

# Congratulations and Thank You for selecting the PRODIGI RDR42x0 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, highend professional grade materials and components, simple operation and superior assembly quality: RCA Communications Systems has it all, including our exclusive no-nonsense, three-year "Warranty Protection Program," one of the most comprehensive warranties in the communications industry.

To ensure you achieve maximum performance from your RDR4220, RDR4250, or RDR4280 radio, please be sure to carefully read this manual.

MODELS COVERED IN THIS MANUAL:

- RDR4220V VHF Two-Way Radio
- RDR4220U UHF Two-Way Radio
- RDR4250V VHF Two-Way Radio
- RDR4250U UHF Two-Way Radio
- RDR4280V VHF Two-Way Radio
- RDR4280U UHF Two-Way Radio

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WARRANTY

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RDR42x0 Professional Digital Two-Way Radios

# **PRODUCT INSPECTION**

Prior to unpacking the RDR42x0 series portable radio, please inspect the packaging for signs of damage and report any damage or missing components immediately to your RCA Communications System Sales and Service Center. Every RDR42x0 series portable radios should come with the following items:

Item	Qty.
Handheld Radio Unit	1
2300 mAh Li-Ion Battery	1
Whip Antenna	1
Heavy Duty Belt Clip	1
Desktop Rapid Charger Base	1
Power Supply for Charger Base	1
Wrist Strap	1



**RDR4220** 

Handheld Radio



**RDR4250** Handheld Radio

**RDR4280** Handheld Radio

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**INSTRUCTION MANUAL** 



VHF UHF Whip Antenna

Heavy Duty Belt Clip

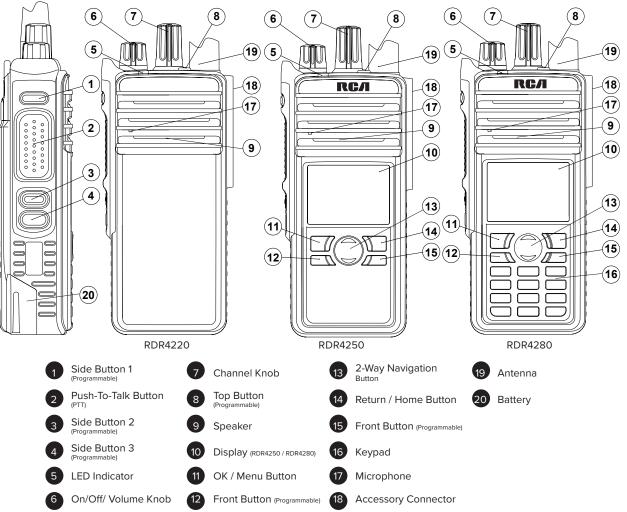
2300 mAh Li-Ion Battery

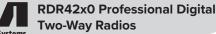
HAR MAN



Desktop Rapid Charger Base

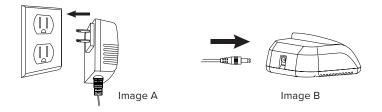
Power Supply for Charger Base





# 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.

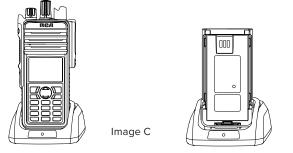


# **Battery Information**

# **Charging the Battery**

Your radio is powered by a Lithium-Ion (Lilon) 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.



**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 (talktime 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.

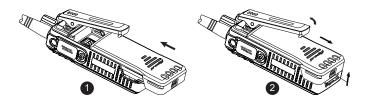
- Do not cut off the power supply or remove battery while charging.
- Never charge a battery that is wet. Dry it with soft cloth prior charging.
- The battery will eventually weaken. When the operating time (talktime and standby time) becomes noticeably shorter than normal, replace the battery.
- Battery 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 the 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

- To install the battery, please place it into the groove on the top of the radio chassis about 5mm away from latch. If the radio has the belt clip installed, you will have to press one side of the clip to raise it and then slide the battery in proper position. Press the battery with your fingers and push the battery until you hear a latch click. The battery is now installed. (See Figure 1)
- 2. If you want to remove the battery from the radio, first press the battery latch located on the bottom of the radio, and then press down to slide the battery about 5mm to release the latch. (See Figure 2)



#### Attaching the Antenna

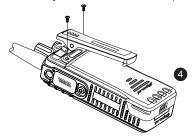
Screw the antenna into the connector at the top of the radio by holding the bottom of the antenna and turn it clockwise until secure. (See Figure 3)





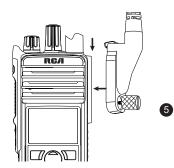
# Attaching / Removing the Belt Clip

Use the 2 screws (M2.5x8.0) supplied with the radio and insert these screws through the holes in the radio clip and into the holes in the aluminum case. If you want to remove the clip from the radio, just unscrew them, and remove the clip. You can put the screws back into the radio to make sure you do not lose them. (See Figure 4)



#### **Connecting Audio Accessories**

Open the cover of the connector for external speaker/MIC, and then insert the plug of the external speaker or microphone onto the connector socket of the radio. When screwing the accessory plug, make sure it is properly aligned (straight) to ensure the right connection to the connector of the radio. (See Figure 5)



#### Turn On/Off the Radio

- Rotate the On/Off/Volume Control Knob clockwise until you hear a click. The LED blinks orange and a brief tone sounds, indicating that the power up test is successful. The RDR4250 & RDR4280 radio displays "RCA RDR42X0 DMR Radio" when powered up.
- To turn off the radio, rotate the 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.

# Select A Channel

Rotate the Channel Selector Knob to the desired channel. or to switch between channels. Channels can be configured as analog or digital channel. Your radio has features that are available in both analog and digital mode. The minor differences in the way each feature works does not affect the performance of your radio.

### **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).

Programmable Functions				
Adjust Power Level	Nuisance Delete			
Adjust Squelch Level	One Touch Call 1			
All Alert Tones On/Off	One Touch Call 2			
Accessory Link Audio Switch	One Touch Call 3			
Channel Down	One Touch Call 4			
Channel Knob Disable	One Touch Call 5			
Channel Up	One Touch Call 6			
Contact List	Preset Channel1			
Emergency Alarm Ack	Preset Channel2			
Emergency Off	Preset Channel3			
Emergency On	Preset Channel4			
Encryption On/Off	Record Delete			
Favorite Contact List	Record Play/Play Next/Play Stop			
Group Call Alert	Repeater/Talk Around			
Home Screen	Scan On/Off			
Keypad Lock	Squelch On/Off			
Lone Worker On/Off	Surveillance/Covert Mode			
ManDown On/Off	VOX On/Off			
Manual Dial For Private	Zone Down			
Momentary Monitor	Zone Toggle (RDR4220)			
Monitor	Zone Up (RDR4220)			
None				

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.

- Nuisance Delete Temporarily removes an unwanted channel, except the Selected Channel, from the scan list. The Selected Channel refers to the user's selected zone/channel combination from which scan is initiated.
- High/Low Transmit Power Toggles transmit power level between high and low.
- Monitor On/Off Monitors a selected channel for activity.
- **One Touch Access** Directly initiates a predefined Private or Group Call, a Call Alert or a Quick Text message.
- **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.

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

- **Lone Worker On/Off** Toggles Lone Worker feature On or Off, on per channel basis.
- **Zone Toggle** (*RDR4220*) Toggles between Channel Zone 1 and Channel Zone 2.
- **Battery Indicator** (*RDR4220*) Indicates battery charge level, low, medium or high.



# 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/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, certain features of the radio become unavailable.

# Accessing the Programmed Functions

You can access various radio functions one of the following ways: A short or long press of the relevant programmable buttons. OR -



- To access the main menu, press the [🐨] button. To toggle through the menu options, press " 🔼 " or " 💟 ".
- To select a function or access a sub-menu, press the [ ] button.
- To go back one menu level, or return to the previous screen, press the [vertex] button.

*Note:* Your radio will exit the menu after a period of inactivity and returns to Main Menu.

# Radio Keypad (RDR4280 only)

You can use the alphanumeric keypad to access the radio features. You can also use the keypad to enter subscriber numbers or IDs, and text messages. *Note:* Some characters require that you press a key multiple times. The table shows the number of times a key needs to be pressed to generate the required character.

Key	1	2	3	4	5	6	7	8	9	10	11	12	13
1,.?	1		,	?	!	@	&	6	%	-	:	*	#
2abc	А	В	С	2									
3 <sub>def</sub>	D	Е	F	3									
4 <sub>ghi</sub>	G	Н	Ι	4									
5jkl	J	Κ	L	5									
<b>6</b> mno	М	Ν	0	6									
7pqrs	Ρ	Q	R	S	7								
8tuv	Т	U	V	8									
9 <sub>wxyz</sub>	W	Х	Υ	Ζ	9								
0 NOTE: Press to enter "0" and long press to activate the CAPS lock. Another long press to turn off the CAPS lock.													
* or Del <i>NOTE:</i> Press during text entry to delete a character.													
# or Space <i>NOTE:</i> Press during text entry to insert a space.													

Number of Times Key is Pressed

# **Operational Status Indicators**

Your radio indicates its operational status through the following:

- Display Icons (RDR4250 / RDR4280)
- Call Icons (RDR4250 / RDR4280)
- Sent Item Icons (RDR4250 / RDR4280)
- LED Indicator (Entire RDR42x0 Series)
- Audio Tones (Entire RDR42x0 Series)



# **Display Icons**

The LCD display shows radio status, text entries, and menu entries. The following are icons that appear on the radio's display.

۳×	No Signal	The number of bars displayed represents the radio signal strength and is only displayed while the radio is in receiving mode.
ዊ. ዊ. ዊ. ዊ.ብ	Received Signal Strength Indicator (RSSI)	The number of bars displayed represents the radio signal strength. Four bars indicate the strongest signal. This icon is only displayed while receiving.
	Battery	The number of bars (0 - 4) shown indicates the charge remaining in the battery.
8	Accessory Link	The Accessory Link feature is enabled but there is no remote Accessory Link device connected.
*	Accessory Link Connected	The Accessory Link feature is enabled. The icon stays lit when one or more remote Accessory Link devices are connected.
•	Scanning	Scan land on Scan feature is enabled.
Ē	Encryption Enable	The Encryption feature is enabled.
2	GPS Available	The GPS feature is enabled. The icon stays lit when a position fix is available.
J	GPS Not Available / Out of Range	The GPS feature is enabled. The icon stays lit when a position fix is available.
<b>E</b> o	Accessories Con- nected	Accessory Connected
L/H	Power Level	Radio is set at Low/High power.
DM	Direct Mode	Talk around mode.
RM	Repeater Mode	Repeater mode
$\square$	Unread Message	Unread Message
<u>رو</u>	Missed Call	Missed Call
$\odot$	VOX Enable	VOX Enable
<b>4</b> »	Speaker Open	Speaker Open

# Call Icons

The following icons appear on the radio's display during a call and in the Contacts list to indicate ID type.



Private Call - Indicates a Private Call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).



Group Call/All Call - Indicates a Group Call or All Call in progress. In the Contacts list, it indicates a group alias(name) or ID (number).

# Accessory Link Device Found List



Accessory Link Audio Device - Accessory Link-enabled audio device, such as a headset.

# Sent Items Icons

The following icons appear at the top right corner of the radio's display in the Sent Items folder.



Sent Successfully



Send Failed

The text message to a subscriber alias or ID's pending transmission, followed by waiting for acknowledgment. Or The text message to a group alias or ID is pending transmission.

# Switch Input Method

Long press # key to switch input method between,







#### **LED** Indicator

The LED indicator shows the operational status of your radio.

Blinking Red - Radio is at low battery condition

Solid Orange - Powering up

Solid Green – Radio is receiving, or detecting activity over the air.

Solid Red – Radio is transmitting

Blinking Orange – Radio is scanning, or in selective call, or emergency state

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.

#### **Battery indicator**

Battery Usage Status	Audio Indication (RDR4220 model)	Display Indication (RDR4250/RDR4280)
Power ≤ 100%	4 Beeps	
Power≥80%	3 Beeps	
Power ≥ 40%	2 Beeps	
Power ≤ 40%	1 Веер	
Power ≤ 10%	Low Battery Beep Warning	



# Making and Receiving Calls

# Selecting a Zone

Zones are groups of channels.

RDR4220 has up to 32 channels split in 2 zones with a maximum of 16 channels per zone. RDR4250 and RDR4280 have up to 1000 channels in a flexible zone setup with a maximum of 1000 channels per zone.

You may switch among zones using the Radio Menu (RDR4250 and RDR4280 only), the programmable function keys or the Channel Knob as programmed by your RCA Communications Systems dealer.

- 1. Press " 🕞 " to access the menu.
- 2. Press " To navigate to the Zone menu.
- 3. Press " 🔐 " to select the Zone menu.
- 4. Press " To navigate to the desired Zone.
- 5. Press " 🕞 " to select the Zone.

# Selecting a Channel, Subscriber ID or Group ID

Once the required zone is displayed (if your radio has multiple zones), turn the programmed Channel Selector Knob to select the desired channel, subscriber alias or ID, or group alias or ID.

# Receiving and Responding to a Radio Call

Once the channel, Subscriber ID or Group ID is displayed, you can proceed to receive and respond to calls. To decode an encrypted call, your radio must have the same Encryption Key, or the same Key Value and Key ID (if ARC4 encryption type is utilized) as the transmitting radio (the radio you are receiving the call from).

# **Receiving and Responding to a Group Call**

To receive a Group Call, your radio must be configured with the Group ID in the RX Group List on the channel you are receiving the call on. This is programmed by your RCA Communications Systems Dealer. When you receive a Group Call:

- 1. The LED blinks green.
- 2. Your radio unmutes and the incoming call sounds through the radio speaker.
- 3. The Group Call icon appears on the display (RDR4250 and RDR480 only). The first text line shows the Caller Subscriber ID/Alias. The second text line displays the Group Call ID/Alias.
- 4. To respond to the call, press the [PTT] button, the LED indicator lights up red.
- 5. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

Note: If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

- 6. Release the [PTT] button to listen.
- 7. 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 direct call from one individual radio to another individual radio. When you receive a Private Call:

- 1. The LED blinks green.
- 2. Your radio unmutes and the incoming call sounds through the radio speaker.
- 3. The Private Call icon appears on the display (RDR4250 and RDR480 only). The first text line shows the Caller Subscriber ID/Alias.
- 4. To respond to the call, press the [PTT] button, the LED indicator lights up red.

5. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

Note: If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

- 6. Release the [PTT] button to listen.
- 7. If there is no voice activity for a set 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 same channel or a channel with the same frequency and color code as the transmitting radio. It is used to make important announcements requiring the attention of all radio users. When you receive an All Call:

- 1. The LED blinks green.
- Your radio unmutes and the incoming call sounds through the radio speaker.
- 3. The All Call icon appears on the display (RDR4250 and RDR480 only). The first text line shows the Caller ID/Alias. The second text line displays the All Call ID/Alias.
- 4. Once the All Call ends, the radio returns to the previous screen before receiving the call.

**Note:** You cannot respond to an All Call. The radio will stop receiving the All Call if you switch to a different channel while receiving the call

# Monitoring A Channel (Analog)

Use the Monitor feature to make sure a channel is clear before transmitting by listening for activity on the channel.

- 1. Press the programmed Monitor function key and listen for activity. The monitor icon appears on the display.
- 2. If you hear activity on the channel the channel is busy. If you hear "white noise" on the channel the channel is free.

#### Making a Radio Call

Select a channel by using the channel selector knob and/or the programmable function keys, as programmed by your RCA Communications Systems dealer. After selecting a channel, you can make a call to a Subscriber ID/Alias, or Group ID/Alias (other than the Group ID already assigned as TX Contact on the channel) by using a programmed One Touch Call function key, the contact list in the radio menu or a manual dial.

#### Making a Call

#### Making a Group Call

To make a Group Call, your radio must be configured with the Group ID, as a TX Contact on the channel (the Group ID of the group you are transmitting to).

- 1. Turn the Channel Selector Knob to select the desired channel.
- 2. When on the desired channel, press the [PTT] button to make the call, the LED indicator lights up red.
- 3. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

**Note:** If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

- 4. Release the [PTT] button to listen.
- 5. When the target radio responds, the LED lights up red.
- 6. 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 (RDRD4250 and RDR4280 only).



# Or (RDRD4250 and RDR4280 only)

- 1. Turn the Channel Selector Knob to select the desired channel.
- 2. Press " or " to access the menu.
- 3. Press " 🔼 " or " 💟 " to navigate to the Contacts. Press "OK".
- 4. Press " **The area of the Contacts List**.
- 5. Press " To ravigate to the desired Group ID/Alias. When highlighted, press the [**PTT**] button to make the call. The LED lights up red.
- 6. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

*Note:* If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

7. Release the [PTT] button.

# Making an All Call

An All Call is a call from an individual radio to every radio on the same channel or a channel with the same frequency and color code as the transmitting radio. It is used to make important announcements requiring the attention of all radio users. Your radio must be programmed by your RCA Communications Systems Dealer to allow you to use this feature. To initiate an All Call:

- 1. Turn the Channel Selector Knob to select the designated All Call channel with a preset All Call Group ID/Alias as TX Contact.
- 2. Press the [PTT] button to make the call. The LED lights up red.
- 3. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

*Note:* If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

4. Release the [PTT] button.

# Or (RDRD4250 and RDR4280 only)

- 1. Turn the Channel Selector Knob to select the desired channel.
- 2. Press " or " to access the menu.
- 3. Press " 🔼 " or " 💟 " to navigate to the Contacts. Press "OK".
- 4. Press " or " to enter the Contacts List.
- 5. Press " To ress " To navigate to the All Call Group ID/Alias. When highlighted, press the [**PTT**] button to make the call. The LED lights up red.
- 6. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

*Note:* If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

7. Release the [PTT] button.

Note: Users cannot respond to an All Call.

# Making a Private Call

To make a Private Call, your radio must be configured with the Private Subscriber ID, as a TX Contact on the channel (the Subscriber ID of the radio you are transmitting to).

- 1. Turn the Channel Selector Knob to select the desired channel.
- 2. When on the desired channel, press the [**PTT**] button to make the call, the LED indicator lights up red.
- 3. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

**Note:** If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

- 4. Release the [PTT] button to listen.
- 5. When the target radio responds, the LED lights up red.
- 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 (RDRD4250 and RDR4280 only).

# Or (RDRD4250 and RDR4280 only)

- 1. Turn the Channel Selector Knob to select the desired channel.
- 2. Press " r to access the menu.
- 3. Press " or " " to navigate to the Contacts. Press "OK".
- 4. Press "or " to enter the Contacts List.
- 5. Press " **C** " or " **C** " to navigate to the desired Subscriber ID/ Alias. When highlighted, press the [**PTT**] button to make the call. The LED lights up red.
- 6. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

**Note:** If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

7. Release the [PTT] button.

# Making a Group or Private Call using One Touch Call Function

The One Touch Call allows you to make quick Group or Private Call respectively to a predefined Group or Private Subscriber ID/Alias. This feature can be assigned to a short or long programmable function key press. You can only have one alias or ID assigned to a One Touch Call programmable function key. Your radio can have multiple One Touch Call programmable function keys programmed.

- 1. Press the programmed One Touch Call programmable function key.
- 2. Press the [**PTT**] button to make a call. The LED lights up red.
- 3. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

**Note:** If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

- 4. Release the [**PTT**] button to listen. When the target radio responds, the LED blinks green.
- 5. 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 (RDRD4250 and RDR4280 only).



# **Emergency Operation**

An Emergency Alarm is used to indicate a critical situation. Your radio supports 3 Emergency Alarms:

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

Note: Only one Emergency Alarm can be programmed per channel.

# Initiating & Responding to Emergency Alarm

- 1. To initiate an Emergency Alarm, press the programmed Emergency programmable function key (typically the top orange key). The LED blinks in red.
- 2. (RDR4250 and RDR4280 Only) The display shows Sending Alarm, the Group ID alternating with the Group Alias. The Emergency lcon appears on the status bar of the display. When an Emergency Alarm acknowledgment is received, an alert tone sounds and the display shows **Emergency Alarm Successful**.
- Depending on the settings programmed by your RCA Communications Systems Dealer, you can press the [PTT] to talk or your radio's microphone is automatically activated, allowing you to communicate with the target radios without pressing the [PTT] button.
- 4. To Respond to an Emergency Alarm, press the " To Respond to an Emergency Alarm, press the " To Respond 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 acknowledgment is received (for Emergency Alarm only).
- All retries to send the alarm have been exhausted.
- The Emergency is turned Off by pressing the programmed Emergency Off programmable function key.
- Your radio is powered off

# **ADVANCED FEATURES**

# **Radio Check**

If enabled, this feature allows you to determine if another radio is active in your radio system without disturbing the user of that radio. No audible or visual notification is shown on the target radio. Only RDR4250 and RDR4280 can initiate a Radio Check. To be able to initiate a Radio Check, the feature must be enabled by your RCA Communications Systems Dealer.

**Note:** This is a direct radio to radio feature and it is only applicable for subscriber IDs/Aliases in digital mode.

Sending a Radio Check (RDR4250 and RDR4280 Only)

- 1. Press " The access the menu.
- 2. Press "or " to enter Contacts.
- 3. Press " or enter Contacts List.
- 5. Press " **T**" to enter Control Services and press " **T**" to select Radio Check. Wait for acknowledgment.
- 6. The screen will display Radio Check, indicating that Radio Check is in progress. The LED blinks in red.
- If the target radio is active in the system, a tone sounds and the display briefly shows **Target Available**. If the target radio is not active in the system, a tone sounds and the display shows **Target Not Available**.

*Note:* Do not press the " **w** " key. Pressing the " **w** " key while the radio is waiting for acknowledgment will terminate all retries and exits Radio Check.

# Initiating Remote Monitor (RDR4250 & RDR4280 only)

If enabled, this feature allows you to remotely monitor (listen) another radio in your radio system without disturbing the user of that radio. No audible or visual notification is shown on the target radio. Only RDR4250 and RDR4280 can initiate a Remote Monitor. To be able to use the Radio Monitor feature, the feature must be enabled by your RCA Communications Systems Dealer, in both the initiating radio and the target radio.

- 1. Press " ro access the menu.
- 2. Press "
- 3. Press "
- 4. Press " and input the subscriber ID.
- 5. Press " 🐨 " to enter Control Services and press " 🐨 " to select Remote Monitor. Wait for acknowledgment.
- 6. The screen will display Radio Monitor, indicating that Radio Monitor is in progress. The LED blinks in red.



- 7. The display shows Remote Monitor Successful or Remote Monitor Failed.
- 8. If successful, the radio will start receiving audio from the monitored radio for the duration of the programmed Remote Monitor time. Once the timer expires, the radio sounds an alert tone and the display shows Remote Monitor Ended. If the Remote Monitor is unsuccessful, the radio repeats the attempt until the programmed number of retries expires.

# Contacts Settings (RDR4250, RDR4280 only)

Contacts provides an address-book capability on your radio. Each entry corresponds to an ID/Alias that you can use to initiate a call. Additionally, each entry can be associated with one of 3 types of calls: Group Call, Private Call, All Call. Each entry within Contacts displays the following information:

- Call Type
- Call Alias
- Call ID

*Note:* You can add, delete, or edit contacts from the Digital Contacts list.

Group Call from Contacts (RDR4250, RDR4280 only)

- 1. Press " or access the menu.
- 2. Press " r to enter Contacts.
- 3. Press " **T** " to enter Contacts List. All entries are alphabetically sorted.
- 4. Press " 🔼 " or " 💟 " to select the desired Group ID/Alias.
- Press [PTT] button to make the call. The LED lights up red. The display shows the Group Call Icon and the Group ID/Alias.
- 6. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

*Note:* If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

- 7. Release the [**PTT**] button to listen.
- When any user in the group responds, the LED lights up solid green. The display shows the Group Call Icon, the Group ID/Alias, and the calling Subscriber ID/Alias.
- 9. If there is no voice activity for a programmed period of time, the call ends.

# Private Call from Contacts (RDR4250, RDR4280 only)

- 1. Press " rest = rest = rest to access the menu.
- 2. Press " or a contacts.
- Press " r to enter Contacts List. All entries are alphabetically sorted.
- 4. Press " **Solution** or " **Solution** or " **Solution** of the desired Subscriber ID/Alias.
- 5. Press [**PTT**] button to make the call. The LED lights up red. The display shows the Private Call Icon and the Subscriber ID/Alias.
- 6. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

*Note:* If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

- 7. Release the [PTT] button to listen.
- 8. When any user in the group responds, the LED lights up solid green. The display shows the Private Call Icon, the Subscriber ID/Alias.

9. If there is no voice activity for a programmed period of time, the call ends.

# Alert Tone Settings

# Activating and Deactivating Call Alert Tones for Private Calls (RDR4250 and RDR4280 only)

Turn on or off the call alert tones for a received Private Call.

- 1. Press " **T** " to access the main menu.
- 2. Press " To navigate to Setting and press " To select.
- 3. Press " To navigate to Tone/Alerts and press " To select.
- 4. Press " a " or " to navigate to Individual Call and press " To select.
- 5. Press " and pre
- 6. Press " ar " or " ar " or " Off".

# Activating and Deactivating Call Alert Tones for Group Calls (RDR4250 and RDR4280 only)

Turn on or off the call alert tones for a received Group Call.

- 1. Press " The access the main menu.
- 2. Press " and press " r to navigate to Setting and press " r to select.
- 3. Press " To navigate to Tone/Alerts and press " To select.
- 4. Press " a " or " to navigate to Talkgroup Call and press " " to select.
- 5. Press " To navigate to "On/Off" and press " To select.
- 6. Press " 🔼 " or " 🔽 " to "On" or "Off".

# Activating and Deactivating Call Alert Tones for Alert Calls (RDR4250 and RDR4280 only)

Turn on or off the call alert tones for a received Private Call.

- 1. Press " **T** " to access the main menu.
- 2. Press " To avigate to Setting and press " To select.
- 3. Press " To navigate to Tone/Alerts and press " To select.
- Press " and press " or " a vigate to Alert Call and press " r visable of the select.
- 5. Press " and pre
- 6. Press " ar " or " ar " or " On" or " Off".

# Activating and Deactivating Call Alert Tones for Text Messages (RDR4250 and RDR4280 only)

Turn on or off the call alert tones for a received Text Message.

- 1. Press " **T** " to access the main menu.
- 2. Press " To navigate to Setting and press " To select.
- 3. Press " To navigate to Tone/Alerts and press " To select.
- 4. Press " 🔼 " or " 💟 " to navigate to Text Message and press " 🕞 " to select.
- 5. Press " To navigate to "On/Off" and press " To select.
- 6. Press " or " To " or " Off".

# Call History Features (RDR4250 and RDR4280 Only)

Your radio keeps track of all recent outgoing, answered, and missed Private Calls. Use the Call History feature to view and manage recent calls. You can store a Subscriber ID from the Call History to Contacts or Delete it. The Call History list types are Missed, Answered and Outgoing.

*Note:* When the Call List contains no entries, the display shows No Records.

# Accessing the Call History

Use the programmed Remote Monitor button.

- 1. Press " ro access the menu.
- Press " rot " rot navigate to Call History and press " rot select.
- 3. Press " 🔼 " or ' 🔽 " to navigate to the desired list and press " 🐨" " to select. The most recent entry is displayed first.
- 4. Use the " or " " button to scroll through the list.
- 5. After locating the desired contact, press [PTT] to initiate a call.

# Storing an Alias or ID from a Call List (RDR4250 and RDR4280 Only)

- 1. When viewing an entry from the Call History list press " 🕞 " to select.
- 2. Press " a " or " a " to navigate to the desired subscriber ID, press " r to select.
- 3. Press " 🔼 " or " 💟 " to navigate to Save, press OK to select.
- Use the keypad to Input the desired Subscriber Alias, press "
   to Save.
- 5. The display shows Contact Saved.

Note: You can store an ID without an Alias.

# Deleting a Call from a Call List

- 1. While viewing an entry from the Call Log list press " 🐨 " to select.
- 2. Press " T or " T vo navigate to Delete.
- 3. Press " 🔂 " and press " 🞑 " or " 💟 " to navigate to Yes and press " 💽 ". The display shows Deleted.

# Call Alert (RDR4250 and RDR4280 Only)

Call Alert enables you to alert a specific radio user to call you back when they are able to do so. This feature is applicable for subscriber IDs/Aliases only and is accessible through the menu via Contacts or Manual Dial.

# **Receiving and Responding to a Call Alert**

When you receive a Call Alert:

- 1. You hear a repetitive Alert Tone.
- On the display you see Call Alert. To respond to the Call Alert directly, Press [PTT] button to make the call. The LED lights up red. The display shows the Private Call Icon and the Subscriber ID/Alias.
- 3. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

*Note:* If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

- 4. Release the [PTT] button to listen.
- 5. To view the Subscriber ID/Alias of the calling radio, press "To ignore the Alert Call press " To .".

# Making a Call Alert from the Contact List (RDR4250, RDR4280 only)

- 1. Press " To access the menu.
- 2. Press " a " or " " to navigate to Contacts and press " " to select.
- 3. Press " 🗖 " or " 🔽 " to navigate to Contacts List and press " 🐨" to select.
- 4. Press " or " To navigate to Control Services.
- 5. Press " To r " To find the desired Subscriber ID/Alias and press " To select. For Manual Dial, press " To r " To the Manual Dial option and press " To r". Use the keypad to input the Subscriber ID and press " To r".
- 6. Press " T or " T on avigate to Call Alert, then press " T.".
- 7. The display shows Call Alert Icon.
- 8. The LED blinks in red when your radio is sending the Call Alert.
- If the Call Alert acknowledgment is received, a tone sounds, and the display shows Call Alert Successful. If the Call Alert acknowledgment is not received, a tone sounds, and the display shows Call Alert Failed.

# Text Message Features (RDR4250 and RDR4280 Only)

Your radio is capable to receive and send data such as a text messages from/to another radio. The maximum text message length is 70 characters.

# **Navigating to Messages**

- 1. Press " **T** " to access the menu.
- 2. Press " T or " T ito navigate to Messages.

Note: Press Back button at any time to return to the previous screen.

# **Receiving Text Message**

When your radio receives a message, the display shows the Message lcon as a notification and the radio sounds an alert tone.

- 1. Press View to read the text message.
- 2. Press Ignore to disregard and read it later.

# **Managing Received Text Messages**

Your radio can store the incoming text messages into an Inbox folder. You can use the Inbox to manage your text messages. The following options are supported:

- Reply
- Forward
- Detail
- Delete

# Viewing a Text Message from the Inbox

- 1. Press " r to access Menu.
- 2. Press " To navigate to Messages and press " Tr violate to select.
- 3. Press " 🔼 " or " 💟 " to navigate to Inbox and press " 📷 " to select.
- 4. Press " and press " again to view the message.
- 5. Press " **T**" to Reply, Forward, Detail or Delete the message. Unread messages are indicated with a closed envelope icon. Read messages are indicated with opened envelope icon.

# Writing and Sending Text Message (RDR4280 Only)

- 1. Press " or access the menu.
- 2. Press " 🎑 " or " 💟 " to navigate to Message.
- 4. Use the keypad to type your message. Press "#" to enter space, press "\*" to delete the last character.
- 5. When done, press " 💦 " to send or save the text message.
- 6. Press " 🔼 " or " 💟 " to navigate to Send and press " 🕞 " to select Send.
- Press " " or " " to navigate to Contact List and press " or " to select it.
- 9. Press " or send the text message.
- 10. If the message is sent successfully, a tone sounds, and the display shows Success. If the message is not sent, a low tone sounds and the display shows Failed. If the text message fails to send, the radio returns to the home screen.

# Sending a Quick Text Message (RDR4250 and RDR4280 Only)

Your radio stores a maximum of 50 Quick Text Messages as programmed by your RCA Communications Systems Dealer. While Quick Text Messages are predefined, you can edit each message before sending it.

- 1. Press " or " to access the menu.
- 2. Press " 🔼 " or " 💟 " to navigate to Message.
- 3. Press " To r " To navigate to Quick Text and press " To select.
- 4. Press " 🔊 " or " 🔊 " to find the desired Quick Text and press " 🐨 " to select.
- 5. Use the keypad to edit the message, if needed. Press "#" to enter space, press "\*" to delete a character.
- 6. Press " 🐨 " when ready to send the message.
- 7. Press " To navigate to Send and press " To select Send.
- 8. Press " To navigate to Contact List and press " To select it.
- 9. Press " 💭 " or " 💟 " to navigate to the desired Subscriber ID/ Alias or Group ID/Alias. Or Press " 💭 " or " 💟 " to navigate to Manual Dial.
- 10. Press " or rest message.
- 11. If the message is sent successfully, a tone sounds, and the display shows Success. If the message is not sent, a low tone sounds, and the display shows Failed. If the text message fails to send, the radio returns to the home screen.

**Note:** Your RCA Communications Systems Dealer can program a One Touch Access programmable function key to send a Quick Text Message to a predefined Subscriber ID/Alias or Group ID/Alias.

# Managing Failed-to-Send Text Messages

You can select one of the following options if the message fails to send.

- Resend
- Forward
- Detail
- Delete

# **Resending a Text Message**

- 2. Press " To navigate to Outbox List.
- 3. Press " To select and press " To enter the Options menu.
- If the message is sent successfully, a tone sounds, and the display shows Success. If the message is not sent, a low tone sounds, and the display shows Failed. If the text message fails to send, the radio returns to the home screen.

# Forwarding a Text Message

- 2. Press " 🔼 " or " 💟 " to navigate to Outbox List.
- 3. Press " To avigate to the desired message, press " To select and press " To enter the Options menu.
- 5. If the message is sent successfully, a tone sounds, and the display shows Success. If the message is not sent, a low tone sounds, and the display shows Failed. If the text message fails to send, the radio returns to the home screen.

# Managing Sent Text Message

Once a message is sent to another radio, it is saved in the Outbox. The most recent sent text message is added to the top of the Outbox List. The Outbox folder is capable for storing a maximum of thirty (30) last sent messages. When the folder is full, the next sent text massage automatically replaces the oldest text message in the folder.

# **Viewing Sent Text Messages**

- 1. Press " To access Menu.
- 2. Press " To r " To navigate to Messages and press " To select.
- 3. Press " To navigate to Outbox and press " To select.
- 4. Press " To navigate to Outbox List and press " To select.
- 5. Press " To navigate to the desired message and press " To navigate to



You can select one of the following options while viewing a sent message:

- Resend
- Forward
- Detail
- Delete

To perform any of the functions follow the steps described in section **Managing Failed-to-Sent Text Messages**.

# **Deleting All Sent Text Messages from Sent items**

- 1. Press " To access Menu.
- Press " " or " " or " to navigate to Messages and press " " to select.
- 3. Press " To navigate to Outbox and press " To select.
- Press " rot " to navigate to Delete All and press " rot select.
- 5. The display shows Delete All?, press "To confirm. The display shows Success.

# Replying to a Text Message from the Inbox

- 1. Press " r to access Menu.
- 3. Press " a " or " " to navigate to Inbox and press " " to select.
- 4. Press " or " or " to select Inbox List and press " R or select.
- 5. Press " To navigate to the desired message and press " To select. Press " To again to enter the Options Menu.

You can select one of the following options if the message:

- Reply
- Forward
- Detail
- Delete
- 6. Press " 🔼 " or " 💟 " to navigate to Reply and press " 🔜 " to select.
- 8. Press "
- 9. Press " or " to Send.
- 10. If the message is sent successfully, a tone sounds, and the display shows Success. If the message is not sent, a low tone sounds, and the display shows Failed. If the text message fails to send, the radio returns to the home screen.

# **Deleting All Text Messages from the Inbox**

- 1. Press " or " to access the menu.
- 2. Press " To navigate to Messages and press " To select.
- 3. Press " a " or " " to navigate to Inbox and press " a " to select.
- 4. Press " To navigate to Delete All and press " To select.
- 5. The display shows Delete All?, press " The display shows Success.

*Note:* When you select the Inbox and it contains no text messages, the display shows Inbox Empty.

# Encryption

If enabled and programmed into your radio, this feature helps to prevent eavesdropping by unauthorized users on a channel, using softwarebased encryption solution. The signaling and user identification portions of a transmission are not encrypted. Your radio must have encryption enabled on the channel to send an encrypted transmission, although it is not required for receiving encrypted transmission. Your radio supports two types of encryption:

- Basic Encryption
- PRODIGI Advanced Encryption
- DMRA ARC4 Encryption

Only ONE encryption type can be assigned to your radio.

To decode an encrypted call or data transmission, your radio must be programmed to have the same encryption key (for Basic Encryption), OR the same Key Value of up to 18 characters for PRODIGI Advanced Encryption as the transmitting radio.

If your radio receives an encrypted call that is of a different encryption key, OR a different Key Value and Key ID, you will either hear a garbled transmission (Basic Encryption) or radio's audio will be muted (PRODIGI Advanced Encryption). The LED lights up solid green while the radio is receiving an encrypted transmission.

*Note:* Encryption is available only in digital mode. The feature must be enabled and programmed by your RCA Communications Systems Dealer.

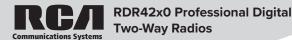
# Making an Encrypted Call

Your radio may have a mix of encrypted and unencrypted channels. To make an encrypted call:

- 1. Using the channel selector knob, switch to an encrypted channel.
- 2. When on the desired channel, press the [**PTT**] button to make the call, the LED indicator lights up red.
- 3. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth and then speak clearly into the microphone.

*Note:* If Talk Permit Function is enabled, wait for the Talk Permit Tone to sound before speaking.

- 4. Release the [PTT] button to listen.
- 5. When the target radio responds, the LED lights up red.
- 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 (RDRD4250 and RDR4280 only).



# **Turning Encryption On/Off**

Encryption can be programmed to turn on automatically and can be programmed without the ability to be turned off. It can also be programmed to be controlled manually. If your radios is set for manual control of the encryption feature , you may turn the encryption On/ Off using the pre-programmed by your RCA Communications Systems dealer long or short press function key or you may use the radio menu (RDR4250 and RDR4280 only):

- 1. Press " ro access to the menu.
- 2. Press " To r " To navigate to Settings
- 3. Press " or " " or " avigate to Radio Settings.
- 4. Press " To navigate to Encryption and press " To select.
- 5. Press " To enable to turn Encryption On or Disable to turn Encryption Off. If successful, the radio displays Success.

# Dual Tone Multi Frequency (DTMF)

The Dual Tone Multi Frequency (DTMF) feature allows the radio to operate in a radio system with an interface to telephone or other DTMF based systems. DTMF Codes can be programmed into the radio by your RCA Communications Systems dealer. DTMF receive/transmit feature has four optional modes with 32 encode groups with up to 30 characters per group. To use this feature, your radio must have an access code, which is system dependent. Please contact with your RCA Communications Systems dealer or system administrator for more information.

To initiate a DTMF call:

- 1. Press and hold PTT button.
- 2. Enter the desired number.

*Note:* You can turn off the DTMF tone by disabling all radio tones and alerts.

### Radio Enable/Disable (RDR4250 and RDR4280 Only)

The Radio Enable/Disable feature allows you to enable or disable any radio within your system. For example, you may want to disable a stolen radio, to prevent the thief from using it, then enable that radio once it is recovered.

**Note:** The Radio Disable/Enable feature requires the radio in your system to have this function enabled. You can only Enable/Disable a radio that is within communication range. Check with your RCA Communications Systems Dealer or system administrator for more information.

**Radio Disable:** The radio receive / transmit functions become disabled after the radio receives the Radio Disable code. In order to initiate Radio Disable you must have a radio a model with a display (RDR4250 or RDR4280). To send a Radio Disable code:

- 1. Press " **or**" to access the main menu.
- 2. Press " a " or " a " key to navigate to Contacts and press " a " to select.
- 3. Press " and " or " a wey to navigate to the desired Subscriber ID/Alias and press " a " to select. You may also press " a " or " a " key to navigate to Manual Dial, press " a ", input the Subscriber ID and press " a" to select.
- 4. Press " " or " " or " to navigate to "Control Services and press
  " or " to select.

- 5. Press " To select.
  5. Press " To select.
- 6. Wait for acknowledgment.
- 7. If successful, a tone sounds, and the display shows Success. If failed, a low tone sounds, and the display shows Failed.

**Radio Enable:** The Radio receive / transmit functions become enabled, if the radio was previously in Disabled status, after the radio receives the Radio Enable code. In order to initiate Radio Enable you must have a radio model with a display (RDR4250 or RDR4280). To send a Radio Enable code:

- 1. Press " ro access the main menu.
- 2. Press " 🔼 " or " 💟 " key to navigate to Contacts and press " 🐨 " to select.
- 3. Press " " or " " " key to navigate to the desired Subscriber ID/Alias and press " " to select. You may also press " " or " " key to navigate to Manual Dial, press " " , input the Subscriber ID and press " " to select.
- 4. Press " 🔼 " or " 💟 " to navigate to Control Services and press " 🐨" " to select.
- 5. Press " To select.
- 6. Wait for acknowledgment.
- 7. If successful, a tone sounds, and the display shows Success. If failed, a low tone sounds, and the display shows Failed.

#### Scanning

When a scan is initiated, your radio cycles through the programmed scan list for the current channel looking for voice activity. The LED blinks orange and you see the Scan icon on the display (RDR4250 and RDR4280 only).

There are two methods to initiating scanning:

- Manual Scan: Initiate scanning manually using the preprogrammed Scan ON/OFF programmable function key. This must be programmed by your RCA Communications Systems Dealer. You can also use the radio menu as described in the Starting and Stopping Scan section (RDR4250 and RDR4280 Only). When scan is initiated, your radio will look for and detect matching activity on all channels / groups included in the scan list (see Scan Lists section for more information).
- 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. OR - Follow the procedure below (RDR4250 and RDR4280 Only):

# **Starting and Stopping Scan**

Press the programmed Scan side button to start or stop the Scan. OR - Follow the procedure below (RDR4250 and RDR4280 Only):

- 1. Use the Channel Selector Knob to select a channel programmed with a scan list.
- 2. Press " or " to access the menu.
- 5. Press " To navigate to ON or OFF and press " To respect.



- 6. The display shows Turned Off if you stop the scan or the display shows Turned On if you start the scan.
- 7. Press " The return to the main menu.
- The LED blinks orange and the Scan lcon is displayed when Scan is in progress. The LED turns off and the Scan icon disappears when Scan is stopped.

# **Responding to a Scan**

During scanning, your radio stops on any channel / group where matching activity is detected. After the transmission is over the radio remains on the active channel for a programmed time known as "Hang Time" (the Hand Time is adjustable and must be programmed by your RCA Communications Systems dealer).

- 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 will resume scanning.

# Scan Lists

Scan lists are created and assigned to individual channels/groups. The radio scans for activity by cycling through the channel/group specified in the scan list for the current channel/group. The RDR4220 radio has 32 scan lists with up to 32 members each and the RDR4250/4280 has 250 scan lists with 32 members each. Each scan list supports a mixture of both analog and digital channels. You can add, delete, or prioritize channels by editing the scan lists.

# Viewing an Entry in the Scan List (RDR4250 and RD4280 Only)

- 1. Use the Channel Selector Knob to select a channel programmed with a scan list.
- 2. Press "or " to access the menu.
- 3. Press " or " " to navigate to Scan and press " or " to select.
- 4. Press " To navigate to Scan Lists, press " To select.
- 5. Press " 🔊 " or " 💙 " to select the desired Scan List and press " 🐨 " to select. Press " 🔊 " or " 💟 " to select View/Edit and press " 🐨 " to view or edit the channel members.

**Note:** If set as priority, the Priority icon appears left of the channel member Number/Alias, indicating whether the member is Priority 1 or Priority 2 channel. You cannot have multiple Priority 1 or Priority 2 channels in the same scan list. There is no Priority icon if priority is set to None.

# **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 programmable function key until you hear a tone.
- 2. Release the programmed Nuisance Channel Delete programmable function key. The nuisance channel is deleted.

# **Restoring a Nuisance Channel**

To restore the deleted nuisance channel, restart the radio by powering it off powering it back on, or restart the scanning (see Starting and Stopping Scanning section).

# Radio Settings (RDR4250 and RDR4280 Only)

# Keypad Locked and Keypad Unlocked

You can lock your radio keypad to avoid an inadvertent key entry.

- 1. Press " **o** " to access the main menu.
- 2. Press " To r " To navigate to Settings and press " To r to select.
- 3. Press " 🔼 " or " 💟 " to navigate to Radio Settings and press " 🐨 " to select.
- 4. Press " To navigate to Keypad Lock and press " To select.
- 5. Press " 🔼 " or " 💟 " to select On. The display shows "Keypad Locked".

To unlock the keypad, press " 🐨 " then press [\*] button. The display shows Keypad Unlocked and returns to the Home screen.

# **Turning Keypad Tones On or Off**

You can enable or disable keypad tones if needed.

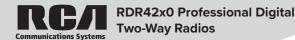
- 1. Press " 🕞 " to access the main menu.
- 2. Press " 🔼 " or " 💟 " to navigate to Settings and press " 🔜 " to select.
- Press " " or " or " to navigate to Tone/Alerts and press " or " to select.
- 5. Press " 🔼 " or " 💟 " to navigate to Keypad Tone and press " 🐼 " to select.
- 6. Press " 🔼 " or " 💟 " to Enable or Disable the keypad tone.

# Setting the Power Level

You can adjust your radio power setting to high or low for each channel.

Press the programmed Power Level programmable function key to toggle the transmit power level between high and low. You may also use the radio menu (RDR4250 and RDR4280 Only) by following the process outlined below:

- 1. Press " The access the main menu.
- 2. Press " 🔼 " or " 💟 " to navigate to Settings and press " 📷 " to select.
- 4. Press " and pre
- 5. Press " To select the desired power level. Once the level is selected the display shows "Success".



# Controlling the Display Backlight (RDR4250 and RDR4280)

You can enable or disable the radio display backlight as needed. The setting also affects the Menu navigation buttons and keypad backlight. Press the programmed Backlight programmable function key to toggle the backlight settings. You may also use the radio menu by following the process outlined below:

- 1. Press " To access the main menu.
- 2. Press " a " or " " to navigate to Settings and press " " to select.
- 3. Press " a " or " a " to navigate to Radio Settings and press " or" to select.
- 4. Press " To navigate to Backlight and press " To select.
- 5. Press " or " " or " or " or " to select one of the following options:
  - Off
  - On
  - Timed
- 6. The display shows "Success".

**Note:** The display backlight and keypad backlight automatically turn off if the LED indicator is disabled.

# Controlling the Display Brightness (RDR4250 and RDR4280)

You can control the display brightness depending to the environment you are using your radio.

- 1. Press " r to access the main menu.
- 2. Press " 🔼 " or " 💟 " to navigate to Settings and press " 💽 " to select.
- 3. Press " 🔼 " or " 💟 " to navigate to Radio Settings and press " 🐨 " to select.
- Press " " or " " to navigate to Brightness and press " " " to select.
- 5. Press " 🔼 " or " 🔽 " to adjust to the desired display brightness.
- 6. The display shows "Success".

# Switching Day/Night Mode

You can switch the display to Day or Night mode according to your need. This automatically adjust the display brightness to Day/Night preset levels.

- 1. Press " To access the main menu.
- 2. Press " and pre
- 3. Press " To avigate to Radio Settings and press " To select.
- 4. Press " a " or " " or " to navigate to Day/Night Mode and press " " or " to select.
- 5. Press " To switch to Day Mode or Night Mode and press " To select.
- 6. The display shows "Success".

#### Channel Display (RDR4250 and RDR4280)

Defines if the radio shows the channel name or frequency on the display.

- 1. Press " r to access the main menu.
- 2. Press " a " or " " to navigate to Settings and press " r to select.
- 3. Press " 🔼 " or " 💟 " to navigate to Radio Settings and press " 🐨 " to select.
- 4. Press " " or " " to navigate to Channel Display and press
  " " or " to select.
- 5. Press " To select Name or Frequency, press " To select to select
- 6. The display shows "Success".

# Man Down

Man Down is an optional feature. If the feature is not activated in the radio, contact your RCA Communications Systems Dealer.

**Note:** Your radio must be programmed by your RCA Communications Systems dealer according your requirements to allow you to efficiently use the Man Down feature.

This feature enables Man Down function in the radio. Man Down initiates an emergency alarm if the radio is in a position at a predefined angle for a predefined period of time and there has been no actions taken by the user during the predefined time. Man Down is radiowide feature. To Enable/Disable the Man Down feature press the programmed Man Down On/Off programmable function key to toggle Man Down On and Man Down Off. You may also use the radio menu by following the process outlined below:

- 1. Press " or " to access the main menu.
- 2. Press " To avigate to Settings and press " To select.
- 3. Press " The area of a setting and press and press " The select.
- 4. Press " To navigate to Man Down and press " To select.
- 5. Press " To select. The select. 5. Press " The select.
- 6. The display shows "Success".

# Lone Worker

Lone Worker is an optional feature. If the feature is not activated in the radio, contact your RCA Communications Systems Dealer.

**Note:** Your radio must be programmed by your RCA Communications Systems dealer according your requirements to allow you to efficiently use the Lone Worker feature.

This feature enables Lone Worker function in the radio. Lone Worker gives a tone as a reminder at regular intervals to which the radio user needs to respond to by pressing the PTT button. If the worker fails to respond, within the pre-defined time, the radio initiates an emergency alarm. Lone Worker is radio-wide feature. Lone Worker is radio-wide feature. To Enable/Disable the Lone Worker feature press the programmed Man Down On/Off programmable function key to toggle Lone Worker On and Lone Worker Off. You may also use the radio menu by following the process outlined below:



- 1. Press " ro access the main menu.
- 2. Press " 🔼 " or " 💟 " to navigate to Settings and press " 💽 " to select.
- 3. Press " 🔊 " or " 💟 " to navigate to Radio Settings and press " 🐨 " to select.
- 4. Press " To navigate to Lone Worker and press " To select.
- 5. Press " The select. The select of the select. 5. Press " The select.
- 6. The display shows "Success".

# Squeich Level (Analog Mode Only)

You can adjust your radio 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 On/Off programmable function key to turn Squelch On or Off. You may also adjust the Squelch Level through the radio menu (RDR4250 and RDR4280 Only) by following the process outlined below:

- 1. Press " To access the main menu.
- 2. Press " To avigate to Settings and press " To select.
- 3. Press " To avigate to Radio Settings and press " To select.
- - Open
  - Normal
  - Tight
- 6. The display shows "Success".

# **Tones/Alerts**

The Tones/Alerts menu allows you to preset or customize your radio audible alerts and tones for the functions listed below. You can Enable or Disable each one of them individually or customize the tone from the tone list. The settings are radio-wide and affect all radio operating modes.

- 1. Press " ro access the main menu.
- 2. Press " To r " To navigate to Settings and press " To select.
- 3. Press " 🔼 " or " 💟 " to navigate to Radio Settings and press " 🐨 " to select.
- 4. Press " or " or " or " to navigate to Tones/Alerts and press " or " to select.
- 5. Press " or " " to navigate to the desired function and press " To select.

- Radio Silent
- Keypad tones
- Text Message
- Private Call
- Group Call
- Alert Call
- Power Up
- Low Battery
- Annunciation
- Scan
- TX Inhibit
- Lone Worker
- TOT
- 6. Press " or select.
- 7. Press " To realize the navigate to On/Off or Tone List and press
  " To select.
- 8. Press " and press " or " To navigate to On, Off or the desired Tone and press " or " to select.
- 9. The display shows "Success".

# Turning the Radio Tones/Alerts On/Off

You can enable and disable all radio tones and alerts (except for the incoming Emergency alert tone) if needed. Press the programmed All Tones/Alerts On/Off programmable function key to toggle All Tones/ Alerts On or Off. You may also adjust the Tones/Alerts through the radio menu (RDR4250 and RDR4280 Only) by following the process outlined below:

- 1. Press "  $rac{1}{2}$ " to access the main menu.
- 2. Press " a " or " " to navigate to Settings and press " " to select.
- 3. Press " 🔼 " or " 💟 " to navigate to Radio Settings and press " 🐨 " to select.
- 4. Press " 🔼 " or " 💟 " to navigate to Tones/Alerts and press "
- 6. The display shows "Success".

# Turning the LED Indicator On/Off (RDR4250 and RDR4280 Only)

The LED Indicator shows the operational status of your radio. To turn the LED Indicator On/Off follow the process outlined below:

- 1. Press " 🕞 " to access the main menu.
- 2. Press " a " or " T " to navigate to Settings and press " T " to select.
- 4. Press " a " or " a " to navigate to LED Indicator and press " or " to select.
- 5. Press " To r " or " To navigate to the LED Indicator Enable or Disable, press " To select.
- 6. The display shows "Success".

**Note:** The display backlight, buttons and keypad backlight are automatically turned off if the LED indicator is disabled.

# Radio PIN Lock (RDR4250 and RDR4280 Only)

For security purposes you can lock your radio with the PIN lock feature. To turn the PIN On/Off follow the process outlined below:

- 1. Press " or " to access the main menu.
- 2. Press " 🔼 " or " 💟 " to navigate to Settings and press " 🕞 " to select.
- 3. Press " The area of a constraint of a const
- 4. Press " To ress " To navigate to PIN and press " The select.
- 5. Press " To navigate to On/Off and press " To select.
- 6. To turn On the PIN lock, select "On" and enter a 6 digit PIN. When done press "
- 7. The display shows "Success".
- To change the PIN, follow the process outlined below:
- 1. Press " or " to access the main menu.
- 2. Press " To avigate to Settings and press " To select.
- 3. Press " a " or " a " to navigate to Radio Settings and press " " to select.
- 4. Press " or " to navigate to PIN and press " ro select.
- 5. Press " 🔼 " or " 🚺 " to navigate to Change Pass. and press " 🔂 " to select.
- 6. Enter the current PIN first and press " 🐨 ". Then enter a new 6 digit PIN and press " 🐨 ", enter the new PIN again to confirm and press " 🐨 ".
- 7. The display shows "Success".

# Turning Voice Operating Transmission (VOX) Feature On/Off

This feature allows you to initiate a hands-free voice activated call on a programmed channel. The radio automatically transmits, for a programmed period of time, whenever the microphone on the VOXcapable accessory detects a voice.

**Note:** This feature must be programmed by your RCA Communications Systems Dealer to enable your radios to use this function. It is NOT advised to use VOX in loud and noisy environments, around heavy machinery or when close by to other radio users.

If VOX is programmed by your RCA Communications Systems Dealer you may manually turn it On or Off. Press the programmed VOX programmable function key to toggle VOX On/Off. You may also use the radio menu (RDR4250 and RDR4280 Only) by following the process outlined below:

- 1. Press " To navigate to Settings and press " To select.
- 2. Press " a " or " a " to navigate to Radio Settings and press " To select.

- 3. Press " or " or to navigate to VOX and press " or select.
- 4. Press " The select. " The select of the select of the select.
- 5. The display shows "Success".

*Note:* Pressing the PTT button during hands-free radio operation will disable VOX.

# Talkaround

This feature toggles between Repeater and Talkaround (Direct) mode. If you are using a repeater and your repeater is not operating or you are out of range, you can continue to communicate during that time directly with other radios within your group. This is called "Talkaround".

Press the programmed Repeater / Talkaround programmable function key to toggle between Talkaround and Repeater modes.

*Note:* The Talkaround setting is retained even after powering down.

# Function Keys (RDR4250 and RDR4280 Only)

This feature allows you to assign and control radio features and functions to the programmable function keys.

- 1. Press " **T** to access the main menu.
- 2. Press " 🔼 " or " 💟 " to navigate to Settings and press " 💽 " to select.
- 4. Press " 🔼 " or " 💟 " to navigate to Function Keys and press " 🐨 " to select.
- 5. Press " To r " To navigate to the desired function key and press " To select.
  - Top Key (TK)
  - Channel Knob
  - Side Key 1 (SK1)
  - Side Key 2 (SK2)
  - Side Key 3 (SK3)
  - PTT
  - FK1 Key (-)
  - FK2 Key (- -)
- 6. Press " 🔼 " or " 💟 " to Enable or Disable and press " 🕞 " to confirm.
- 8. The display shows "Success".





#### Keypad Mode (RDR4250 and RDR4280 Only)

This feature allows you to define the radio behavior upon press of any keypad alphanumeric key when your radio is on the home screen. The options are:

- Disable the keypad will be inactive.
- Manual Dial you can dial a subscriber ID/Alias directly from the home screen.
- One Touch Call you can select an assigned by you RCA Communications Systems Dealer One Touch Call.
- Channel Switch you can enter a channel number (within the current Zone) to switch to that channel without turning the Channel Knob.
- 1. Press " The access the main menu.
- Press " To " or " To navigate to Settings and press " " to select.
- Press " a " or " a " to navigate to Radio Settings and press " or " to select.
- 4. Press " 🔼 " or " 💟 " to navigate to Keypad Mode and press " 🔂 " to select.
- 5. Press " or " " to set one the following options:
  - Disable
  - Manual Dial
  - One Touch Call
  - Channel Switch
- 6. The display shows "Success".

### Vibration (None I.S. (Intrinsically Safe) Models Only)

You may set you radio to Vibrate when it receives a Private Call, Group Call, Alert Call or a Text Message. You may enable or disable Vibration as needed by pressing the programmed Vibration On/Off programmable function key to toggle Vibration On/Off. You may also use the radio menu (RDR4250 and RDR4280 Only) by following the process below.

- 1. Press " or " to access the main menu.
- 2. Press " 🔼 " or " 💟 " to navigate to Settings and press " 📷 " to select.
- 3. Press " a " or " a " to navigate to Radio Settings and press " " or " to select.
- 4. Press " To navigate to Vibration and press " To select.
- 5. Press " or " To Enable or Disable vibration.
- 6. The display shows "Success".

# GPS Settings (Digital Mode Only)

GPS is an optional feature. A location reporting feature, which allows the radio to obtain its current location from available satellites. The coordinates then can be sent to a designated Dispatch console for tracking purposes.

**Note:** This feature can only work when the radio is used outdoors. At least one RCA Communications Systems compatible PC Dispatch Console, serving as Target Contact, is needed to decode and display properly the radio unit location coordinates. For more information contact your RCA Communications Systems Dealer. If GPS is enabled and programmed by your RCA Communications Systems Dealer you may manually turn it On or Off. Press the programmed GPS programmable function key to toggle GPS On/Off. You may also use the radio menu (RDR4250 and RDR4280 Only) by following the process outlined below:

- 1. Press " $\bigcirc$  " to access the main menu.
- 2. Press " To navigate to Accessories and press " To ress " To select.
- 3. Press "
- 4. Press " To select one of the following options:
  - GPS On/Off
  - Position
  - GMT
- 5. To turn GPS On/Off, press " ro avigate to On or Off and press " ro select.
- 6. The display shows "Success".

# General Radio Information (RDR4250 and RDR4280 Only)

Your radio contains information of the following:

- Serial Number
- Radio ID
- Radio Alias
- Model
- Frequency Range
- Firmware Version
- Hardware Version
- Database Version
- Bootloader Version
- Language Version
- Picture Version
- Last Prg. Date

To access the information on your radio, follow below steps:

- 1. Press " 🔫 " to access the main menu.
- 2. Press " 🔼 " or " 💟 " to navigate to Settings and press " 🔂 " to select.
- 3. Press " and " or " and " to navigate to Radio Info and press " row" to select.



# **CARE AND CLEANING**

- Do not directly handle the radio by its antenna or external microphone. Damage due to improper handling and misuse is NOT covered under the warranty.
- Do not place the radio in a dusty or dirty environment.
- Clean the radio with a lint-free cloth moistened with clean water and/or a mild dishwashing liquid to remove dirt, grease and dust.
- Avoid exposing the radio to corrosives, solvents, or spirits.
- Avoid exposing the radio and it's battery to direct sunlight for prolonged periods of time.



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# TROUBLESHOOTING

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