RCA

Communications Systems

RDR1520

Digital Two-Way Radio

prodigi™

PROFESSIONAL DIGITAL RADIO PRODUCTS

Models Covered: RDR1520U (UHF) **/ RDR1520V** (VHF)

> **Congratulations and Thank You for selecting the PRODIGI RDR1520 Series portable two-way radio from RCA Communications Systems**
> **- *The most trusted name in radio!***

Our newest digital series professional communications products based on DMR technology establishes a benchmark in premium digital two-way radio equipment, made to perform flawlessly under the most demanding commercial conditions. Cutting edge design, high-end professional grade materials and components, simple operation and superior assembly quality: RCA Communications Systems has it all, including our exclusive no-nonsense, four-year "Warranty Protection Program," one of the most comprehensive warranties in the communications industry.

To ensure you achieve maximum performance from your RDR1520 radio, please be sure to carefully read this manual.

MODELS COVERED IN THIS MANUAL:

- RDR1520™ VHF Two-Way Radio
- RDR1520™ UHF Two-Way Radio

SAFETY AND GENERAL INFORMATION

This radio is restricted to occupational use only to satisfy FCC RF energy exposure requirements. Before using this product, read the operating instructions.

» Turn radio off prior to entering any area with a potentially explosive atmosphere, such as gas, petroleum, chemicals, blasting caps, etc.

» Do not charge the battery in a potentially explosive atmosphere.

» Do not use any portable radio that has a damaged antenna, as it can burn skin.

» This equipment is to be serviced only by authorized RCA Communications Systems technicians. Any service performed by unauthorized technicians will void the warranty.

» Turn radio off when near electrical blasting caps to avoid possible interference with blasting operations. Obey posted signs such as those in hospitals or blasting areas advising people to turn off all two-way radios. Obey pilots and flight attendants instructions to turn off radios on airplanes.

» Do not place a radio over an air bag or in an air bag's deployment area, as the force with which an air bag is inflated could propel the radio and may cause serious injury.

» Do not place the radio close to a heat source or expose the radio to direct sunlight for a prolonged time.

» Hold the radio while in use in a vertical position with the microphone one to two inches away from your lips.

» While wearing a transmitting radio, keep the radio and its antenna at least one inch away from your body.

For a complete list of RCA approved antennas, batteries, chargers, holsters and audio accessories, visit:

http://www.rcacommunicationssystems.com

PRODUCT INSPECTION

Prior to unpacking your RDR1520 Series portable radio, please inspect the packaging for signs of damage and report any damage or missing components immediately to your RCA Communications Systems Sales and Service Outlet. Every RDR1520 Series portable radio comes with the following items:

Item	Qty.
RDR1520™ -Handheld Radio	1
B1520LI - Li-Ion Battery (2000 mAh)	1
ANH1520U - Antenna for UHF Models **ANH1520V** - Antenna for VHF Models	1
BC1520 - Belt Clip	1
Instruction Manual	1
CH1521* - Desktop Rapid Charger	1
PS1521* - Power Supply	1

RDR1520™
Handheld Radio

B1520LI
Li-Ion Battery
(2000 mAh)

Antenna
ANH1520U - UHF models
ANH1520V - VHF models
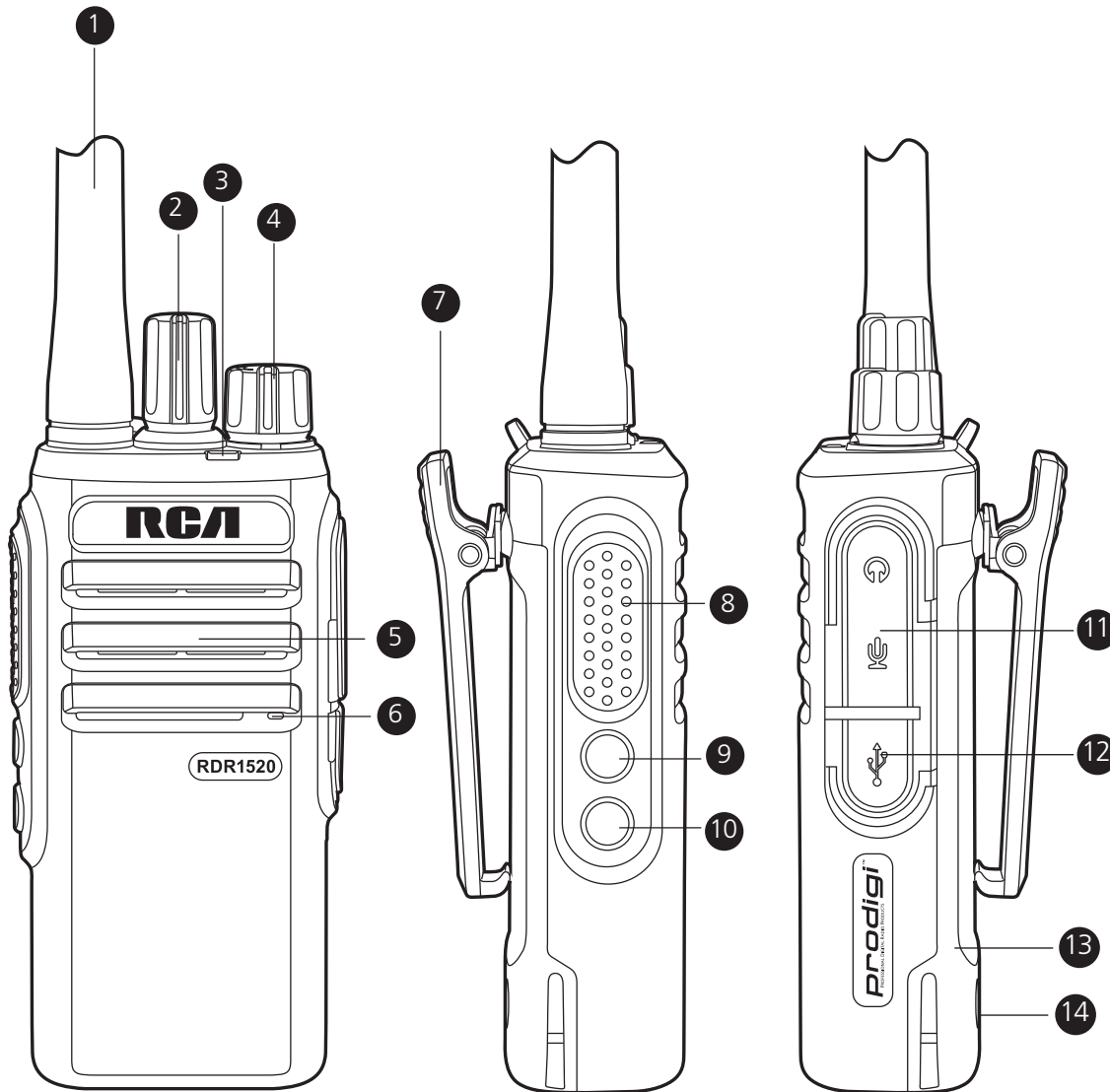
BC1520
Belt Clip

PS1521*
Power Supply

CH1521*
Desktop Rapid Charger

*Items sent in separate box if ordered.

RCA RDR1520™ Series Overview

1. Antenna
2. Channel Knob
3. LED Indicator
4. On/Off/Volume Knob
5. Speaker
6. Microphone
7. Screw-On Belt Clip
8. Push-to-Talk (PTT) Button
9. Side Button 1*
10. Side Button 2*
11. Accessories Connector
12. Micro-USB (for charging & programming)
13. Battery
14. Battery Charging Contact Points

* These buttons are programmable by your RCA Communications Systems Dealer only upon request at the time of purchase.

Preparing Your Radio for Initial Use
Setting Up Your Charger

1. Plug the adapter's AC connector into the AC outlet socket. (see image A)
2. Plug the adapter's DC connector into the DC socket on the back of the charger. (see image B)
3. Place the radio with the battery attached, or the battery alone, in the charger. (see image C)
4. Make sure the battery contact is touching the charging terminals. The charging process begins when the red LED light illuminates.
5. The green LED light will illuminate approximately two hours later, indicating the battery is fully charged.
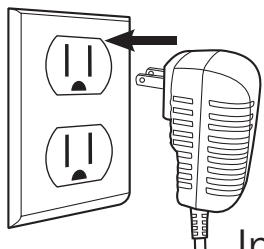
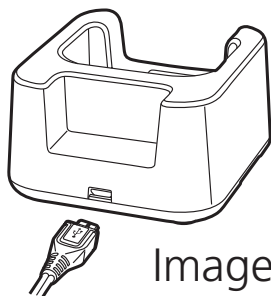## Battery Information
Charging the Battery

Your radio is powered by a Lithium-Ion (Li-Ion) battery. To avoid damage and comply with warranty terms, charge the battery using only an original RCA charger, exactly as described in the charger user guide. When the charger's LED illuminates red, it is an indication that the battery is being correctly charged. When the LED illuminates green, the battery charge is complete. ***Note:*** Charge a new battery 12 to 14 hours before initial use for best performance. Maximum battery capacity is normally achieved after two or three full charge / discharge cycles.
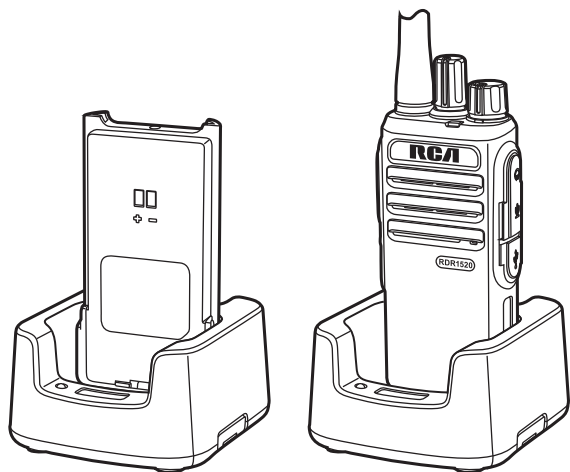
Image A

Image B

Copyright © 2019 RCA Communications Systems

Image C

Caution:

To reduce the risk of injury, use only batteries specified by RCA Communications Systems.

- To avoid risk of personal injury, do not dispose of batteries in a fire.

- Dispose of batteries according to local recycling regulations. Do not dispose as household waste.

- Never attempt to disassemble the battery.

- When charging a battery, keep it at a temperature between 41°F ~ 104°F (5°C ~ 40°C) to ensure a full charge. Temperatures outside this range significantly reduce battery life. The operating time (talk-time and standby time) is noticeably shorter than normal, replace the battery.

- Before charging a battery attached to a radio, turn the radio off to ensure a full charge. Never leave a radio on while in the charger, as it can damage both the battery and the radio; the charger is not a radio stand.

- Do not cut off the power supply or remove battery while charging.

- Never charge a battery that is wet. Dry it with soft cloth prior charging.

- The battery will eventually weaken. When the operating time (talk-time and standby time) becomes noticeably shorter than normal, replace the battery.

- Battery performance greatly decreases at temperatures below -4°F (-20°C). Having a spare battery is always necessary in extremely cold environments. A cold

battery may work again when it returns to room temperature, so keep it for later use.

- Dust on the battery contact may cause the battery not to work or charge properly. Use a clean dry cloth to wipe it before attaching the battery to the radio.
- Batteries with damaged contacts can be extremely dangerous. Any battery with damage to one or more contacts should be replaced immediately and not used under any circumstances.

Battery Storage

1. Fully charge a battery before storing it for an extended period of time to avoid battery damage due to over-discharge.
2. Recharge a battery after three months storage to avoid reduced battery capacity due to over-discharge.
3. When storing a battery, keep it in a dry place at room temperature.

Attaching & Removing the Battery

1. Attach the battery on the back of the radio by aligning the side rails and pushing battery up as shown until it clicks into place. (See Figure 1)

2. Remove the battery by pressing the battery release button and sliding the battery down as shown. (See Figure 2)

Note: If the battery is not securely locked, remove it and reattach it.
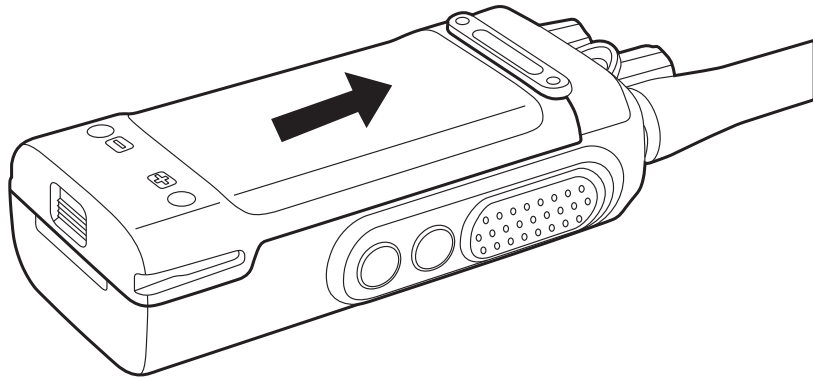
Figure 1
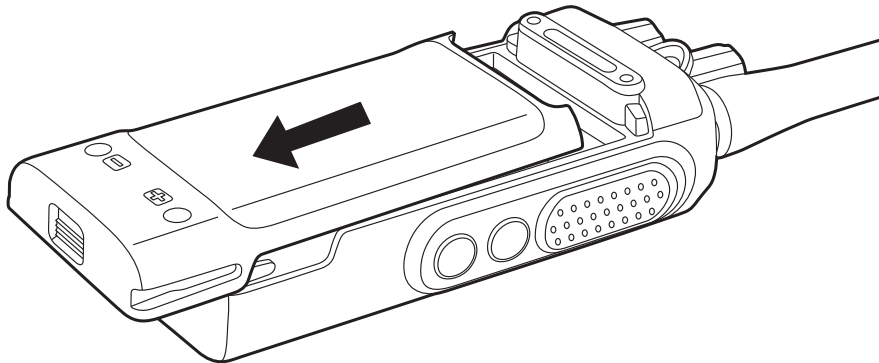
Attaching / Removing the Antenna

1. With the radio turned off, set the antenna in its receptacle and turn clockwise until it is screwed down. (See Figure 3)

2. To remove the antenna, turn the radio off and turn the antenna counterclockwise. (See Figure 4)
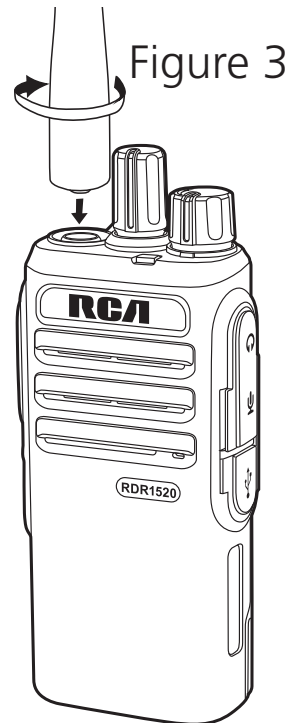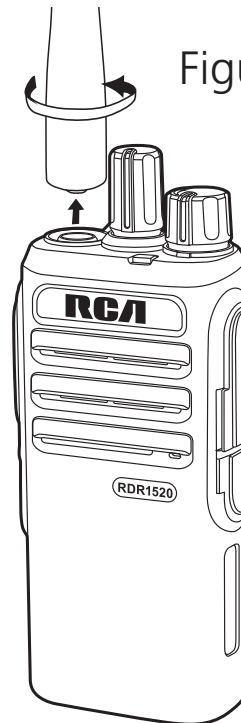
Figure 2

Figure 3

Figure 4

* If antenna needs to be replaced, ensure that only RCA Communications Systems antennas are used. Damaged Antennas may reduce your radio coverage.

Attaching / Removing the Belt Clip

Using a small screwdriver, align the belt clip's screw holes to the radio's chassis. Attach by turning the screws clockwise into the belt clip's screw holes. Remove by doing the reverse. (See Figure 5)

Figure 5
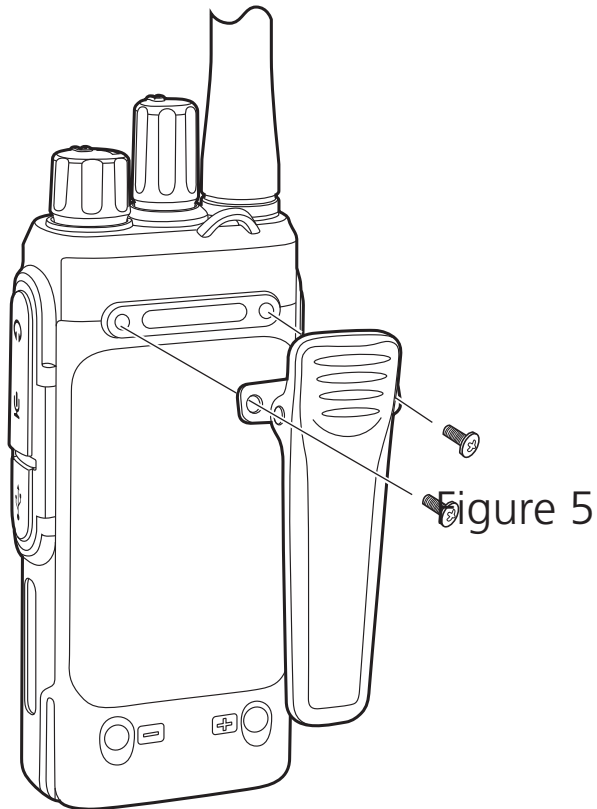
Connecting Audio Accessories

The accessory connector is located on the side of the radio. It is used to connect RCA audio accessories to the radio. Remove the accessory cover by unscrewing the screw location at the bottom of the cover. Connect the desired audio accessory firmly into the accessory jack and secure the screw by turning it clockwise. (See Figure 6)

Note: Please loosen the screw prior to removing the audio accessory. The use of the audio accessory may affect the waterproof performance of the radio.
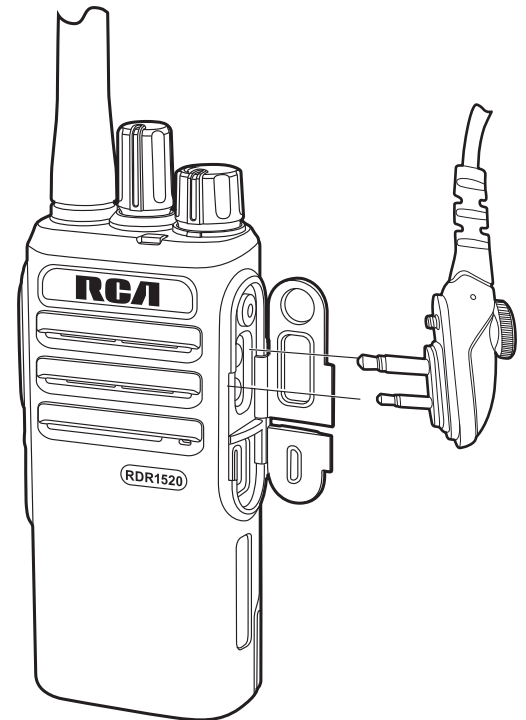
Figure 6

Turn On/Off the Radio

1. Rotate the On/Off/Volume Control Knob clockwise until you hear a click. (See Figure 7) The LED blinks green and a brief tone sounds, indicating that the power up test is successful.

2. To turn off the radio, rotate this knob counterclockwise until you hear a click.

Note: There is no power up tone if the radio tones/alerts function is disabled. If your radio does not power up, check your battery. Make sure that it is charged and properly attached. If your radio still does not power up, contact your RCA Communications Systems dealer.

Adjusting the Volume

To increase the volume, turn the On/Off/Volume Control Knob clockwise. To decrease the volume, turn this knob counterclockwise. (See Figure 7)
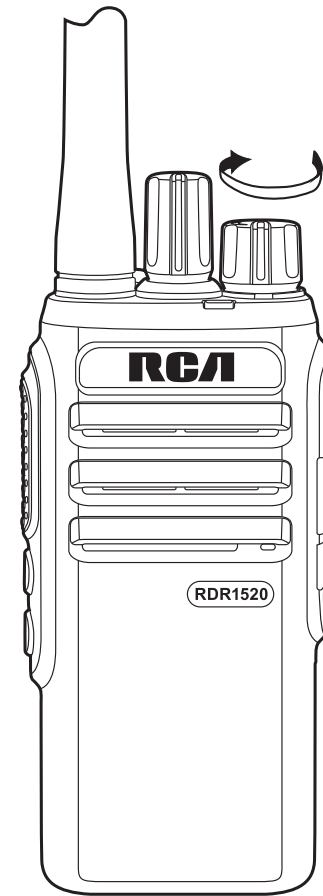

Figure 7

Programmable Buttons

Your RCA Communications Systems Dealer can program the programmable buttons as shortcuts to radio functions or preset channels/groups depending on the duration of a button press:
- Short Press - Press and release quickly.
- Long press - Press and hold for the programmed duration (between 1 seconds and 3.75 seconds).

The Programmable Functions are:	
Unassigned	All Alert Tones On/Off
Emergency On	Emergency Off
High/Low Transmit Power	Monitor On/Off
Nuisance Channels Delete	One Touch Access 1
One Touch Access 2	One Touch Access 3
One Touch Access 4	One Touch Access 5
One Touch Access 6	Repeater/Talkaround
Scan On/Off	Tight/Normal Squelch
Scrambler On/Off	VOX On/Off
Battery Indicator	Lone Worker On/Off
Tone Select	Privacy On/Off

All Alert Tones On/Off - Toggles all tones and alerts on or off.

Emergency On - Initiates an emergency alarm or call.

Emergency Off - Cancels an emergency alarm or call.

High/Low Transmit Power - Toggles transmit power level between high and low.

Monitor On/Off - Monitors a selected channel for activity.

Nuisance Channels Delete - Temporarily removes an unwanted channel, except for the Selected Channel, from the scan list. The Selected Channel refers to the user's selected zone/channel combination from which scan is initiated.

One Touch Access - Directly initiates a predefined Private or Group Call, a Call Alert or a Quick Text message.

Repeater/Talkaround - Allows the user to toggle between Repeater and Talkaround mode.

Scan On/Off - Toggles scan on or off.

Tight/Normal Squelch - Toggles squelch level between tight and normal squelch levels. Privacy On/Off - Toggles privacy (basic voice encryption) on or off.

Privacy On/Off - Allows the user to toggle the Privacy feature between on and off for the channel.

VOX On/Off - Toggles Voice Activated Function on or off.

Battery Indicator - Indicates battery charge level, low, medium or high.

Lone Worker On/Off - Toggles Lone Worker feature On or Off, on per channel basis.

Push-To-Talk (PTT) Button

The PTT button on the side of the radio has two main functions:

- Press and hold down PTT button to initiate and call and talk. Release the PTT button to listen. The microphone is activated when the PTT button is pressed.

- If a call is in progress, the PTT button allows the radio to transmit to the other radios that are part of the call.

Note: If the Talk Permit Tone is enabled, wait until the short alert tone ends before talking.

During a call, if the Channel Free Indication feature is enabled on your radio (programmed by your RCA Communications Systems Dealer), you will hear a short alert tone the moment the target radio (the radio that is receiving your call) releases the PTT button, indicating the channel is free for you to respond. You will also hear the Channel Free Indication tone if your call is interrupted, for example when the radio receives an Emergency Call.

Switching Between Analog and Digital Mode

Each channel in your radio can be programmed as an analog channel or a digital channel. Use the Channel Selector Knob to switch between an analog or a digital channel.

Note: When switching from digital to analog mode, certain features of the radio become unavailable.

Transmission
Analog transmission:
Press PTT key and speak into the mic.
Digital transmisson:
Each channel can be set as a digital channel:
- Press PTT key to call all other members in this talk group, and release PTT to receive calls. When call is complete, press PTT again to send a new call (use the channel knob to select one channel or recall one with ONE TOUCH ACCESS). If the Talk Permit Tone was programmed, the radio will be produce a tone before talking.

Receive and Recall Transmission
Select Zone
- The Zone is a channel group, the radio can support two zones, each zone with 16 channels max.

- Press the preset side key button which is programmed to define the zones.
- You will hear a confirm tone when the radio goes from zone 1 to zone 2, or you will hear a negative tone when the radio goes from zone 2 to zone 1.

Select channels, user's ID or group ID
Rotate the channel knob to select the channels, user's ID or group ID.

Receive and response calling
After setting the channels, user's ID or group ID, you can receive or respond to calls. When radio is transmitting the LED indicates red or green when receiving.

Analog receive: Receive the same carrier and matching signaling to open SQ.

Voice receive: When receive correct calling (correct single call, group call, all call tone), the radio opens the speaker to hear the call.

Short message receive

When a "Di, Di" tone is heard, the radio received the message, otherwise if you hear one alert tone means receive failed.

Receive and Respond to group call

When receiving the call from one group, the radio must belong to this group.

1. LED indicates green.
2. Hold the radio 1-2 inches (2.5-5cm) away from your mouth. If "CH free indication" was enabled, you will hear the short beep tone when your partner releases the PTT, which means the channel is free and waiting for response.
3. Press PTT to respond to the call while LED indicates red.
4. You hear the "Call permit" tone (if enabled) and speak into the mic.
5. When done speaking release the PTT to receive again.
6. If there is no talking on this channel during a preset time, the call ends.

Receive and Response single call

Single call means one radio call to another radio; there are two call types:

1) The radio processes an inspection before calling.

2) Immediate calling.

When your radio receives a call, your radio indicates a green LED. The call type programmed by PC software.

When receiving the single calling

1. LED indicates green
2. If "CH free indication" was enabled, you will hear the short beep tone when your partner releases the PTT, which means the channel is free and waiting for a response.
3. Press PTT to respond to the call and LED indicates red.
4. You will hear the "Call permit" tone (if enabled) and speak to the mic.
5. Release PTT to receive.

6. If there is no talking on this channel during a preset time, the call ends.
7. A short tone will be heard.

Receive all call

All calling is one radio call to other radios in the same channel. When you receive all calls:
1. An alert tone is heard and the LED indicates green.
2. If there is no talking on this channel during a preset time, the call will end. If "CH free indication" was enabled, you will hear the short beep tone when your partner releases the PTT, it means the channel can be used, but you cannot respond to all calling.

Attention!!

♦ When receiving all calling, you switch to another channel, the radio will stop receiving the all calling.

♦ During the calling, you cannot use any preset button until the calling was end.

Send the transmission

You can use 2 ways to select a channel, user's ID or group ID. :
1)Rotate the channel knob
2)Press Preset One Touch Access key

Rotate the channel knob to send a Group Call transmission

To send the group call, your radio must belong to this group:
1. Rotate the channel knob, use the group ID to select the channel.
2. Hold the radio 1-2 inches (2.5-5cm) distance from your mouth.
3. Press PTT to transmit the call; the LED indicates red.
4. You hear the "Call permit" tone (if enabled) and speak into the mic.
5. Release PTT to receive, LED indicates green if your partner is answering.

6. If "CH free indication" was enabled, you will hear the short beep tone when your partner release PTT, it means the channel is free and wait for your response. Press PTT to respond, if there is no talking on this channel in a preset time, the call ends.

Single Call

1. Rotate the channel knob, use the user's ID to select the channel.
2. Hold the radio 1-2 inches (2.5-5cm) distance from your mouth.
3. Press PTT to transmit the call; the LED indicates red.
4. You hear the Call permit tone (if enabled) and speak into the mic.
5. Release PTT to receive, LED indicates green if your partner is answering.
6. If "CH free indication" was enabled, you will hear the short beep tone when your partner releases PTT, it means the channel is free and waiting for your response. Press

PTT to respond, if there is no talking on this channel in preset time, the call ends.
7. You will hear a short beep tone.

All calling

This function lets you send calls to all users in this channel. This function must PC programmed.

1. Rotate the channel knob, use the All Calling ID to select the channel.
2. Hold the radio 1-2 inches (2.5-5cm) distance from your mouth.
3. Press PTT to transmit the call; the LED indicates red.
4. You hear the Call permit tone (if enabled) and speak into the mic. Other users in this channel cannot respond to the all calling.

Use One Touch Access Key to Send Group Calls or Single Calls

One touch access function lets you easily send the group call or single call to the preset ID or contacts. This function can be assigned to the

pre-programmed keys by long press or short press. You can program only one ID or Preset one contact person to one pre-programmed key, you can program several One Touch Access Keys.

1. Press preset One Touch Access key to send the group call or single call.
2. Hold the radio 1-2 inches (2.5-5cm) distance from your mouth.
3. Press PTT to transmit the call; the LED indicates red.
4. You hear the Call permit tone (if enabled) and speak into the mic.
5. Release PTT to receive, LED indicates green if your partner is answering.
6. If "CH free indication" was enabled, you will hear the short beep tone when your partner releases PTT, it means the channel is free and waiting for your response. Press PTT to respond, if there is no talking on this channel in preset time, the call ends.

7. You hear a short beep tone at the end of group call or single call.

Short Message Setting

Sending the preset message

You may send a pre-programmed short message with pre-program key, there are 50 preset short message available.

1. Press the pre-programmed one touch access key to send pre-programmed message to one contact person.
2. LED indicates red.
3. Two "Di, Di" tones will be heard; if message fails to send, you will hear one alert tone.

Privacy Function

Privacy setting (for digital mode only)

You can program this function with PC software, and the programmable keys can be used to enable/disable privacy function.

Digital Emergency Alarm System

You can program the Alarm Type by PC software and enable/disable the function by pre-programmed keys.

Disabled: Deactivates Alarm function and the unit cannot send emergency alarm, but can receive emergency call alarm from other units.

Regular: The unit sending the Alarm tone and after preset time (programmed by software) send the alarm tone and ID to the receive unit.

Silent: The unit is not alarmed but will send the ID to the receiving unit and that unit alarm.

Silent w/Voice: In the status of alarm press PTT key to send the voice from speaker.

Lone Work

Enable/disable this function by pre-programmed keys, in order to ensure the security of the user when user is working alone. In the process of lone work, the unit will sound the alert tone in the due time, the user must press any key to indicate their safety, otherwise the unit will be go to automatic alarm mode.

Scan (Programmable Keys On/Off)

Scan List

Create scan list and program single channel/group as the scan list, the radio will scan all channels/group in the scan list. The radio supports a maximum of 250 scan lists, each list includes up to 16 members.

Scan

When the scan is enabled, the LED indicates yellow, there are two types of scan.

+ **Main channel scan (manual):** The radio scans all channels in scan list/group. By programming, the radio can scan the last activated channel or start from 1st scan channel.

+ **Auto scan:** You can select one channel/group which is already programmed as auto scan, the radio scans from this auto scan channel.

Nuisance channel delete

When scan remains on one channel, press the pre-programmed nuisance channel key, the radio will continue to scan next channel, and will not scan this channel afterward. But when the scan function closes and then opens the scan function again, the radio will resume scanning this channel.

Start and stop scanning

1. Press pre-programmed scan key or use the channel knob to select one auto scan channel.
2. When scan activated, LED indicator flashes yellow, you can hear a confirm tone. When scanning stops, LED indicator stops and an alarm tone is heard.

Dual priority channel scan

When set up one priority channel, activate the priority scan function, this scan uses Cyclic scan mode, which always scans the priority channel during each common scan.

??? In time of scan, response the transmission scan

The radio remain in the activated channel/group. The time of the radio keep in this channel mean Scan hold time. ???

1. Hold the radio 1-2 inches (2.5-5cm) distance from your mouth, If "CH free indication" was enabled, you will hear the short beep tone when your partner releases PTT, it means the channel is free and wait for your response.
2. In the scan hold time, press PTT and the LED indicates red.
3. When you hear the Call permit tone (if enabled), speak into the mic.
4. Release PTT to receive.
5. If you don't respond during the hold time, the radio continues to scan other channels.

Settings
Set squelch level
You can adjust the squelch level, filter low signal or useless calling Setting: Normal squelch is default value.

1. Press pre-programmed "tight/normal squelch" key
2. You can hear one confirm tone which means the radio in the status of strong squelch, or you will hear an alarm tone which means in weak squelch.

Set power level
You can set each channel to be high or low power. Setting: high power to communicate long distance, low power works with short distance.

1. Press pre-programmed "high/low power" key.
2. You may hear one confirm tone which means it transmits in low power, otherwise in high power.

Open/close VOX function
This function enables your hands free calling in the pre-programmed channel, regardless when the VOX accessories detect voice, the radio will automatically send the single during the programmed time If you press PTT key the VOX function will be deactivated. To activate the VOX function: Power off and then power on the radio, or change channels or:

1) Press the pre-programmed "VOX on/off" key to open/close this function.
2) If "call permit tone" activated, you can use one touch access key to send the calling. You hear the Call permit tone (if enabled) and speak into the mic.

Repeater/Talk around
You can continue to communicate when the repeater is not working, or when the radio is outside the range of the repeater but is within the range of other radios. This is called "talk

around", and the radio must be set to allow talk around in the channel. Press the pre-programmed key to switch the talk around mode and repeater mode.

Check battery power strength

Press the pre-programmed "battery power strength" key to hear the beep tones. When the battery power is high you hear 3 beep tones, when battery power is middle you hear 2 beep tones, and when battery power is low you hear one beep tone.

Two time slot ON/OFF

This function can be set to ON and OFF, When the function is ON, it will support the two time slot function.

LED Indicator

The LED indicator shows the operational status of your radio.

Blinking Red - Radio is scanning, Radio is transmitting at low battery condition, receiving an emergency transmission or has failed the self-test upon powering up.

Solid Red - Radio is transmitting.

Blinking Green - Radio is powering up.
Solid Green - Radio is receiving or carrier is present/busy channel.
Rapidly Blinking Green - Radio is receiving a privacy-enabled call or data.

Note: When the LED is solid green, it indicates the radio detects activity over the air. Due to the nature of the digital protocol, this activity may or may not affect the radio's programmed channel.

Audio Tones

Alert tones provide you with audible indications of the radio's status or the radio's response to data received.

Continuous Tone - A monotone sound. Sounds continuously until termination.

Periodic Tone - Sounds periodically depending on the duration set by the radio.

Repetitive Tone - A single tone that repeats

itself until it is terminated by the user.

Momentary Tone - Sounds only once for a short period of time defined by the radio.

Making and Receiving Calls

Selecting a Zone

Zones are groups of channels.

*RDR1520TM offers up to 2 zones with a maximum of 16 channels per zone.

Change zones with radio's function keys as programmed by your RCA Communications Systems dealer.

Selecting a Channel, Subscriber ID or Group ID

Once the required zone is displayed (if you have multiple zones in your radio), turn the programmed Channel Selector Knob to select the desired channel.

Receiving and Responding to a Group Call

To receive a call from a group of users, your radio must be configured as part of that group. When you receive a Group Call:

1. The LED blinks green.
2. Press the **[PTT]** button to respond to the call and the LED indicator lights up red.
   Note: If Talk Permit Function is enabled, wait for the Talk Permit Tone to finish and then speak clearly into the microphone.
3. Release the **[PTT]** button to listen again.
4. If there is no voice activity for a set period of time, the call ends.

Receiving and Responding to a Private Call

A Private Call is a call from an individual radio to another individual radio.

There are two types of Private Calls. The first type is when a radio presence check is

performed prior to setting up the call, while the other sets up the call immediately. When you receive a Private Call:

1. The LED blinks green.
2. Press the **[PTT]** to respond to the call; the LED indicator lights up red. **Note:** If Talk Permit Function is enabled, wait for the Talk Permit Tone to finish and then speak clearly into the microphone.
3. Release the **[PTT]** button to listen.
4. If there is no voice activity for a predetermined period of time, the call ends.

Receiving an All Call

An All Call is a call from an individual radio to every radio on the channel. It is used to make important announcements requiring all radio user's full attention. When you receive an All Call:

1. The LED blinks green.

Note: The radio stops receiving the All Call if you switch to a different channel while receiving the call.

Making a Radio Call

You can select a channel, subscriber ID, or group by using:

- The channel Selector Knob
- The programmable buttons

Making Call with Channel Selector Knob

Making a Group Call

To make a call to a group of users, your radio must be configured as part of that group.

1. Turn the Channel Selector Knob to select the channel with the active group alias or ID.
2. Release the **[PTT]** button to listen.
3. If there is no voice activity for a predetermined period of time, the call

ends. The radio returns to the screen you were on prior to initiating the call.

Making a Private Call

1. Turn the Channel Selector Knob to select the channel with the active subscriber alias or ID.
2. Release the **[PTT]** button to listen. When the target radio responds, the LED lights up solid green.

Making an All Call

This feature allows you to transmit to all users on a channel. Your radio must be programmed to allow you to use this feature.

1. Turn the Channel Selector Knob to select the channel with the active All Call group alias or ID.

Note: Users on the channel cannot respond to an All Call.

Making a Group or Private Call with the One Touch Access Button

The One Touch Access feature allows you to make a Group or Private Call to a predefined alias or ID easily. This feature can be assigned to a short or long programmable button press. You can only have one alias or ID assigned to a One Touch Access button. Your radio can have multiple One Touch Access buttons programmed.

1. Press the programmed One Touch Access button to make a Group or Private Call to the predefined alias or ID.

Note: If Talk Permit Function is enabled, wait for the Talk Permit Tone to finish, then speak clearly into the microphone.

2. Release the **[PTT]** button to listen. When the target radio responds, the LED blinks green.
3. If there is no voice activity for a predetermined period of time, the calls end.

Emergency Operation

An Emergency Alarm is used to indicate a critical situation. You can initiate an Emergency at any time regardless of any activity on the current channel. **Note:** This function is available only in digital mode.

Your radio supports 3 Emergency Alarms:

- Emergency Alarm
- Emergency Alarm with Call
- Emergency Alarm with Voice to Follow

Each alarm has the following default setting:

Disabled: Radio cannot transmit alarm signal, but can receive alarm from other radios.

Each alarm has the following types:

Regular: Radio transmits an alarm signal and shows audio and/or visual indicators.

Silent: Radio transmits an alarm signal without any audio or visual indicators. There will be no response (call) from the target radio until you press the PTT button to initiate the call.

Silent with Voice: Radio transmits an alarm signal and is able to receive an incoming call, without any audio or visual indicators, until you press the **[PTT]** button to initiate, or respond to the call.

Initiating & Responding to Emergency Alarm

1. To initiate an Emergency Alarm press the programmed Emergency button. The LED lights up solid red. At this point depending on the setting selected you can press the **[PTT]** to talk or your radio's microphone is automatically activated, allowing you to communicate with the other radio without pressing the **[PTT]** button.
2. To Respond to an Emergency Alarm Press any button to stop all Emergency Alarm received indications. Press **[PTT]** button to initiate a call with the emergency initiating radio.

Exiting Emergency Mode

Your radio exits Emergency mode automatically when any of the following occurs:

- Emergency Alarm acknowledgement is received (for Emergency Alarm only), OR
- All retries to send the alarm have been exhausted, OR
- The Emergency Off button is pressed, OR
- The [PTT] button is pressed

Note: If your radio is powered off, it exits the Emergency mode. The radio will not reinitiate the Emergency mode automatically when it is turned on again.

Privacy

If enabled, this feature helps to prevent eavesdropping by unauthorized users on a channel by the use of a software based scrambling solution.

Your radio must have privacy enabled on the channel to send a privacy-enabled transmission. To unscramble a privacy-enabled call or data transmission, your radio must be programmed by your RCA Communications Systems dealer to have the same Privacy Key Value and Privacy Key ID as the transmitting radio. If your radio receives a scrambled call that is of a different Privacy Key Value and Privacy Key ID, you will hear a garbled voice transmission.

The LED lights up solid green while the radio is transmitting and blinks green rapidly when the radio is receiving an ongoing privacy-enabled transmission.

You can preprogram 16 groups privacy, encryption keys by software, press programmed Privacy button to Turn On or Turn Off Privacy.

Note: This feature is available only in digital mode.

Scan

Scan lists are created and assigned to individual channels / groups. The radio scans for voice activity by cycling through the channel/

group sequence specified in the scan list for the current channel / group. Your radio can support up to 250 scan lists, with a maximum of 16 members in a list. Each scan list supports a mixture of both analog and digital entries. You can add, delete, or prioritize channels by editing the scan lists.

Scan Instructions and Methods

When a scan is initiated, your radio cycles through the programmed scan list for the current channel looking for voice activity. The LED blinks red.

There are two ways of initiating scan:

- **Manual Scan:** Initiate scan manually using the programmed by your RCA Communications Systems dealer Scan ON/ OFF side button. When scan is initiated, radio will detect all channels / groups on the programmed scan list.

- **Auto Scan:** Your radio automatically starts scanning when you select a channel / group that has Auto Scan enabled.

Starting and Stopping Scan

Press the programmed Scan side button to start or stop the Scan feature:

1. The LED blinks red when Scan is enabled. The LED turns off when Scan is disabled.

Responding to a Scan

During scanning, your radio stops on any channel / group where activity is detected. After the transmission is over the radio remains on the active channel for a programmed time period known as "hang time".

1. Press the PTT button during hang time to respond to the call. The LED lights up red.
2. Release PTT button to listen.

Note: If you do not respond within the hang time period, the radio continues scanning other channels / groups.

Deleting a Nuisance Channel

If a channel continually generates unwanted calls or noise (termed a "nuisance" channel), you can temporarily remove the unwanted channel from the scan list.

Note: This capability does not apply to the channel designated as the Selected Channel. This feature is not accessible through the menu.

1. When your radio stops on an unwanted or nuisance channel, press the programmed Nuisance Channel Delete button until you hear a tone.
2. Release the Nuisance Channel Delete button. The nuisance channel is deleted.

Restoring a Nuisance Channel

To restore the deleted nuisance channel, power the radio off and back on again or press Stop and Start to restart a scan via the programmed Scan button.

Setting the Squelch Level

You can adjust your radio's squelch level to filter out unwanted calls with low signal strength or channels that have a higher than normal background noise.

Settings: Normal is the default level. Tight may help to filter out (unwanted) calls and / or background noise. However, calls from radio within your system that are in very remote locations may also be filtered out.

Press the programmed Squelch button to toggle squelch level between normal and tight.

Setting the Power Level

You can customize your radio's power setting to high or low for each channel.

Settings: High enables communication with radios located at a considerable distance from you. Low enables communication with radios in closer proximity.

Press the programmed Power Level button to toggle transmits power level between high and low.

Turning Voice Operating Transmission (VOX) Feature On or Off

This feature allows you to initiate a hands-free voice activated call on a programmed channel.

Note: Turning this feature on or off is limited to radios with this function enabled.

Press the programmed VOX button to toggle the feature on or off.

CARE AND CLEANING

- Do not hold the radio by its antenna or external microphone.
- Do not place the radio in a dusty environment.
- Clean with a lint-free cloth moistened with clean water or a mild dishwashing liquid.
- Avoid exposing to corrosives, solvents or spirits.

TROUBLESHOOTING

Symptom	Solution
Radio will not power on	a. The battery needs charging. Recharge the battery or replace it with a fresh one. b. The battery is not properly installed. Remove the battery and reattach it.
The operating time is noticeably shorter than normal even though the battery is properly charged.	a. The battery has worn out; it is time to buy a new battery. b. The battery is not fully charged. Make sure that the battery is removed after LED indicator has turned green.
Cannot talk to or hear transmissions from your group members	a. Make sure that your radio operates on the same channel and / or has the same CTCSS/CDCSS settings as your group members. b. Make sure you are within their communication range.
Radio is on, but you cannot hear voice transmissions or they are not very loud	a. Turn the volume control knob to its maximum volume. b. Return the radio to your dealer to check for microphone damage.

FCC Statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.

– Increase the separation between the equipment and receiver.

– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

– Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Industry Canada Compliance

Operation is subject to the following two conditions:
(1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause cause undesired operation of the device.

L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

WARNING: Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. The transmitter antenna gain shall not exceed 0 dBi.

FRENCH: Conformément ŕ la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique ŕ l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée quivalente (p.i.r.e.) ne dépassepas l'intensité nécessaire ŕ l'établissement d'une communication satisfaisante.

Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits. http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01904.html http://www.ic.gc.ca/eic/site/ceb-bhst.nsf/eng/h_tt00080.html

RF Exposure Compliance and Control Guidelines and Operating Instructions

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits always adhere to the following procedures.

Guidelines:

- Do not remove the RF Exposure Label from the device.
- User awareness instructions should accompany device when transferred to other users.
- Do not use this device if the operational requirements described herein are not met.

Operating Instructions:

- Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) button. To receive calls, release the PTT button. Transmitting 50% of the time, or less, is important because this radio generates measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance).
- Hold the radio in a vertical position in front of face with the microphone (and the other parts of the radio, including the antenna) at least one inch (2.5 cm) away from the nose. Keeping the radio at the proper distance is important because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes.
- When worn on the body, always place the radio in a RCA's approved clip for this product. Using approved body-worn accessories is important because the use of RCA's or other manufacturer's non-approved accessories may result in exposure levels, which exceed the occupational/controlled environment RF exposure limits.
- If you are not using a body-worn accessory and are not using the radio in the intended use position in front of the face, then

ensure the antenna and the radio are kept at least 2.5 cm (one inch) from the body when transmitting. Keeping the radio at the proper distance is important because RF exposures decrease with increasing distance from the antenna.
Use only RCA Communications Systems approved, supplied or replacement antennas, batteries, and accessories. Use of non-approved antennas, batteries, and accessories may exceed the FCC and IC RF exposure guidelines.

EXPOSURE RF compliance et Lignes de contrôle et Instructions opérationnelles
Pour contrôler votre exposition et assurer la conformité avec le milieu ambiant, il est toujours nécessaire de suivre les procédures suivies.
Taliban:
• On ne peut pas enlever le Label RF de ce dispositif.
• L'utilisateur doit utiliser le dispositif de

référence pour les autres utilisateurs.
• Il ne faut pas utiliser cet appareil pour les besoins opérationnels.

Description des opérations:
• La transmission ne dépasse pas 50% de la valeur nominale. Pour téléporter (appel), appuyez sur le bouton "Push – To– Talk" (PTT). Pour recevoir un appel, libčre le bouton du PTT. La réduction de 50 % du temps, ou moins, est importante, étant donné que cette radio a été exposée ŕ la seule fois que la radioactivité de la radioactivité a été utilisée en tant que mesure de conformité.
• La radio est placée en face de face avec le microphone (et les autres parts de la radio) ŕ moins d'un inch (2,5 cm). Le maintien de la radio ŕ distance est important car il est important que les données soient tirées de la distance.
• Quand on est sur le corps, toujours place

35 Prodigi™ RDR1520 Series Professional Digital Two-Way Radio Instruction Manual

la radio dans un clip pour ce produit.
Le recours ŕ la procédure de recours est important parce que la use de ces produits ou autres produits non réglementés peut avoir des effets secondaires, C'est ce qui est le plus important.

- Si vous n'utilisez pas une personne pour accéder ŕ la radio dans le front de la face, Il est donc essentiel que la chaîne et la radio soient maintenues ŕ moins de 2,5 cm (un inch) de la personne quand il s'agit de la transmission du corpsdistance séparée de l'antenne.

ISEDC Compliance statement

This device complies with Industry Canada licence-exempt RSS standard(s).
Operation is subject to the following two conditions:

1. this device may not cause interference, and

2. this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. l'appareil ne doit pas produire de brouillage, et

2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, męme si le brouillage est susceptible d'en

Copyright © 2019 RCA Communications Systems

WARRANTY STATEMENT

RCA Communications Systems warrants each new radio product it supplies to be free from defects in material and workmanship under normal use and service for the time period listed below, provided that the user has complied with the requirements stated herein.

The warranty period begins on the date of purchase from an Authorized RCA Communications Systems Sales and Service Outlet. This warranty is offered to the original end user and is not assignable or transferable. RCA Communications Systems is not responsible for any ancillary equipment which is attached to or used in conjunction with RCA Communications Systems products.

RCA Communications Systems offers to the original end user a Two (2) Year Limited Warranty on the RCA RDR1520™ Radio Handset. The RDR1520™ Antenna, RDR1520™ Battery and the RDR1520™ Battery Charger are covered under a One (1) Year Limited Warranty. The RDR1520™ Belt Clip is not covered under the warranty.

During this period, if the product fails to function under normal use because of manufacturing defect(s) or workmanship, it should be returned to the Authorized RCA Communications Systems Sales and Service Outlet from which it was purchased. The Sales and Service Outlet will repair the product to full operating specifications or replace the product with a new product of the same make and model. The user is responsible for all charges incurred in returning the product to the Authorized RCA Communications Systems Sales and Service Outlet. RCA Communications Systems will be responsible for all charges in returning the product to the end user via standard ground shipping service.

RCA Communications Systems shall have no obligation to repair or replace the product, if there is damage as a result of normal wear and tear or if the damage is caused in whole or in part by catastrophe, fault or negligence of the user, improper or unauthorized alterations or repairs to the product, incorrect wiring, use of the product in a manner for which it was not designed, or by causes external to the product. This warranty is void if the product serial number is altered, defaced or removed.

THE EXPRESS WARRANTIES CONTAINED HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

FOR ANY PRODUCT WHICH DOES NOT COMPLY WITH THE WARRANTY SPECIFIED, THE SOLE REMEDY WILL BE REPAIR OR REPLACEMENT. IN NO EVENT WILL RCA COMMUNICATIONS SYSTEMS BE LIABLE TO THE BUYER OR ITS CUSTOMERS FOR ANY DAMAGES, INCLUDING ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, OR THE LOSS OF PROFIT, REVENUE OR DATA ARISING OUT OF THE USE OR THE INABILITY TO USE THE PRODUCT.

RCA Communications Systems endeavors to achieve the accuracy and completeness of this manual, but is not liable for any possible omission and printing mistakes.

All the above specifications and design are subject to change without prior notice.

All the reproduction and translation of this manual without authorization is prohibited.

In this manual, we strive to achieve accuracy and completeness, but provide no warranty of accuracy or reliability. All the above specifications and design are subject to change without notice due to continuous development.

No part of this manual may be copied, reproduced, translated, stored in a retrieval system, distributed, or transmitted in any form or by any means, electronic or mechanical, for any purpose without the expressed, written permission from RCA Communications Systems.

The end-user of any two-way radio is solely responsible for obtaining any license or other authorizations required by the Federal Communications Commission (FCC). For further information visit www.fcc.gov or call 1-888-CALL-FCC (1-888-225-5322).

For Sales, Warranty and Customer Support please contact:

Discount Two-Way Radio Corporation – Worldwide Distributor
555 W. Victoria Street
Rancho Dominguez, CA 90220
Phone: 310-224-5100 / Fax: 310-224-5101
www.discounttwo-wayradio.com

RCA COMMUNICATIONS SYSTEMS strives to achieve accuracy and completeness of this manual, but no warranty of accuracy or reliability is given. All the above specifications and design are subject to change without notice due to continuous development.

No part of this manual may be copied, reproduced, translated, stored in a retrieval system, distributed, or transmitted in any form or by any means, electronic or mechanical, for any purpose without the express written permission of RCA.