parties who are using the same channel. The dealer can set CTCSS/DCS tones on radio channels.

When you receive a signal that has a tone different from the one set on your radio, you will not hear the signal. Likewise, signals that you transmit will only be received by the parties whose CTCSS/DCS tones are the same as yours.

Note:

Using a CTCSS/DCS channel doesn't mean your calls are private. If other parties' CTCSS/DCS tones are identical with yours, they can hear your calls.

● Voice Annunciation of Current Channel Number

If voice annunciation of current channel number has been activated, when pressing the channel annunciation button in stand-by mode, the current channel number will be annunciated in the preset language through the loudspeaker. If turn on the radio with this button pressed, the annunciation language will be changed. Repeat turning on the power with this button pressed, the type of the annunciation language can be changed in sequence “ Chinese Male---English Male---Chinese Female---English Female---No Annunciation” .

● Wired Clone

Cloning, as well as any programming, is to be performed by the authorized technician or Dealer. Please contact the authorized personnel to clone or alter the program contents of your radio.

● Emergency Alert

Press the emergency button for more than 2 seconds, and then the radio enters the state of emergency alert: red light flashes, and loud warning tone sounds.

Press the emergency button again to exit the emergency state.

In emergency state, any other keys or buttons are inactive.

■ TROUBLE SHOOTING GUIDE

| NO. | PROBLEM | SOLUTION |
|-----|--|--|
| 1 | The radio cannot be switched on or no display after being switched on. | <ul style="list-style-type: none"> • Battery power may be insufficient. Recharge or replace the battery pack. • Battery pack may not be installed properly. Remove the battery pack and install it again. |
| 2 | The battery power consumes quickly after charging. | <ul style="list-style-type: none"> • The battery life is finished; please replace it with a new battery pack. |
| 3 | Cannot talk to or hear other group members. | <ul style="list-style-type: none"> • Make sure the CTCSS/DCS tone is the same as that of your group members. • Out of the effective communication range. |
| 4 | Other voices from non-group members are heard on the Channel. | <ul style="list-style-type: none"> • Change the CTCSS/DCS tone, and make sure to change the tone of all radios in your group. |
| 5 | Communication range is too short. | <ul style="list-style-type: none"> • Make sure the antenna is well connected. • Make sure the antenna is the original one. • Check if the battery power is in normal state. • Ask your local dealer to adjust the squelch level. |

■ SETTINGS (set by the dealer)

Model: _____

Serial No.: _____

1) Channels List

| CHANNEL | TRANSMITTING FREQUENCY | RECEIVING FREQUENCY | CTCSS/DCS |
|---------|------------------------|---------------------|-----------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

2) The way to restart scanning after its pause:

Time control ☐Carrier wave control ☐

3) The way to revert the working channel:

- Selected channel ☐
 Selected channel or currently working channel ☐
 Priority channel ☐
 Priority channel or currently working channel ☐

4) Squelch monitor:

- Open ☐
 Close ☐

5) Time-out timer:

- Open ☐
 Close ☐

6) Automatic scan:

- Open ☐
 Close ☐



CE Versions of the RPU4200A which display the "CE" symbol on the serial number seal, comply with the essential requirements of the European Radio and Telecommunication Terminal Directive 1999/5/EC.



This warning symbol indicates that this equipment operates in non-harmonised frequency bands and/or may be subject to licensing condition in the country of use. Be sure to check that you have the correct version of this radio or the correct programming of this radio to comply with national licensing requirement.