RDX Series™
Two-way Radios
User Guide

models RDU2020, RDV2020, RDU4100 and RDV5100

Radio models shown are RDU2020 and RDV2020

CONTENTS

SAFETY

PRODUCT SAFETY AND RF EXPOSURE COMPLIANCE

ATTENTION!

This radio is restricted to occupational use only to satisfy FCC RF energy exposure requirements.

For a list of Motorola-approved antennas, batteries, and other accessories, visit the following website which lists approved accessories:

http://www.motorola.com/RDX

4

INTRODUCTION

Thank you for purchasing the Motorola® RDX Series™ Radio. This radio is a product of Motorola's 75 plus years of experience as a world leader in the designing and manufacturing of communications equipment. The RDX Series™ radios provide cost-effective communications for businesses such as retail stores, restaurants, schools, construction sites, manufacturing, property and hotel management and more. Motorola Business two-way radios are the perfect communications solution for all of today's fast-paced industries.

Note: Read this user guide carefully to ensure you know how to properly operate the radio before use

Business Radios,
RPSD 1C15, Motorola
8000 West Sunrise Boulevard
Plantation, Florida 33322

PACKAGE CONTENTS

- Radio
- Antenna (only for **RDU4100** and **RDV5100**)
- Spring Action Belt-Clip
- Lithium-Ion Battery
- Power Supply
- User Guide
- Warranty Card
- Drop-in Tray Charger
- Product Safety & RF Exposure Booklet

For a copy of a large-print version of this user guide or for product-related questions, contact:

1-800-448-6686 in the USA

1-800-461-4575 in Canada

1-866-522-5210 on your TTY (Text Telephone)

For product information visit us at:
www.motorola.com/radios/business

or visit our microsite at:
www.motorola.com/RDX

BATTERIES AND CHARGERS SAFETY INFORMATION

This document contains important safety and operating instructions. Read these instructions carefully and save them for future reference.

Before using the battery charger, read all the instructions and cautionary markings on

- the charger,
- the battery, and
- the radio using the battery

1. To reduce risk of injury, charge only the rechargeable Motorola-authorized batteries. Other batteries may explode, causing personal injury and damage.

2. Use of accessories not recommended by Motorola may result in risk of fire, electric shock, or injury.

3. To reduce risk of damage to the electric plug and cord, pull by the plug rather than the cord when disconnecting the charger.

4. An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in risk of fire and electric shock. If an extension cord must be used, make sure that the cord size is 18AWG for lengths up to 6.5 feet (2.0 m), and 16AWG for lengths up to 9.8 feet (3.0 m).

5. To reduce risk of fire, electric shock, or injury, do not operate the charger if it has been broken or damaged in any way. Take it to a qualified Motorola service representative.

6. Do not disassemble the charger; it is not repairable and replacement parts are not available. Disassembly of the charger may result in risk of electrical shock or fire.

7. To reduce risk of electric shock, unplug the charger from the AC outlet before attempting any maintenance or cleaning

OPERATIONAL SAFETY GUIDELINES

- Turn the radio OFF when charging battery.

- The charger is not suitable for outdoor use. Use only in dry locations/conditions.

- Connect charger only to an appropriately fused and wired supply of the correct voltage (as specified on the product).

- Disconnect charger from line voltage by removing main plug.

- The outlet to which this equipment is connected should be nearby and easily accessible.

- Maximum ambient temperature around the power supply equipment must not exceed 40°C (104°F).

- Make sure that the cord is located where it will not be stepped on, tripped over, or subjected to water, damage, or stress.

FCC LICENSING INFORMATION

INTERFERENCE INFORMATION

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

RDX Series™ Business two-way radios operate on radio frequencies that are regulated by the Federal Communications Commission (FCC). To transmit on these frequencies, you are required to have a license issued by the FCC. Application is made available on FCC Form 601 and Schedules D, H, and Remittance Form 159.

To obtain these FCC forms, request document 000601 which includes all forms and instructions. If you wish to have the document faxed, mailed or have questions, use the following contact information.

Faxed contact the Fax-On- Demand system at:	Mailed call the FCC forms hotline at:	Questions regarding FCC license contact the FCC at:
1-202-418-0177	1-800-418-FORM 1-800-418-3676	1-888-CALL-FCC 1-888-225-5322 Or: http://www.fcc.gov

Before filling out your application, you must decide which frequency(ies) you can operate on. See "Frequencies and Code Charts". For questions on determining the radio frequency, call Motorola Product Services at:

1-800-448-6686

Changes or modifications not expressly approved by Motorola may void the user's authority granted by the FCC to operate this radio and should not be made. To comply with FCC requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services.

Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the FCC equipment authorization for this radio could violate FCC rules.

Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited

FCC LICENSING INFORMATION

RADIO OVERVIEW

PARTS OF THE RADIO

Antenna

Channel Selector Knob

On/Off/Volume Knob

Microphone

LED Indicator

Accessory Connector

Model Label

Lithium-Ion Battery

PTT Button

SB1-Monitor Button

SB2- Scan/ Nuisance Channel Delete
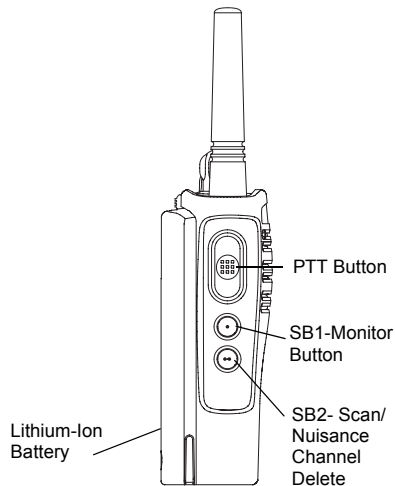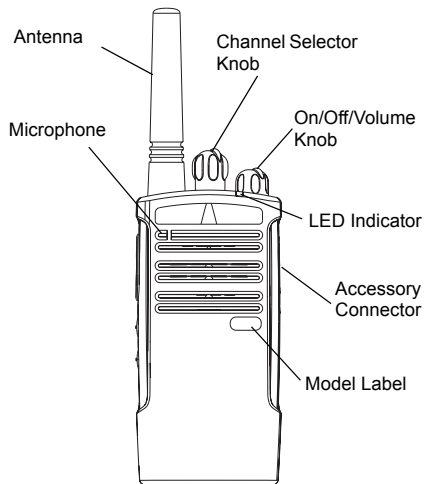
On/Off/Volume Knob

Used to turn the radio ON or OFF and to adjust the radio's volume.

Channel Selector Knob

Used to switch the radio to different channels.

Accessory Connector

Used to connect compatible audio accessories.

Model Label

Indicates the model of the radio.

Microphone

Speaks clearly into the microphone when sending a message.

Antenna

For models **RDU2020**, and **RDV2020** the antennas are non-removable. For **RDV5100**, **RDU4100** antennas are removable.

LED Indicator

Used to give battery status, power-up status, radio call information and scan status.

Side Buttons

Push-to-Talk (PTT) Button

• Press and hold down this button to talk, release it to listen.

Side Button 1 (SB1)

• The Side Button 1 is a general button that can be configured by the Computer Programming Software - CPS. The default setting of SB1 is 'Monitor'.

Side Button 2 (SB2)

• The Side Button 2 is a general button that can be configured by the CPS. The SB2 default setting is 'Scan/Nuisance Channel Delete'.

The Lithium-Ion (Li-Ion) Battery

RDX Series™ provides different types of batteries. For more information, see "Battery Features" on page 14.

This User Guide covers multiple RDX Series™ models, and may detail some features your radio does not have. The radio's model is shown on the front of the radio, underneath the speaker, and provides you the following information:

Model	Frequency Band	Transmit Power (Watts)	Number of Channels	Antenna
RDV2020	VHF	2	2	Non-removable
RDU2020	UHF	2	2	Non-removable
RDU4100	UHF	4	10	removable
RDV5100	VHF	5	10	removable

RADIO OVERVIEW

BATTERY FEATURES

RDX Series™ radios provide Lithium-Ion batteries that come in different capacities that will define the battery life. It also offers the option to use Alkaline batteries.

About the Li-Ion Battery

The RDX Series™ radio comes equipped with a rechargeable Li-Ion battery. This battery should be charged before initial use to ensure optimum capacity and performance.

Battery life is determined by several factors. Among the more critical are the regular overcharge of batteries and the average depth of discharge with each cycle. Typically, the greater the overcharge and the deeper the average discharge, the fewer cycles a battery will last. For example, a battery which is overcharged and discharged 100% several times a day, lasts fewer cycles than a battery that receives less of an overcharge and is discharged to 50% per day. Further, a battery

which receives minimal overcharging and averages only 25% discharge, lasts even longer.

Motorola batteries are designed specifically to be used with a Motorola charger and vice versa. Charging in non-Motorola equipment may lead to battery damage and void the battery warranty. The battery should be at about 77°F (25°C) (room temperature), whenever possible. Charging a cold battery (below 50° F [10°C]) may result in leakage of electrolyte and ultimately in failure of the battery. Charging a hot battery (above 95°F [35°C]) results in reduced discharge capacity, affecting the performance of the radio. Motorola rapid-rate battery chargers contain a temperature-sensing circuit to ensure that batteries are charged within the temperature limits stated above.

Battery Recycling and Disposal

Li-Ion rechargeable batteries can be recycled. However, recycling facilities may not be available in all areas. Under various U.S. state laws and the laws of several other countries, batteries must be recycled and cannot be disposed of in landfills or incinerators. Contact your local waste management agency for specific requirements and information in your area. Motorola fully endorses and encourages the recycling of Li-Ion batteries. In the U.S. and Canada, Motorola participates in the nationwide Rechargeable Battery Recycling Corporation (RBRC) program for Li-Ion battery collection and recycling.

Many retailers and dealers participate in this program. For the location of the drop-off facility closest to you, access RBRC's Internet web site at:

www.rbrc.com

or call:

1-800-8-BATTERY

This internet site and telephone number also provides other useful information concerning recycling options for consumers, businesses and governmental agencies.

Installing the Lithium-Ion (Li-Ion) Battery

Battery Latch
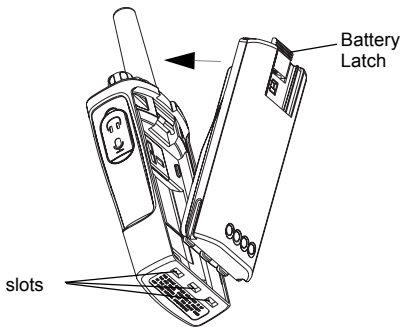
slots

1. Turn OFF the radio.
2. With the Motorola logo side up on the battery pack, fit the tabs at the bottom of the battery into the slots at the bottom of the radio's body.
3. Press the top part of the battery towards the radio until a click is heard.

Note: To learn about the Li-Ion Battery Life features, refer to "About the Li-Ion Battery" on page 14

Removing the Lithium-Ion (Li-Ion) Battery
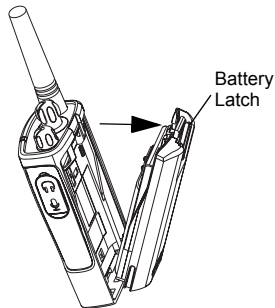
Battery Latch

1. Turn OFF the radio.
2. Push down the battery latch and hold it depressed while removing the battery.
3. Pull the battery away from the radio.

RADIO OVERVIEW

16

Alkaline Battery Pack (Optional Accessory)

Installing Alkaline Batteries

Alkaline
Battery
Door
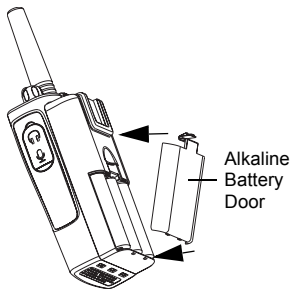
1. Turn OFF the radio, if it is turned ON.
2. Remove Li-Ion battery.
3. Assemble alkaline battery pack in the same steps as installing the Li-Ion battery pack.
4. Remove battery door from alkaline battery pack.
5. Slide the 5 AA alkaline batteries into the frame, matching the markings inside the compartment

Removing Alkaline Batteries

Alkaline
Battery
Door
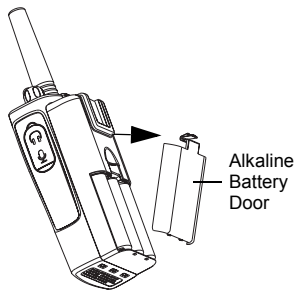
1. Turn OFF the radio, if it is turned ON.
2. Slide the battery latches, on both sides of the battery, downwards.
3. Pull the top of the battery away from the radio's body, and lift the battery from the radio's body.

Attaching and Removing Antenna

These instructions apply **ONLY** to models **RDU4100** and **RDV5100**. Do not attempt to remove the antenna if your radio is not one of these models.

Attaching the Antenna
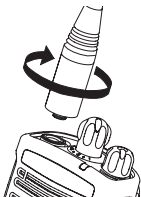
1. Align the threaded end of the antenna with the radio's antenna connector.

2. Turn the antenna clockwise to fasten it.

Removing the Antenna
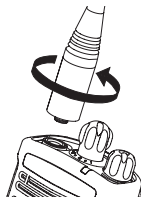
1. Turn the antenna counterclockwise until you can remove it.

Installing Spring Action Belt Clip

Belt Clip Tab

Spring Action Belt Clip
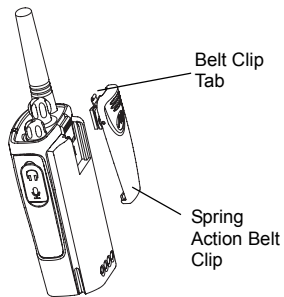
1. Slide the spring action belt clip rails into the belt clip grooves on the back of the battery pack and slide it down until the belt clip tab snaps into place.

2. To remove, pull back the metal release tab on the belt clip tab and push the spring action belt clip upward to remove.

Power Supply, Adaptor and Drop-in Tray Charger

Drop-in Tray Charger
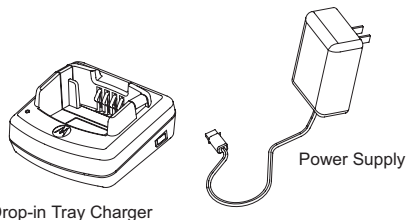
Power Supply

The radio is equipped with one Drop-in Tray Charger and one Power Supply with Adaptor. For details, see "Chargers" on page 81.

Battery Life Information

When the Battery Save feature is ON (enabled by default) the battery life will be longer. The following chart summarizes battery life estimations:

Li-Ion Battery Life with Battery Save feature ON			
Battery Type	**5 Watts**	**4 Watts**	**2 Watts**
Standard	8.5 hours	8.5 hours	12 hours
High	17 hours	17 hours	24 hours
Ultra High	18.5 hours	18.5 hours	26 hours

Note: Battery life is estimated based on 5% transmit/ 5% receive/ 90% standby standard duty cycle

Alkaline Battery Life

The following chart estimates the Alkaline battery life:

Alkaline Battery Life			
Battery Save Feature	**5 Watts**	**4 Watts**	**2 Watts**
ON	26 hours*	26 hours*	26 hours

Notes:

- Battery life are being estimated based on 5% transmit/ 5% receive/ 90% standby standard duty cycle.

- * When using Alkaline battery, the radio is set to 2W by default

Charging the Battery

RDX Series™ offers two types of chargers :

- Standard Charger and,
- Rapid Charger.

Note: The radio comes equipped with a Standard Charger

To charge the battery (with the radio attached), place it in a Motorola-approved Drop-in Tray Single Unit Charger or Drop-in Tray Multi Unit Charger.

Note: When acquiring additional chargers or power supplies, make sure you have similar drop-in tray chargers and power supplies sets (all "rapid" or all "standard"). For part number details, refer to "Chargers" on page 81

Charging with the Drop-in Tray Single Unit Charger (SUC)
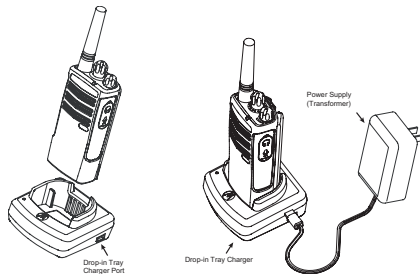
1. Place the drop-in tray charger on a flat surface.
2. Insert the connector of the power supply into the port on the side of the drop-in tray charger.
3. Plug the AC adaptor into a power outlet.
4. Insert the radio into the tray with the front of the radio facing the front of the charger, as shown.

Note: When charging a battery attached to a radio, turn the radio OFF to ensure a full charge. See "Operational Safety Guidelines" on page 8 for more information

Charging a Standalone Battery
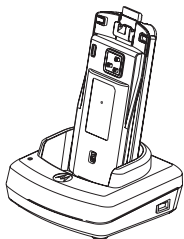
To charge only the battery - at step 4, insert the battery into the tray, with the inside surface of the battery facing the front of the charger, as shown. Ensure the slots in the battery correctly engage in the charger

Note: Ensure that the bracket in the charger is adjusted to the correct position for either Standard or High capacity battery. See "Charging a Standard Battery" on page 23

Charging a Standard Battery

The drop-in tray charger has a removable bracket that is adjustable depending on the type of battery that needs to be charged. It is designed to charge either the battery (with the radio) or a standalone battery. The drop-in tray charger's default position will charge a standard battery. The following image shows the orientation for each battery:

Adjustable bracket   Adjustable bracket

Standard   High and Ultra High Capacity
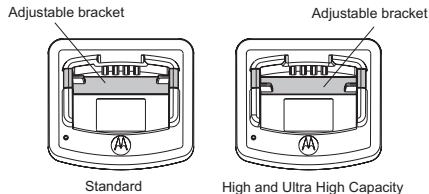
Figure 1: Identifying the Drop-In Charger's Position Before Charging the Battery

Charging a High Capacity or Ultra High Capacity Battery
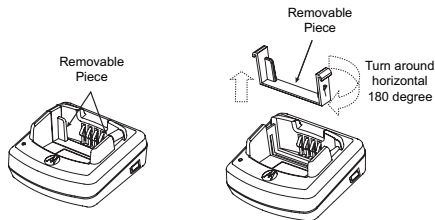
To convert the charger from the default setup to accommodate the High capacity or Ultra High capacity battery:

1. Squeeze both tabs on each side of the removable bracket in the drop-in charger tray and lift the bracket from the charger tray.

2. Rotate the removable bracket 180 degrees and replace it by fitting it in the charger slot until it snaps. The label on the removable bracket should show 'High & Ultra Capacity Battery' facing front of the charger.

3. Repeat same procedure to return to the charging a Standard Battery position. Label on the removable bracket should show 'Standard Battery' facing front.

Note: Make sure the bracket is assembled correctly for both standalone battery and battery (with radio)

Drop-in Tray Charger LED Indicators

Standard Charger LED Indicator		
Status	**LED Status**	**Comments**
Power ON	Steady red indication for 3 seconds	The charger has powered up
Charging	Blinking red (slow)	The charger is currently charging
Charging Complete	Steady red indication	Battery is fully charged
Battery Fault(*)	Blinking red (fast)	Battery had a fault when battery was inserted

Notes:

- (*) Normally re-seating the battery pack will correct this issue.

- (**) Battery temperature is too warm or too cold or wrong power supply is being used

Rapid Charger LED Indicator		
Status	**LED Status**	**Comments**
Power ON	Steady green indication for 3 seconds	The charger has powered up
Charging	Blinking green	The charger is currently charging
Top-off Charging	Blinking green (slow)	Battery is near fully charged
Charge Complete	Steady green indication	Battery is fully charged
Battery Fault (*)	Blinking red (fast)	Battery has a fault when battery was inserted
Waiting to Charge (**)	Double-blink yellow indications	Battery charging conditions not suitable

Notes:

- (*) Normally re-seating the battery pack will correct this issue.

- (**) Battery temperature is too warm or too cold or wrong power supply is being used

Estimated Charging Time

The following table provides the estimated charging time of the battery. For further details, see "Battery" on page 80.

Estimated Charging Time			
Charging Solution	**Battery Type**		
	Standard	High Capacity	Ultra High Capacity
Standard Charging Solution	7 hours	12 hours	13 hours
Rapid Charging Solution	1.5 hours	3 hours	3.5 hours

Charging a Radio and Battery using a Multi Unit Charger- MUC (Optional Accessory)
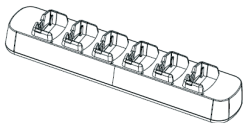
The Multi Unit Charger (MUC) allows drop-in charging of up to 6 radios or batteries. Batteries can be charged with the radios or removed and placed in the MUC separately. Each of the 6 charging pockets can hold a radio or battery, but not both.

1. Place the charger on a flat surface.
2. Insert the power cord plug into the MUC's jack.
3. Plug the cord into an AC outlet.
4. Turn the radio OFF.
5. Set removable bracket for battery type.
6. Insert the radio or battery into the charging pocket.

Notes:

- This Multi Unit Charger also allows you to clone up to 3 radios (3 Source radios and 3 Target radios). Refer to page 51 for details.

- Further details on MUC's operation are explained in the Instructions Sheet provided with the MUC. For part number details, refer to the Accessories section.

MUC LED Indicator		
Status	**LED Status**	**Comments**
Charging	Steady Red Indication	The charger is currently charging
Charge Complete	Steady Green Indication	Battery is fully charged
Battery Fault (*)	Blinking red (fast)	Battery was faulty when inserted

Note: (*) Normally re-seating the battery pack will correct this issue.

GETTING STARTED

For the following explanations, refer to "Parts of the Radio" on page 11.

TURNING RADIO ON/OFF

To turn ON the radio, rotate the On/Off/Volume Knob clockwise. The radio will chirp and the LED Indicator will briefly blink red.

To turn the radio OFF, rotate the On/Off/Volume Knob counterclockwise until you hear a 'click' and the radio LED Indicator turns OFF.

ADJUSTING VOLUME

Turn the On/Off/Volume Knob clockwise to increase the volume, or counterclockwise to decrease the volume.

Note: Do not hold the radio too close to the ear when the volume is high or when adjusting the volume

SELECTING A CHANNEL

To select a channel, rotate the Channel Selector Knob and select the desired channel number.

Program each channel separately. Each channel has its own Frequency, Interference Eliminator Code and Scan Settings.

TALKING AND MONITORING

It is important to monitor for traffic before transmitting to avoid 'talking over' someone who is already transmitting

To monitor, long press and hold the SB1(*) button to access channel traffic. If no activity is present, you will hear 'static'. To release, press SB1 again. Once channel traffic has cleared, proceed with your call by pressing the PTT button. When transmitting, the LED Indicator will blink red every 3 seconds.

Notes:

- To listen to all activity on a current channel, short press the SB1 to set the CTCSS/DPL code to 0. This feature is called 'CTCSS/DPL Defeat (Squelch set to SILENT)'.

- (*) This assumes SB1 is not being programmed for a different mode.

RECEIVING A CALL

1. Select a channel by rotating the Channel Selector Knob until you reach the desired channel.

2. Make sure the PTT button is released and listen for voice activity.

3. The LED Indicator blinks red while the radio is receiving a call.

4. To respond, hold the radio vertically 1 to 2 inches (2.5 to 5cm) from mouth. Press the PTT button to talk; release it to listen.

TALK RANGE

TALK RANGE		
Model	**Industrial**	**Multi-Level**
	Inside steel/concrete Industrial buildings	**Inside multi-level buildings**
UHF 4W	Up to 350,000 Sq. Ft.	Up to 30 Floors
VHF 5W	Up to 300,000 Sq. Ft.	Up to 18 Floors
UHF 2W	Up to 250,000 Sq. Ft.	Up to 20 Floors
VHF 2W	Up to 220,000 Sq. Ft.	Up to 13 Floors

To establish a proper two-way communication, the channel, frequency, and interference eliminator codes must be the same on both radios. This depends on the stored profile that has been preprogrammed on the radio:

1. **Channel:** Current channel that the radio is using, depending on radio model.

2. **Frequency:** The frequency the radio uses to transmit/receive.

3. **Interference Eliminator Code:** These codes help minimize interference by providing a choice of code combinations.

4. **Scramble Code:** Codes that make the transmissions sound garbled to anyone listening who is not set to that specific code.

5. **Bandwidth:** Some frequencies have selectable channel spacing, which must match other radios for optimum audio quality.

For details on how to set up frequencies and CTCSS/DPL codes in the channels, refer to "Programming Selection Mode" in page 36.

RADIO LED INDICATORS

RADIO STATUS	LED INDICATION
Channel Alias Edit	Red heartbeat
Channel Busy	Solid orange
Cloning Mode	Two orange heartbeats
Cloning In Progress	Solid orange
Fatal Error at Power up	One green blink, one orange blink, one green blink, then repeat for 4 seconds
Low Battery	Orange blink
Low Battery Shutdown	Orange heartbeat
Monitor	LED is OFF
Power-Up	Solid red for 2 seconds
'Idle' Programming Mode / Channel Mode	Green heartbeat
Scan Mode	Red heartbeat
Transmit (Tx)/Receive (RX)	Red heartbeat
Transmit in Low Power Select	Orange heartbeat

Note: Channel Alias Edit only applies to Display Models

HANDS-FREE USE/VOX

VOX Accessory

Accessory Port/Connector
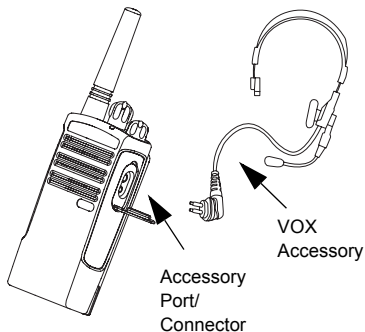
Motorola RDX Series™ radios can operate hands-free (VOX) when used with compatible VOX accessories.

With Compatible VOX Accessories

The default factory setting for VOX sensitivity level is OFF (level '0'). Before using VOX, set VOX level to a level different from '0' via the CPS. Then, perform the following steps:

1. Turn the radio OFF.

2. Open accessory cover.

3. Insert the audio accessory's plug firmly into accessory port.

4. Turn radio ON. The LED Indicator will blink double red

5. Lower radio volume BEFORE placing accessory near ear.

6. To transmit, speak into accessory microphone and to receive, stop talking.

7. VOX can be temporarily disabled by pressing the PTT button or by removing the audio accessory.

Note: To order accessories, refer to: **www.motorola.com/radios/professional**, call **1 (800) 448-6686**, or contact your Motorola point of purchase

Setting VOX Sensitivity

The sensitivity of the radio's accessory or microphone can be adjusted to suit different operating environments. VOX sensitivity can be programmed via the CPS.

Default value is OFF (level 0). If you want to use the VOX feature, VOX level should be set at a level different from 0.

- 1 = Low sensitivity
- 2 = Medium sensitivity
- 3 = High sensitivity

Microphone Gain

The sensitivity of the microphone can be adjusted to fit different users or operating environments.

This feature can be adjusted only through the CPS. Microphone default setting is set to level 2 (medium gain).

Battery Save

Battery Save feature extends battery life as your radio goes into 'Idle' state. To enable/disable press SB1 and SB2 buttons simultaneously for 2 or 3 seconds while powering up the radio until you hear a quick series of beeps. To have a slightly better attack time, set Battery Save feature to OFF so that the radio is always ready to transmit or receive without any delays.

Note: Battery Save feature is set to ON by default

Reset to Factory Defaults

Reset to Factory Defaults will set back all radio features to the original factory default settings. To do so, press PTT, SB2 and SB1 simultaneously while turning ON the radio until you hear a high tone chirp.

End of Transmission Tone (Roger Beep Tone)

To enable/disable End of Transmission Tone, short press the SB1 button while turning ON the radio .

Note: This setting is set to OFF by default

PROGRAMMING FEATURES

To easily program all the features in your radio, it is recommended to use the CPS Programming Cable and CPS software.

CPS software download is available for free at **www.motorola.com/RDX**

PROGRAMMING MODE

Programming Mode is a special radio mode to program basic radio's features by using the radio's panel.

When the radio is set to Programming Mode, you are able to read and modify three features:

- Frequencies,
- Codes (CTCSS/DPL) and,
- Auto-Scan.

The Programming Frequencies feature allows you to select frequencies for each channel.

The Interference Eliminator Code (CTCSS/DPL) helps minimize interference by providing you with a choice of code combinations that filter out static, noise, and unwanted messages.

The Auto-Scan feature allows you to set a particular channel to automatically enable Scan each time you switch to that channel.

Learning to Read the Values the Radio Signals You

As the non-display model does not have a display to show the values that are being programmed, the radio will communicate this information using beeps and LED indications.

The radio's LEDs will blink two colors:

- Orange to signal '0' and,
- Red for other values from '1' to '9'.

Short and long red blinks differentiate the specific number the radio is signaling you.

Please refer to "Programming Mode: Reading the Values" table on page 38.
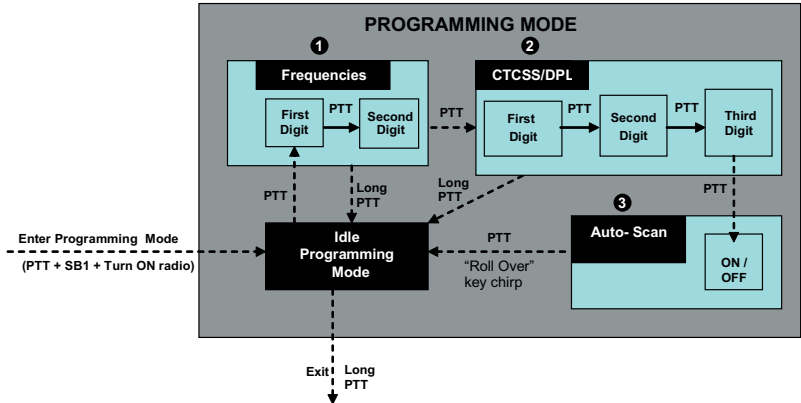
Figure 1: Entering Programming Mode

Programming Mode: Reading the Values

Number	Confirmation Beep	LED Indication
0	Zero beep	One orange blink
1	One beep	One short red blink
2	Two beeps	Two short red blinks
3	Three beeps	Three short red blinks
4	Four beeps	Four short red blinks
5	Long beep	One long red blink
6	Long beep and one beep	One long and one short red blinks
7	Long beep and two beeps	One long and two short red blinks
8	Long beep and three beeps	One long and three short red blinks
9	Long beep and four beeps	One long and four short red blinks

Entering Programming Mode

Note: Before programming the features, make sure your radio is set to the channel you wish to program. You can do so before entering Programming Mode or at any time during the Programming Mode by turning the Channel Selector Knob to the desired channel

To read or modify Frequencies, Codes and Auto-Scan, set the radio to 'Programming Mode' by long pressing both the PTT and the SB1 button simultaneously while turning ON the radio for 3 to 5 seconds until a 'chirp' sounds to indicate that you have entered 'Idle' Programming Mode (*).The LED Indicator will start blinking a green heartbeat.

Note: (*)'Idle' Programming Mode is the stage of the Programming Mode in which the radio is waiting for the user to start the radio programming cycle (refer "Entering Programming Mode" on page 37)

Once you are in the 'Idle' Programming Mode, you will be able to read the Frequencies, Codes and Auto-Scan setting by short pressing the PTT button to move along the different programmable features.

Reading Frequencies Values

When reading frequencies values you need to read two digits as RDX Series™ radios have 27 frequencies for VHF and 89 frequencies for UHF.

Once in 'Idle' Programming Mode, the radio will signal the first value it was programmed when you short press the PTT button (see *Figure 2: Reading Frequencies Values* on page 40). This value corresponds to the frequency's first digit

value. If you short press the PTT button again, the radio will signal you the second digit value.
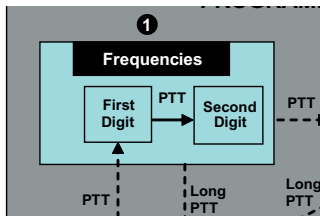
Figure 2: Reading Frequencies Values

Reading CTCSS/DPL Values

If you continue short pressing the PTT button as shown in *Figure 1: Entering Programming Mode* on page 37 (stage 2), the radio will move forward to programming CTCSS/PL Codes.

When reading the values for CTCSS/PL Codes the radio signals you the digit codes each time you short press the PTT button.

You will have to read three digits as RDX Series™ have up to 122 codes available (refer to "Frequencies and Codes Charts" Section).

The following is an example of the order in which your radio will be signaling the '118' CTCSS/DPL code:
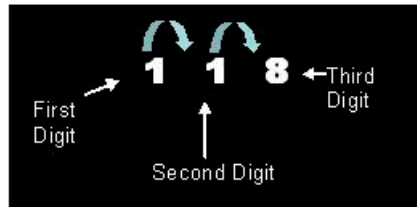
Figure 3: Example of How to Program Values

- Short press the PTT button. The radio will signal you the first digit '1'.
- Short press PTT button again and the radio will show the second digit '1' and,
- Finally, short press PTT again and radio will show the third digit '8'.

Reading Auto-Scan Values

After reading the CTCSS/DPL codes, short press the PTT button and the radio will take you to Auto-Scan (refer to Stage 3 of *Figure 3: Entering Programming Mode* on page 40).

Auto-Scan only has two values:

If the radio signals the value...	*It means Auto-Scan is...*
0	OFF
1	ON

• Auto-Scan is set to OFF by default.

Note: While in Auto-Scan Mode, if you short press PTT button, the radio will return to the 'Idle' Programming Mode. It will then generate a 'roll-over' chirp and it will start blinking a green heartbeat

Programming Frequencies, Codes and Auto-Scan

Each time your radio signals and beeps the current setting you can change this setting by either **increasing** it by short pressing SB1 or **decreasing** it by short pressing SB2 . The radio will then signal the new setting it has been programmed.

Saving Settings

If you are satisfied with the setting, you can either:

• short press PTT to continue programming,
• long press PTT to save and return to 'Idle' Programming Mode, or
• long press the PTT button twice to exit 'Idle' Programming Mode and return to the normal radio operation.

Note:

• If you do not wish to save the value you just programmed, turn radio OFF or change channel using the channel knob.

- If you 'roll-over' to the beginning at Idle Programming Mode you will hear a 'chirp' and the LED Indicator will start blinking green again. All values that were changed will be automatically saved.

Programming Mode FAQ

1.   I got distracted while programming and forgot which digit I was programming. What should I do?

Return to 'Idle' Programming Mode and start over, as you will not be able to return to the Programming Mode (the radio does not provide further way to let you know the specific stage you are at when programming). Therefore you can:

- Long press the PTT button. The radio will return to the 'Idle' Programming Mode or,

- Turn OFF the radio and enter Programming Mode again (see instructions in the beginning of this section)

2.   I am trying to program a frequency (or code) value but the radio would not do it. It rolled over and took me back to value '0'.

The radio will not allow you to program any values that are not available in the frequencies and codes pool. For example, if you try to program code 128, the radio would not accept it, as the maximum value allowed is 122. Same thing will happen with frequencies. Check the Frequencies and Codes Charts section to make sure you are programming a valid number.

3.   I am trying to enter the Programming Mode but the radio would not do it.

The radio might be locked using the CPS to not allow Front Panel Programming. To re-enable, use the CPS.

4. When I was programming I made a mistake and programmed the wrong value. How can I erase it or re-program it?

If you make a mistake while programming a value you have two choices:

- The radio roll-over (and generates a 'wrap-around' sound) each time it reaches a maximum (9) or minimum (0) value. Keep increasing (short press SB1) or decreasing (short pressing SB2) until you get the desired value or,
- Turn OFF the radio and start-over.

5. I just programmed the value I wanted. How do I exit Programming Mode?

- If you are in Programming Mode you can exit by long pressing the PTT button twice.
- If you are already in the 'Idle' Programming Mode, long press the PTT button once.

6. I am done programming the features in this channel and want to program another channel.

Switch to the new channel you wish to program by using the Channel Selector Knob. The radio will enter 'Idle' Programming Mode. If you wish to save the changes, make sure you are in the 'Idle' Programming Mode before switching the channel as otherwise you will lose the changes made.

PROGRAMMING VALUES EXAMPLE

Example of Programming a Frequency

Assuming current frequency value is set to Channel 1, with the UHF default frequency '02' (equivalent to 464.5500 MHz), and you want to change it to Frequency Number = '13' (which is mapped to 461.1375 MHz), follow this sequence:

- Enter Programming Mode

- Short press the PTT button to enter Frequency Mode. Radio will signal current value '0' (orange blink)
- Press the SB1 button once to increase first digit to '1'.
- Short press the PTT button once to move ahead and program the frequency's second digit. Radio will signal current value which is '2' (two red blinks).
- Press the SB1 button to increase the digit value to '3'.
- Long press the PTT button. LED Indicator will show a green heartbeat to indicate 'Idle' state.
- Long press the PTT button to exit Programming Mode or turn radio OFF.

Example of Programming a Code

Assuming current code value is set to factory default '001', and you want to change it to CTCSS/DPL Code = 103 follow the sequence below:

- Enter Programming Mode
- Short press the PTT button three times (Enter CTCSS/DPL Programming Selection Mode). The LED Indicator will blink orange to indicate that current value is '0'
- Press the SB1 button once (to change first digit to '1') LED Indicator will blink red. Short press the PTT button (to move forward and program second digit). The LED Indicator will blink orange to indicate current value is '0'.

- Short press the PTT button and move ahead to program the third digit. LED Indicator will blink red to indicate current value is '1'.
- Press the SB1 button to change the 'third digit' to '2'. Press the SB1 button to change again this 'third digit' to '3'. Radio will signal the chosen value.
- Long press the PTT button to save changes and return to 'Idle' Programming Mode.
- Once in 'Idle' Programming Mode, LED Indicator will start blinking a green heartbeat.
- Long press the PTT button to exit Programming Mode.

Example of Programming Auto-Scan

Auto-Scan is the last Programming Mode and can be set to either ON or OFF on a particular channel.

To set Auto-Scan to ON:

- Enter Programming Mode and select the desired channel (see *Figure 1: Entering Programming Mode* on page 37).
- Short press the PTT button six times to enter Auto-Scan Programming Selection Mode. The radio will signal beeps and will show the current Auto-Scan setting (please refer to "Reading Auto-scan Settings" on page 41).
- Short press the SB1 button to toggle ON/OFF the Auto-Scan feature in the channel. When ON, the LED Indicator will blink RED once. When OFF, the LED Indicator will blink ORANGE once.

OTHER PROGRAMMING FEATURES

Scan

Scan allows you to monitor other channels to detect conversations. When the radio detects a transmission, it will stop scanning and will stop on the active channel. This will allow you to listen and talk to people on that channel without having to change the channel knob. If there is talking on Channel 2 during this time, the radio will stay on Channel 1 and you will not hear Channel 2. After talking has stopped in Channel 1, the radio waits for 5 seconds before resuming scan again.

- To start scanning, press the SB2 button (*). When the radio detects channel activity, it will stops on that channel until the activity ends. You can talk to the person(s) transmitting without having to switch channels by pressing PTT.

- To stop scanning, short press the SB2 button again.

- By pressing the PTT button while the radio is scanning, the radio will transmit on the channel which was selected before Scan was activated. If no transmission occurs within five seconds, scanning will resume.

- If you want to scan a channel without Interference Eliminator Codes (CTCSS/DPL), set the code settings for the channels to '0' in the CTCSS/DPL Programming Selection Mode.

Whenever the radio is set up in Scan, the LED Indicator will signal a red blink.

Note: (*)Assumes the SB2 button is not programmed to other function different from the default. If Auto-Scan has been enabled for a particular channel, do not press SB2 to scan the channel, as the radio will do it automatically.

Editing Scan List

Scan Lists can be edited by using the CPS (refer to CPS section on page 48)

Nuisance Channel Delete

Nuisance Channel Delete allows you to temporarily remove channels from the Scan List. This feature is useful when irrelevant conversations on a 'nuisance' channel tie up the radio's scanning feature.

To delete a channel from the Scan List:

- Start Scan by short pressing the SB2 button (*)
- Wait until the radio stops on the channel you wish to eliminate, then long press the SB2 button to delete it.
- The channel will not be removed until you exit Scan by short pressing the SB2 button again or by turning the radio OFF.

Note: (*) Assumes the SB2 button is not programmed to another function different from the default.

PROGRAMMING FEATURES

CPS (COMPUTER PROGRAMMING SOFTWARE)
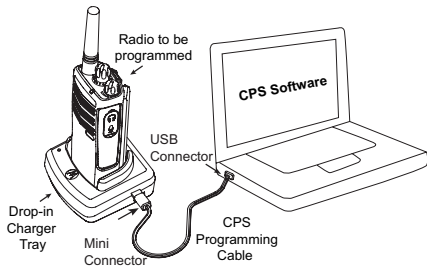
The easiest way to program or change features in your radio is by using the Computer Programming Software (CPS) and the CPS Programming Cable(*). CPS Software is available for free as web based downloadable software at:

www.motorola.com/RDX

To program, connect the RDX Series™ radio via the Drop-in Charger Tray and CPS Programming Cable as shown in the picture above.

CPS allows the user to program frequencies, PL/DPL codes, as well as other features such as: Bandwidth Select, Time-out Timer, Power Select, Battery Type Select, Scan List, Call Tones, Scramble, Reverse Burst, etc. CPS is a very useful tool as it can also lock the Front-Panel Radio Programming or restrict any specific radio feature to be changed (to avoid accidentally erasing the preset radio values). It also provides security by giving the option to set up a password for profile radio's management. Please refer to Features Summary Chart Section at the end of the user guide for more details.

Note: (*) CPS Programming Cable (P/N RKN4155) is an accessory sold separately. Please contact your Motorola point of purchase for more information.

Bandwidth Select

Default setting for Bandwidth Select depends on the specific frequency and channel. Some frequencies have selectable channel spacing, which must match with other radios for optimum audio quality.

For details, refer to Frequency and Code Charts section.

Time-Out Timer

When pressing the PTT button, transmissions can be terminated by setting up a 'time-out' timer.

Power Select

Power Select allows you to select between high and low transmission power per frequency in each channel. The power levels for RDX Series™ 2W toggle between 1W and 2W or 2W and 4W/5W depends on the model.

Note: Some frequencies may have FCC transmit power restrictions that do not allow them to be set at a higher power level. For details see the Frequencies and Code Chart Section.

Battery Type Setting

The RDX Series™ radio can be powered by either Alkaline or Lithium-Ion batteries.

Call Tones

Call Tones feature allows you to transmit to other radios in your group by alerting them that you are about to talk or alerting them without speaking.

Scramble ✑

The Scramble feature makes transmissions sound garbled to anyone listening without the same code. Scramble default value is OFF.

Reverse Burst

Reverse Burst eliminates unwanted noise (squelch tail) during loss of carrier detection. You can select values of either 180/240.

Notes:

- The features described in previous pages are just some of the features CPS has. CPS offers more capabilities. For more information refer to the HELP file in the CPS.

- Some of the features available with the CPS software may vary depending on the radio model.

CLONING RADIOS

You can clone RDX Series™ radio profiles from one Source radio to a Target radio by using any one of these 3 methods:

- a Multi Unit Charger (optional accessory),
- Two Single Unit Chargers (SUC) and a Radio-to-Radio cloning cable (optional accessory),
- the CPS (free software download)

Cloning with a Multi Unit Charger (MUC)
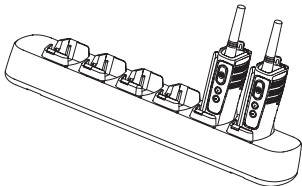
To clone radios using the MUC, there must be at least two radios:

- a Source radio (radio which profiles will be cloned

or copied from) and

- a Target radio (the radio which profile will be cloned from the source radio.)

The Source radio has to be in Pocket 1, 3 or 5 while the Target radio has to be in Pocket 2, 4 or 6, matching in the MUCs pockets by pairs as follows:

- 1 and 2 or,
- 3 and 4 or,
- 5 and 6 (*).

When cloning, the MUC does not need to be plugged into a power source, but ALL radios require charged batteries.

1. Turn ON the Target radio and place it into one of the MUC Target Pockets

2. Power the Source radio following the sequence below:

   - Long press the PTT button and SB2 simultaneously while turning the radio ON.

    • Wait for 3 seconds before releasing the buttons until a distinctive audible tone is heard.

3. Place the Source radio in the source pocket that pairs with the target pocket you chose in step 1. Press and release SB1.

4. After cloning is completed, the Source radio will sound either a 'pass' tone (cloning was successful) or a 'fail' tone (cloning process has failed). The 'pass' tone sounds like a good key 'chirp' whereas the 'fail' tone sounds similar to a 'bonk' tone. If the Source radio is a display model, it will either show 'Pass' or 'Fail' on the display (a tone will be heard within 5 seconds).

5. Once you have completed the cloning process, turn the radios OFF and ON to exit the 'cloning' mode.

• If cloning fails please refer to "What To Do if Cloning Fails" on page 54.

Further details on how to clone radios are explained in the Instructions Sheet provided with the MUC.

When ordering the MUC, please refer to P/N RLN6309.

Notes:

• Paired Target radios and Source radios must be of the same band type in order for the cloning to run successfully.

• (*) MUC pockets numbers should be read from left to right with the Motorola logo facing front.

Cloning Radio using the Radio to Radio (R2R) Cloning Cable (Optional Accessory)
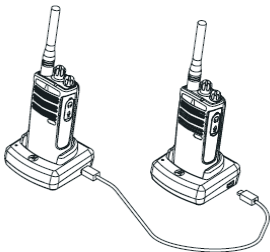
Operating Instructions

1. Before beginning the cloning process, make sure you have:

  • A fully charged battery on each one of the radios.

  • Two Single Unit Chargers (SUC).

  • Turned OFF the radios and,

  • Both radios are of the same radio model.

2. Unplug any cables (power supply or USB cables) from the SUCs.

3. Plug one side of the cloning cable mini connector to one SUC. Plug the other end to the second SUC.

Note: During the cloning process no power is being applied to the SUC. The batteries will not be charged. A data communication is being established between the two radios.

4. Turn ON the Target radio and place it into one of the SUCs.

5. On the Source radio, power the radio following the sequence below:

  • Long press the PTT button and SB2 simultaneously while turning the radio ON.

  • Wait for 3 seconds before releasing the buttons until a distinctive audible tone is heard.

6. Place the Source radio in its SUC, press and release SB1.

7. After cloning is completed, the Source radio will sound either a 'pass' tone (cloning was successful) or a 'fail' tone (cloning process has failed). The 'pass' tone sounds like a good key 'chirp' whereas the 'fail' tone sounds similar to a 'bonk' tone. If the Source radio is a display model, it will either show 'Pass' or 'Fail' on the display (a tone will be heard within 5 seconds).

8. Once you have completed the cloning process, turn the radios OFF and ON to exit 'clone' mode.

What To Do if Cloning Fails

The radio will emit an audible 'bonk' indicating that the cloning process has failed. In the event that cloning fails, try performing each of the following before trying to start the cloning process again:

1. Ensure that the batteries on both radios are fully charged.

2. Check the cloning cable connection on both SUCs.

3. Ensure that the battery is engaged properly on to the radio.

4. Ensure that there is no debris in the charging tray or on the radio contacts.

5. Ensure that the Source radio is in cloning mode.

6. Ensure that the Target radio is turned ON.

7. Ensure that radios are both from the same type (same frequency band, same front panel (display/non display), same region and same transmission power).

Note: This cloning cable is designed to operate only with compatible Motorola RLN6175 (Standard) and RLN6304 (Rapid) Single Unit Chargers.

When ordering Cloning Cable please refer to P/N RLN6303. For details about accessories refer to Accessories section.

Cloning using the CPS (Computer Programming Software)

When cloning using this method, you will need to have the CPS software, a Drop-in Tray Charger and the CPS Programming Cable.

To order the CPS Programming Cable, please refer to P/N RKN4155.

Information on how to clone using the CPS is available either in:

- the CPS Help File --> Content and Index --> Cloning Radios, or
- in the CPS Programming Cable Accessory Leaflet.

TROUBLESHOOTING

Symptom	*Try This...*
No Power	Recharge or replace the Li-Ion battery. Reposition or replace AA batteries. Extreme operating temperatures may affect battery life. Refer to See "About the Li-Ion Battery" on page 14.
Hearing other noises or conversation on a channel	Confirm Interference Eliminator Code is set. Frequency or Interference Eliminator Code may be in use. Change settings: either change frequencies or codes on all radios. Make sure radio is at the right frequency and code when transmitting. Refer to "Talking and Monitoring" on page 29
Message Scrambled	Scramble Code might be ON, and/or setting does not match the other radios' settings.
Audio quality not good enough	Radio settings might not be matching up correctly. Double check frequencies, codes and bandwidths to make sure they are identical in all radios

Symptom	*Try This...*
Limited talk range	Steel and/or concrete structures, heavy foliage, buildings or vehicles decrease range. Check for clear line of sight to improve transmission. Wearing radio close to body such as in a pocket or on a belt decreases range. Change location of radio. To increase range and coverage, you can either reduce obstructions, increase power, or use UHF radio instead of VHF radio. UHF radios provide greater coverage in industrial and commercial buildings. VHF is designed for outdoor or smaller or wood structures. Increasing power provides greater signal range and increased penetration through obstructions. Refer to See "Talking and Monitoring" on page 29.
Message not transmitted or received	Make sure the PTT button is completely pressed when transmitting. Confirm that the radios have the same Channel, Frequency, Interference Eliminator Code and Scramble Code settings. Refer to "Talking and Monitoring" section on page 29 for further information. Recharge, replace and/or reposition batteries. Refer to "About your Li-Ion Battery" section on page 14. Obstructions and operating indoors, or in vehicles, may interfere. Change location. Refer to "Talking and Monitoring" Section on page 29. Verify that the radio is not in Scan. Refer to "Scan" on page 46 and "Nuisance Channel Delete" on page 47.

Symptom	*Try This...*
Heavy static or interference	Radios are too close; they must be at least five feet apart. Radios are too far apart or obstacles are interfering with transmission. Refer to "Talking and Monitoring" on page 29.
Low batteries	Recharge or replace Li-Ion battery. Replace AA batteries. Extreme operating temperatures affect battery life. Refer to "About the Li-Ion Battery" on page 14.
Drop-in Charger LED light does not blink	Check that the radio/battery is properly inserted and check the battery/charger contacts to ensure that they are clean and charging pin is inserted correctly. Refer to "Charging the Battery" section on page 22, "Drop-in Tray Charger LED Indicators" section on page 25 and "Installing the Lithium-Ion Battery" section on page 16.
Low battery indicator is blinking although new batteries are inserted	Verify that the radio is set to the correct battery type. Refer to "Installing the Li-Ion Battery" section on page 16, "Installing Alkaline Batteries" section on page 17 and "About your Li-Ion Battery" section on page 14.

TROUBLESHOOTING

Symptom	*Try This...*
Cannot activate VOX	VOX feature might be set to OFF. Use the CPS to ensure that the VOX Sensitivity level is not set to '0'. Accessory not working or not compatible. Refer to "Hands-Free Use/VOX" section on page 33.
Battery does not charge although it has been placed in the drop-in charger for a while	Check drop-in tray charger is properly connected and correspond to a compatible power supply. Ensure that you have the drop-in tray charger adjustable piece placed on the right position. Refer to "Charging with the Drop-In Tray Single Unit Charger" section on page 22 and "Charging a Standalone Battery" section on page 23. Check the charger's LEDs indicators to see if the battery has a problem. Refer to "Drop-in Tray Charger LED Indicators" section on page 25.

Note: Whenever a feature in the radio seems to not correspond to the default or preprogrammed values, check to see if the radio has been programmed using the CPS with a customized profile.

USE AND CARE

Use a soft damp cloth
to clean the exterior

Do not immerse
in water

Do not use alcohol or
cleaning solutions

If the radio is submerged in water...
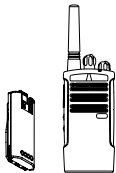
Turn radio OFF and
remove batteries
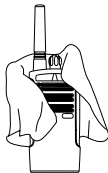
Dry with soft cloth

Do not use radio until
completely dry

FREQUENCY AND CODE CHARTS

RDX VHF FREQUENCIES CHART

The charts in this section provide Frequency and Code information. These charts are useful when using Motorola RDX Series™ two-way radios with other business radios. Most of the frequency's positions are the same as Spirit M, GT, S, and XTN Series Frequencies.

RDX VHF Frequencies

Frequency #	Frequency (MHz)	Bandwidth	Frequency #	Frequency (MHz)	Bandwidth
1	151.6250	25.0 kHz	11	151.6550	25.0 kHz
2	151.9550	25.0 kHz	12	151.6850	25.0 kHz
3	152.8850	25.0 kHz	13	151.7150	25.0 kHz
4	152.9150	25.0 kHz	14	151.7450	25.0 kHz
5	151.7000	12.5 kHz	15	151.7750	25.0 kHz
6	151.7600	12.5 kHz	16	151.8650	25.0 kHz
*7	152.9450	12.5/25.0 kHz	17	151.8950	25.0 kHz
*8	151.8350	12.5/25.0 kHz	18	151.9250	25.0 kHz
*9	151.8050	12.5/25.0 kHz	19	152.7000	25.0 kHz
†10	151.5125	12.5 kHz	20	154.4900	25.0 kHz

RDX VHF Frequencies (cont.)

Frequency #	Frequency (MHz)	Bandwidth	Frequency #	Frequency (MHz)	Bandwidth
21	154.5150	25.0 kHz	25	154.6550	25.0 kHz
†22	154.5275	12.5 kHz	26	158.4000	25.0 kHz
23	154.5400	25.0 kHz	†27	158.4075	12.5 kHz
24	153.0050	25.0 kHz			

Notes:

- (†) Bandwidth for frequencies 10, 22 and 27 are not selectable and different from XTN. You might notice the communication quality differences when using these frequencies to interoperate with XTN radios.

- (*) Due to FCC regulations these frequencies (six in total) are different from the previous Motorola Legacy Series radios. This means that if you select the RDX radio in one of these frequencies the radio will not inter-operate with an XTN radio. In order for a RDX radio to inter-operate with an XTN radio, make sure you choose any of the frequencies (21 in total) that are common for both radios.

RDV2020 - VHF DEFAULT FREQUENCIES CHART

The following are the default frequencies programmed in your RDX Radio. Note that the VHF default frequencies programmed in channels 1 and 2 are different from the XTN Series default values. In order for a RDX radio to inter-operate with an XTN radio, you must make sure you choose any of the frequencies (21 in total, read User Guide for details) that are common for both radios.

BRUS RDX VHF 2CH Radios Default Frequencies - RDV2020

Channel	Frequency #	Frequency (MHz)	Code #	Code	Bandwidth
1	20	154.4900	1	67.0 Hz	25.0 kHz
2	21	154.5150	1	67.0 Hz	25.0 kHz

Note: For RDV2020, refer to Channel # 1 and # 2.

MAKING XTN COMPATIBLE WITH RDX RADIOS - QUICK INSTRUCTIONS

The following instructions are a quick and easy way to make your XTN (XV1100, XV2100 and XV2600 models) compatible with RDX Series™ default frequencies:

1. Make sure your XTN is programmed to the factory default frequencies (Turn your radio ON while holding the MENU and PTT buttons simultaneously for three seconds).

2. Program Channel 1 with Frequency # 20 (154.4900 Mhz) and Channel 2 (for XV2600 model only) with Frequency # 21 (154.5150 Mhz).

XTN VHF Default Frequencies

Channel	Frequency #	Frequency (Mhz)	Code	Bandwidth
1	**3	154.5700	67.0 Hz	25.0 kHz
2	**4	154.6000	67.0 Hz	25.0 kHz
3	1	151.6250	67.0 Hz	25.0 kHz
4	2	151.9550	67.0 Hz	25.0 kHz
5	10	151.5125	67.0 Hz	25.0 kHz
6	12	151.6850	67.0 Hz	25.0 kHz

- Due to FCC regulations, the highlighted frequencies are different from the XTN default values. Make sure to choose a compatible frequency whenever you need to interoperate with XTN series.

- (**) Former XTN frequencies # 3 (154.5700 MHz) and # 4 (154.6000 MHz) are considered MURS frequencies and are not available in the RDX Series™.

RDV5100 - VHF DEFAULT FREQUENCIES CHART

Default frequencies for the RDV5100 are fully compatible with the AXV5100 radios (AX Series). If you need to make this radio compatible with XTN series, please re-program RDV5100 frequencies to match XTN frequencies defaults.

RDX VHF 10CH Radios Default Frequencies - RDV5100

Channel	Frequency #	Frequency (MHz)	Code #	Code	Bandwidth
1	1	151.6250	1	67.0 Hz	25.0 kHz
2	1	151.6250	4	77.0 Hz	25.0 kHz
3	1	151.6250	8	88.5 Hz	25.0 kHz
4	1	151.6250	29	179.9 Hz	25.0 kHz
5	1	151.6250	0	-	25.0 kHz
6	2	151.9550	1	67.0 Hz	25.0 kHz
7	2	151.9550	6	82.5 Hz	25.0 kHz
8	2	151.9550	10	94.8 Hz	25.0 kHz
9	2	151.9550	29	179.9 Hz	25.0 kHz
10	2	151.9550	0	-	25.0 kHz

Note: Compatible with AXV5100 radios (AX series)

RDX UHF FREQUENCIES CHART

RDX UHF Frequencies

Frequency #	Frequency (MHz)	Bandwidth	Frequency #	Frequency (MHz)	Bandwidth
1	464.5000	12.5/25.0 kHz	14	461.1625	12.5 kHz
2	464.5500	12.5/25.0 kHz	15	461.1875	12.5 kHz
*3	467.7625	12.5 kHz	16	461.2125	12.5 kHz
*4	467.8125	12.5 kHz	17	461.2375	12.5 kHz
*5	467.8500	12.5/25.0 kHz	18	461.2625	12.5 kHz
*6	467.8750	12.5/25.0 kHz	19	461.2875	12.5 kHz
*7	467.9000	12.5/25.0 kHz	20	461.3125	12.5 kHz
*8	467.9250	12.5/25.0 kHz	21	461.3375	12.5 kHz
9	461.0375	12.5 kHz	22	461.3625	12.5 kHz
10	461.0625	12.5 kHz	*23	462.7625	12.5 kHz
11	461.0875	12.5 kHz	*24	462.7875	12.5 kHz
12	461.1125	12.5 kHz	*25	462.8125	12.5 kHz
13	461.1375	12.5 kHz	*26	462.8375	12.5 kHz

RDX UHF Frequencies (cont.)

Frequency #	Frequency (MHz)	Bandwidth	Frequency #	Frequency (MHz)	Bandwidth
*27	462.8625	12.5 kHz	38	466.1375	12.5 kHz
*28	462.8875	12.5 kHz	39	466.1625	12.5 kHz
*29	462.9125	12.5 kHz	40	466.1875	12.5 kHz
30	464.4875	12.5 kHz	41	466.2125	12.5 kHz
31	464.5125	12.5 kHz	42	466.2375	12.5 kHz
32	464.5375	12.5 kHz	43	466.2625	12.5 kHz
33	464.5625	12.5 kHz	44	466.2875	12.5 kHz
34	466.0375	12.5 kHz	45	466.3125	12.5 kHz
35	466.0625	12.5 kHz	46	466.3375	12.5 kHz
36	466.0875	12.5 kHz	47	466.3625	12.5 kHz
37	466.1125	12.5 kHz	*48	467.7875	12.5 kHz

Frequency #	Frequency (MHz)	Bandwidth	Frequency #	Frequency (MHz)	Bandwidth
*49	467.8375	12.5 kHz	61	467.1875	12.5 kHz
*50	467.8625	12.5 kHz	62	467.4625	12.5 kHz
*51	467.8875	12.5 kHz	63	467.4875	12.5 kHz
*52	467.9125	12.5 kHz	64	467.5125	12.5 kHz
53	469.4875	12.5 kHz	65	451.1875	12.5 kHz
54	469.5125	12.5 kHz	66	451.2375	12.5 kHz
55	469.5375	12.5 kHz	67	451.2875	12.5 kHz
56	469.5625	12.5 kHz	68	451.3375	12.5 kHz
57	462.1875	12.5 kHz	69	451.4375	12.5 kHz
58	462.4625	12.5 kHz	70	451.5375	12.5 kHz
59	462.4875	12.5 kHz	71	451.6375	12.5 kHz
60	462.5125	12.5 kHz	72	452.3125	12.5 kHz

FREQUENCY AND CODE

RDX UHF Frequencies (cont.)

Frequency #	Frequency (MHz)	Bandwidth	Frequency #	Frequency (MHz)	Bandwidth
73	452.5375	12.5 kHz	82	456.4375	12.5 kHz
74	452.4125	12.5 kHz	83	456.5375	12.5 kHz
75	452.5125	12.5 kHz	84	456.6375	12.5 kHz
76	452.7625	12.5 kHz	85	457.3125	12.5 kHz
77	452.8625	12.5 kHz	86	457.4125	12.5 kHz
78	456.1875	12.5 kHz	87	457.5125	12.5 kHz
79	456.2375	12.5 kHz	88	457.7625	12.5 kHz
80	456.2875	12.5 kHz	89	457.8625	12.5 kHz
81	456.3375	12.5 kHz	-	-	-

Notes:

- (*) Frequency limited to 2W maximum power output

- When referring to XTN radios, note that frequencies from # 57 to # 89 are 33 new additional frequencies

RDU2020 - UHF DEFAULT FREQUENCIES CHART

RDX UHF 2CH Radios Default Frequencies - RDU2020

Channel	Frequency #	Frequency (MHz)	Code #	Code	Bandwidth
1	2	464.5500	1	67.0 Hz	25.0 kHz
2	8	467.9250	1	67.0 Hz	25.0 kHz

Note: Compatible with XTN series radios

RDU4100 - UHF DEFAULT FREQUENCIES CHART

Default frequencies for the RDU4100 are fully compatible with the AXU4100 radios (AX Series). If you need to make this radio compatible with XTN series, please re-program RDU4100 frequencies to match XTN UHF frequencies defaults.

RDX UHF 10 CH Radios Default Frequencies - RDU4100

Channel	Frequency #	Frequency (MHz)	Code #	Code	Bandwidth
1	1	464.5000	1	67.0 Hz	25.0 kHz
2	1	464.5000	4	77.0 Hz	25.0 kHz
3	1	464.5000	8	88.5 Hz	25.0 kHz
4	1	464.5000	29	179.9 Hz	25.0 kHz
5	1	464.5000	0	-	25.0 kHz
6	2	464.5500	1	67.0 Hz	25.0 kHz
7	2	464.5500	6	82.5 Hz	25.0 kHz
8	2	464.5500	10	94.8 Hz	25.0 kHz
9	2	464.5500	29	179.9 Hz	25.0 kHz
10	2	464.5500	0	-	25.0 kHz

Note: Compatible with AXU4100 radios series (AX series)

CTCSS AND PL/DPL CODES

CTCSS Codes

CTCSS	Hz	CTCSS	Hz	CTCSS	Hz
1	67.0	14	107.2	27	167.9
2	71.9	15	110.9	28	173.8
3	74.4	16	114.8	29	179.9
4	77.0	17	118.8	30	186.2
5	79.7	18	123	31	192.8
6	82.5	19	127.3	32	203.5
7	85.4	20	131.8	33	210.7
8	88.5	21	136.5	34	218.1
9	91.5	22	141.3	35	225.7
10	94.8	23	146.2	36	233.6
11	97.4	24	151.4	37	241.8
12	100.0	25	156.7	38	250.3
13	103.5	26	162.2	122 (*)	69.3

Note: (*) New CTCSS code.

PL/DPL Codes

DPL	Code	DPL	Code	DPL	Code
39	23	55	116	71	243
40	25	56	125	72	244
41	26	57	131	73	245
42	31	58	132	74	251
43	32	59	134	75	261
44	43	60	143	76	263
45	47	61	152	77	265
46	51	62	155	78	271
47	54	63	156	79	306
48	65	64	162	80	311
49	71	65	165	81	315
50	72	66	172	82	331
51	73	67	174	83	343
52	74	68	205	84	346
53	114	69	223	85	351
54	115	70	226	86	364

FREQUENCY AND CODE

DPL	Code	DPL	Code	DPL	Code
87	365	99	503	111	654
88	371	100	506	112	662
89	411	101	516	113	664
90	412	102	532	114	703
91	413	103	546	115	712
92	423	104	565	116	723
93	431	105	606	117	731
94	432	106	612	118	732
95	445	107	624	119	734
96	464	108	627	120	743
97	465	109	631	121	754
98	466	110	632		

FREQUENCY AND CODE

PROGRAMMING CUSTOMIZED FREQUENCIES ON 4W/5W RDX MODELS

Certain 4W/5W Models can be programmed to have customized frequencies (different from the ones shown in the VHF and UHF charts in previous pages). VHF range is 146 -174 MHz and UHF 438 - 470 MHz.

Certain 4W/5W models can also be programmed to work with repeaters.

Please contact your Motorola point of purchase for details.

MOTOROLA LIMITED WARRANTY FOR THE UNITED STATES AND CANADA

What Does this Warranty Cover?

Subject to the exclusions contained below, Motorola, Inc. warrants its telephones, pagers, and consumer and business two-way radios (excluding commercial, government or industrial radios) that operate via Family Radio Service or General Mobile Radio Service, Motorola-branded or certified accessories sold for use with these Products ("Accessories") and Motorola software contained on CD-ROMs or other tangible media and sold for use with these Products ("Software") to be free from defects in materials and workmanship under normal consumer usage for the period(s) outlined below.

This limited warranty is a consumer's exclusive remedy, and applies as follows to new Motorola Products, Accessories and Software purchased by consumers in the United States, which are accompanied by this written warranty.

Products and Accessories

Products Covered	Length of Coverage
Products and Accessories as defined above, unless otherwise provided for below.	**One (1) year** from the date of purchase by the first consumer purchaser of the product unless otherwise provided for below.
Decorative Accessories and Cases. Decorative covers, bezels, PhoneWrap™ covers and cases.	**Limited lifetime warranty** for the lifetime of ownership by the first consumer purchaser of the product.
Business Two-way Radio Accessories	**One (1) year** from the date of purchase by the first consumer purchaser of the product.
Products and Accessories that are Repaired or Replaced.	**The balance of the original warranty or for ninety (90) days** from the date returned to the consumer, whichever is longer.

Exclusions

Normal Wear and Tear. Periodic maintenance, repair and replacement of parts due to normal wear and tear are excluded from coverage.

Batteries. Only batteries whose fully charged capacity falls below 80% of their rated capacity and batteries that leak are covered by this limited warranty.

Abuse & Misuse. Defects or damage that result from: (a) improper operation, storage, misuse or abuse, accident or neglect, such as physical damage (cracks, scratches, etc.) to the surface of the product resulting from misuse; (b) contact with liquid, water, rain, extreme humidity or heavy perspiration, sand, dirt or the like, extreme heat, or food; (c) use of the Products or Accessories for commercial purposes or subjecting the Product or Accessory to abnormal usage or conditions; or (d) other acts which are not the fault of Motorola, are excluded from coverage.

Use of Non-Motorola Products and Accessories. Defects or damage that result from the use of Non-Motorola branded or certified Products, Accessories, Software or other peripheral equipment are excluded from coverage.

Unauthorized Service or Modification. Defects or damages resulting from service, testing, adjustment, installation, maintenance, alteration, or modification in any way by someone other than Motorola, or its authorized service centers, are excluded from coverage.

Altered Products. Products or Accessories with (a) serial numbers or date tags that have been removed, altered or obliterated; (b) broken seals or that show evidence of tampering; (c) mismatched board serial numbers; or (d) nonconforming or non-Motorola housings, or parts, are excluded form coverage.

WARRANTY

Communication Services. Defects, damages, or the failure of Products, Accessories or Software due to any communication service or signal you may subscribe to or use with the Products Accessories or Software is excluded from coverage.

Software

Products Covered	Length of Coverage
Software. Applies only to physical defects in the media that embodies the copy of the software (e.g. CD-ROM, or floppy disk).	**Ninety (90) days** from the date of purchase.

Exclusions

Software Embodied in Physical Media. No warranty is made that the software will meet your requirements or will work in combination with any hardware or software applications provided by third parties, that the operation of the software products will be uninterrupted or error free, or that all defects in the software products will be corrected.

Software NOT Embodied in Physical Media. Software that is not embodied in physical media (e.g. software that is downloaded from the internet), is provided "as is" and without warranty.

WHO IS COVERED?

This warranty extends only to the first consumer purchaser, and is not transferable.

HOW TO OBTAIN WARRANTY SERVICE OR OTHER INFORMATION?

Contact your Motorola point of purchase.

SOFTWARE COPYRIGHT NOTICE

The Motorola products described in this manual may include copyrighted Motorola and third party software stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola and third party software providers certain exclusive rights for copyrighted software, such as the exclusive rights to distribute or reproduce the copyrighted software. Accordingly, any copyrighted software contained in the Motorola products may not be modified, reverse-engineered, distributed, or reproduced in any manner to the extent allowed by law.

Furthermore, the purchase of the Motorola products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents, or patent applications of Motorola or any third party software provider, except for the normal, non-exclusive, royalty-free license to use that arises by operation of law in the sale of a product.

PATENT NOTICE

This product is covered by one or more of the following United States patents.
5896277 5894292 5864752 5699006 5742484
D408396 D399821 D387758 D389158 5894592
5893027 5789098 5734975 5861850 D395882
D383745 D389827 D389139 5929825 5926514
5953640 6071640 D413022 D416252 D416893
D433001

EXPORT LAW ASSURANCES

This product is controlled under the export regulations of the United States of America. The Governments of the United States of America may restrict the exportation or re-exportation of this product to certain destinations. For further information contact the U.S. Department of Commerce.

ACCESSORIES

ANTENNAS

Part No.	Description
RAN4033	UHF Stubby Antenna 450-470 MHz
RAN4041	VHF Helical Antenna 146-174 MHz
RAN4031	UHF Whip Antenna 438 - 470 MHz

AUDIO ACCESSORIES

Part No.	Description
53815	Headset w/Boom Mic BR
53862	Remote Speaker Mic BR
53863	Earpiece w/Mic BR

Part No.	Description
53865	Headset w/Swivel Boom Mic
53866	Earbud w/Clip PTT Mic BR
56517	Earpiece w/Inline Mic
56518	Earpiece w/Boom Mic

BATTERY

Part No.	Description
RLN6306	Alkaline Battery Frame
RLN6351	Standard Li-Ion Battery
RLN6305	High Capacity Li-Ion Battery
RLN6308	Ultra High Capacity Li-Ion Battery

CARRY ACCESSORIES

Part No.	Description
RLN6302	Hard Leather Carry Case
RLN6307	Spring Action Belt Clip

POWER SUPPLIES AC PIN ADAPTORS

Part No.	Description
RLN6349	North America AC Pin Adaptor

SOFTWARE APPLICATIONS

Part No.	Description
RVN5147	Computer Programming Software (CPS)

CABLES

Part No.	Description
RLN6303	Radio to Radio Cloning Cable
RKN4155	CPS Programming Cable

CHARGERS

Part No.	Description
RLN6304	Rapid ACCY Charging Kit - Americas (*)
RLN6309	Multi Unit Charger (MUC) Kit - North America
RLN6175	Standard Drop-in Tray Charger

POWER SUPPLIES

Part No.	Description
RPN4054	Standard US Fixed Power Supply
RPN4058	Standard Exchg AC pin Pwr Supply
RLN6170	Rapid Exchg AC pin Pwr Supply

Attention: Certain accessories may be or may not be available at the time of purchase. For latest information on accessories, contact your Motorola point of purchase or visit:
www.motorola.com/RDX or **www.motorola.com/radios/business**

(*) Americas Rapid Charging Kit includes Power Supply, Drop-in Tray Charger, and AC Pin adaptors.

RDX Series™ Features Summary

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	Non-Display	Display	Non-Display		
Backlight	No	N/A	Yes	N/A	5 Seconds	Choose the backlight's time out by using the CPS.
Bandwidth Select	Yes	No	Yes	Yes	Frequency Dependable	Front panel programming available only on display models by entering Programming Mode (1). Bandwidth is programmable according to FCC frequency regulations. Refer to the Frequencies and Code Charts Section for details.
Battery Save (2)	Yes	Yes	Yes	Yes	ON	To enable/disable Battery Save, press SB1 and SB2 simultaneously while turning ON the radio.
Battery Type	Yes	No	Yes	Yes	Li-Ion	Front panel radio programming is available in display models by pressing the MENU button and scrolling down/up with ⊕ and ⊖ buttons to set value. Long press PTT to save and exit.
Buttons Reset	No	No	Yes	Yes	ON	Available only via CPS. Allows to reset the radio buttons to factory default values. Refer to Radio Buttons Summary Table.

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	Non-Display	Display	Non-Display		
Call Tones (4)	Yes	No	Yes	Yes	OFF / BUTTON A	Front panel radio programming available only for Display Models by going into Programming Mode(1). Values available are 0 (OFF),1, 2 and 3. To enable/disable Call Tones press Button A (default button).
Channel Aliasing	Yes	N/A	Yes	N/A	OFF	Only Display Models. To enter or exit Channel Aliasing mode press PTT and $\oplus$ buttons simultaneously while turning radio ON for 3 sec. After editing, to exit and save, long press PTT. *Note: To edit, refer to Programming Features/ Editing Channels.*
Channels	Yes	Yes	Yes	Yes	Model Dependant	You can select channels using the Channel Selector Knob (non-display models) or the MENU button (display models). You can also add or delete channels by using the CPS. *Note: Enabling/disabling channels via CPS will automatically affect the Max Channels you are able to program via front panel.*

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	Non-Display	Display	Non-Display		
Cloning Mode	Yes	Yes	Yes	Yes	OFF	Enables radio to enter cloning mode in order to clone its profile settings into other radios (using Radio to Radio Cloning Cable or Multi-Unit Charger). Press PTT, SB2 while turning radio ON. *Note: You can clone radios using the CPS.*
CPS Manager Lock	No	No	Yes	Yes	N/A	This feature is referred in the CPS software as "Codeplug Password". It prevents unauthorized access to the CPS to the radio's programmed configuration. Make sure you set up a 4 digits password that is easy to remember.
End of Tx Tone (or Roger Beep) (2)	Yes	Yes	Yes	Yes	OFF	To enable/disable press SB1 while powering up the radio
Frequencies	Yes	Yes	Yes	Yes	Channel and Model Dependant	There are 27 VHF frequencies and 89 UHF frequencies available. Use Programming Mode (1) for front panel radio programming. Refer to Frequencies and Codes Charts Section for details.

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	Non-Display	Display	Non-Display		
Frequencies, Direct Input (3)	No	No	Yes	Yes	Any value within radio frequency band	Allows you to customize frequencies in your radio. Available only for certain 4W/5W radio models.
Bandwidth Range	N/A	N/A	N/A	N/A	Model Dependant	Radios Bandwidth is fixed and non-programmable. Bandwidth Range for 2W radios: VHF 150.8 - 160 Mhz / UHF 450-470 Mhz Bandwidth Range for 4W/5W radios: VHF: 146-174 Mhz / UHF 438-470 Mhz.
Codes, Interference Eliminator Codes (CTCSS/DPL)	Yes	Yes	Yes	Yes	Channel and Model Dependant	Use Programming Mode for front panel radio programming. There are 122 codes available. For details refer to Frequencies and Codes Charts Section.
IVOX, enable/disable	Yes	N/A	N/A	N/A	OFF	Hands free without accessories, available for display models only. To enable IVOX long press the PTT button while turning radio ON and until the IVOX icon blinks.

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	Non-Display	Display	Non-Display		
IVOX, sensitivity Level	Yes	N/A	Yes	N/A	HIGH (Level 3)	Available for Display models only. Allows user to specify IVOX sensitivity level. For front panel radio programming use the MENU button.
Keypad Beep (or Keypad Tone) (2)	Yes	Yes	Yes	Yes	ON	Press SB2 while turning ON radio to enable/disable keypad beep.
Keypad Lock (2)	Yes	N/A	Yes	N/A	UNLOCKED	Press and hold MENU for 4 seconds to lock the radio keypad.To unlock, press MENU for 4 seconds.
LEDs Enabled/ Disabled	No	No	Yes	Yes	Enabled	Using CPS you can disable radio LEDs
Low Battery Alert - Shutdown	N/A	N/A	N/A	N/A	ON	Gives a sequence of loud and high beep tones to alert battery level is low. LED will blink orange several times. This a non-programmable feature.

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	Non-Display	Display	Non-Display		
Maximum Channels (2)	Yes	No	Yes	Yes	Model and CPS programmable dependant	Front panel radio programming (only Display models): Set radio to Programming Mode(1) to get the Maximum Channels Menu option. *Note: Default value is set to the maximum number of channels that the radio supports.*
Microphone Gain Level, ACCESSORY	Yes	No	Yes	Yes	Medium (Level 2)	For front panel programming enter Programming Mode (1).
Microphone Gain Level, RADIO	Yes	No	Yes	Yes	Medium (Level 2)	For front panel programming enter Programming Mode (1).
Monitor (4)	Yes	Yes	Yes	Yes	SB1 Button	Long Press SB1 to monitor and press SB1 again to release. *Note: PL/DPL defeat feature should be disabled in order to monitor.*

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	Non-Display	Display	Non-Display		
Nuisance Ch Delete (4)	Yes	Yes	Yes	Yes	SB2 Button	Press SB2 to start scanning and wait until the radio lands on the channel you want to delete. Long press SB2 to delete the channel. *Note: The nuisance deleted channel will be restored into the scan list when the radio is turned OFF or you exit SCAN.*
PL Defeat	Yes	Yes	Yes	Yes	SB1 Button	Also known as 'Squelch defeat'. Short Press SB1 to enable PL/DPL defeat so you can listen or monitor any activity in the channel without noise. Press SB1 again to disable PL/DPL defeat.
Power Select (4)	No	No	Yes	Yes	High Power (Model dependant)	Use CPS for selecting the transmission power level you want for each channel. Power level default depends on maximum power the radio supports. *Note: There may be power restrictions depending on the frequency chosen in each channel.*

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	Non-Display	Display	Non-Display		
Power up Text	No	N/A	Yes	N/A	MOTOROLA	Text that shows up in the radio display when turned ON. Default text is MOTOROLA. Programmable via CPS.
Repeater/ Talkaround (3)	No	No	Yes	Yes	OFF	Available only for RDU4160d model.
Reset to Factory Defaults (2)	Yes	Yes	Yes	Yes	Enabled	Allows to restore radio's factory defaults. Press PTT, SB1, SB2 simultaneously for 3 seconds while turning ON radio.
Reverse Burst	No	No	Yes	Yes	180	Reverse Burst eliminates unwanted noise (squelch tail) during loss of carrier detection. Use CPS to select values 180 or 240.

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	**Non-Display**	**Display**	**Non-Display**		
Scan	Yes	Yes	N/A	N/A	SB2 Button	Short press SB2 to enable/disable scan.
Scan List	Yes	No	Yes	Yes	ON - All Channels	Use CPS for editing Scan List (adding/removing channels to be scanned). For display models only: you can add/delete channels in the scan list using front panel by going into Programming Mode(1).
Scan, Auto Scan	No	Yes	No	Yes	OFF	Feature available only for Non Display Models. For front programming using front panel radio enter Programming Mode(1)
Scramble (4)	Yes	No	Yes	Yes	OFF (level 0)	Display models only: you can program scramble using front panel by going into Programming Mode(1).
Time-Out Timer	No	No	Yes	Yes	60 seconds	Use CPS to program to program how long the PTT can be pressed before the transmission is automatically terminated. Values are 60, 120 and 180 seconds. (Pressing again PTT will start the transmission again).

Features	Programmable Via RADIO PANEL		Programmable via CPS		Default Value	Programming Tips
	Display	**Non-Display**	**Display**	**Non-Display**		
VOX Sensitivity Level	Yes	No	Yes	Yes	OFF (level 0)	Front panel radio programming available in display models by pressing PTT or MENU buttons and scrolling down/up with ⊕ and ⊖ buttons to set value. Long press PTT to save.
VOX, enable/disable	Yes	Yes	Yes	Yes	OFF	Allows to use 'hands-free' mode connecting microphone accessories. To enable connect external accessory and power up radio. *Note: The VOX sensitivity level default value is set to OFF in the CPS settings. Before using this feature, check VOX sensitivity level.*

(1) To enter Programming Mode, press and hold both PTT and SB1 simultaneously for 3-5 seconds while turning radio ON (LED will start to blink green). Short press PTT to get to the different programming options. For setting values, press ⊕ and ⊖ buttons.

(2) Using CPS you can prevent this feature to be programmed via front panel radio.

(3) Contact your Motorola Point of purchase for enabling this feature and/or for radio models details.

(4) For Non-Display Models, feature can be enabled for front panel programming by assigning feature to SB1 or SB2. For Display models: Feature can be enabled to any of the programmable buttons rather than the default ones. For more details refer to Programming Buttons Chart or CPS Menus.

Programmable Buttons Chart

Button	Monitor	Scan / Nuisance Delete	Call Tone	Power Select	Scramble	Backlight	Channel Preset 1	Channel Preset 2	No Operation
SB1	Default	✓	✓	✓	✓	N/A	N/A	N/A	✓
SB2	✓	Default	✓	✓	✓	N/A	N/A	N/A	✓
BUTTON A (*)	✓	✓	Default	✓	✓	✓	✓	✓	✓
BUTTON B (*)	✓	✓	✓	✓	✓	✓	Default	✓	✓
BUTTON C (*)	✓	✓	✓	✓	✓	✓	✓	Default	✓

Notes:

- Buttons come programmed to default functions. Using CPS you can assign one of the features shown in the chart, so the button can toggle values using radio front panel

- (*) Display models only.

Icons Chart

Icon	Symbol	Comments
Battery Level	🔋	Displayed during normal radio mode operation, displays battery life remaining
Channel	CHAN	Displayed during normal radio operation and when programming channel features
Code	CODE	Displayed during normal radio operation and when programming codes features
Frequency	FREQ	Displayed during normal radio operation and when programming frequency features
Keypad lock	🔒	Displayed whenever the Keypad lock feature is enabled (keypad is locked)
Program	PROG	Displayed whenever the radio is set up to Programming Mode.
Scan	Z	Displayed whenever the radio is set to SCAN mode.
Scramble	Ø	Displayed whenever scramble is enabled.

Icon	Symbol	Comments
Power Select	▪⁾⁾	Displayed whenever the channel is transmitting or set to a high-power selection
Signal Strength	▜▖ıll	RSSI Display Icon numbers of bars will indicate the strength of the received signal.
Vox/IVox	🦵	Displayed when IVOX/VOX enabled or when programming MIC / MIC gain features.

MOTOROLA

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com