

MOTOTRBO™ Ion Smart Radio

MSLB-MKZ900i, MSLB-MKZ900, MSLB-MKZ920



User Guide

JULY 2022

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Legal and Support

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European Union (EU) and United Kingdom (UK) Waste of Electrical and Electronic Equipment (WEEE) Directive



The European Union's WEEE directive and the UK's WEEE regulation require that products sold into EU countries and the UK must have the crossed-out wheeled bin label on the product (or the package in some cases). As defined by the WEEE directive, this crossed-out wheeled bin label means that customers and end-users in EU and UK countries should not dispose of electronic and electrical equipment or accessories in household waste.

Customers or end-users in EU and UK countries should contact their local equipment supplier representative or service centre for information about the waste collection system in their country.

Disclaimer

Please note that certain features, facilities, and capabilities described in this document may not be applicable to or licensed for use on a specific system, or may be dependent upon the characteristics of a specific mobile subscriber unit or configuration of certain parameters. Please refer to your Motorola Solutions contact for further information.

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Legal and Compliance Statements

Supplier's Declaration of Conformity

Supplier's Declaration of Conformity

Per FCC CFR 47 Part 2 Section 2.1077(a)



Responsible Party

Name: Motorola Solutions, Inc.

Address: 2000 Progress Pkwy, Schaumburg, IL. 60196

Phone Number: 1-800-927-2744

Hereby declares that the product:

Model Name: **MSLB-MKZ900, MSLB-MKZ920**

conforms to the following regulations:

FCC Part 15, subpart B, section 15.107(a), 15.107(d), and section 15.109(a)

Class B Digital Device

As a personal computer peripheral, this device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1 This device may not cause harmful interference, and
- 2 This device must accept any interference received, including interference that may cause undesired operation.



NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for help.

For country code selection usage (WLAN devices)



NOTE: The country code selection is for non-US model only and is not available to all US models. Per FCC regulation, all Wi-Fi products marketed in the US must be fixed to US operation channels only.

Industry Canada WLAN Statement



CAUTION:

- 1 The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.
- 2 The maximum antenna gain permitted for devices in the bands 5250–5350 MHz and 5470–5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit.
- 3 The maximum antenna gain permitted for devices in the band 5752–5850 MHz shall be such that the equipment still complies with e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.
- 4 The worst case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in Section 6.2.2 (3) shall be clearly indicated.
- 5 User should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250–5350 MHz and 5650–5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Important Safety Information

RF Energy Exposure and Product Safety Guide for Portable Two-Way Radios



CAUTION:

This radio is restricted to Occupational use only. Before using the radio, read the RF Energy Exposure and Product Safety Guide that comes with the radio. This guide contains operating instructions for safe usage, RF energy awareness, and control for compliance with applicable standards and regulations.

Any modification to this device, not expressly authorized by Motorola Solutions, may void the user's authority to operate this device.

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

This radio transmitter has been approved by Industry Canada to operate with Motorola Solutions-approved antenna with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Notice to Users (FCC)

This device complies with Part 15 of the FCC rules per the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications made to this device, not expressly approved by Motorola Solutions, could void the authority of the user to operate this equipment.

Notice to Users (Industry Canada)

The operation of your Motorola Solutions radio is subject to the Radiocommunications Act and must comply with rules and regulations of the Federal Government's department of Industry Canada. Industry Canada requires that all operators using Private Land Mobile frequencies obtain a radio license before operating their equipment.

Regulatory Compliance Information



Japan

This device is compliant to sXGP private LTE requirement in a 5 MHz bandwidth channel and only where the master station carries out the carrier sense for the radio.

Canada

This device does not support LTE B48.

Warranty and Service Support

Batteries and Chargers Warranty

The Workmanship Warranty

The workmanship warranty guarantees against defects in workmanship under normal use and service.

All MOTOTRBO Batteries	Please refer to the warranty statement of your region.
IMPRES Chargers (Single-Unit and Multi-Unit, with Display)	12 Months

The Capacity Warranty

The capacity warranty guarantees 80% of the rated capacity for the warranty duration. Please refer to the warranty statement for your region.

Limited Warranty

MOTOROLA SOLUTIONS COMMUNICATION PRODUCTS

I. WHAT THIS WARRANTY COVERS AND FOR HOW LONG:

Motorola Solutions, Inc. ("Motorola Solutions") warrants the Motorola Solutions manufactured Communication Products listed below ("Product") against defects in material and workmanship under normal use and service for a period of time from the date of purchase as scheduled below:

Portable Radios	Two (2) Years
-----------------	---------------

Product Accessories	One (1) Year
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Motorola Solutions, at its option, will at no charge either repair the Product (with new or reconditioned parts), replace it (with a new or reconditioned Product), or refund the purchase price of the Product during the warranty period provided it is returned in accordance with the terms of this warranty. Replaced parts or boards are warranted for the balance of the original applicable warranty period. All replaced parts of Product shall become the property of Motorola Solutions.

This express limited warranty is extended by Motorola Solutions to the original end user purchaser only and is not assignable or transferable to any other party. This is the complete warranty for the Product manufactured by Motorola Solutions. Motorola Solutions assumes no obligations or liability for additions or modifications to this warranty unless made in writing and signed by an officer of Motorola Solutions.

Unless made in a separate agreement between Motorola Solutions and the original end user purchaser, Motorola Solutions does not warrant the installation, maintenance or service of the Product.

Motorola Solutions cannot be responsible in any way for any ancillary equipment not furnished by Motorola Solutions which is attached to or used in connection with the Product, or for operation of the Product with any ancillary equipment, and all such equipment is expressly excluded from this warranty. Because each system which may use the Product is unique, Motorola Solutions disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

II. GENERAL PROVISIONS

This warranty sets forth the full extent of Motorola Solutions responsibilities regarding the Product. Repair, replacement or refund of the purchase price, at Motorola Solutions option, is the exclusive remedy. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. IN NO EVENT SHALL MOTOROLA SOLUTIONS BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, FOR ANY LOSS OF USE, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, LOST PROFITS OR SAVINGS OR OTHER INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SUCH PRODUCT, TO THE FULL EXTENT SUCH MAY BE DISCLAIMED BY LAW.

III. STATE LAW RIGHTS:

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION OR EXCLUSIONS MAY NOT APPLY.

This warranty gives specific legal rights, and there may be other rights which may vary from state to state.

IV. HOW TO GET WARRANTY SERVICE

You must provide proof of purchase (bearing the date of purchase and Product item serial number) in order to receive warranty service and, also, deliver or send the Product item, transportation and insurance prepaid, to an authorized warranty service location. Warranty service will be provided by Motorola Solutions through one of its authorized warranty service locations. If you first contact the company which sold you the Product (for example, dealer or communication service provider), it can facilitate your obtaining warranty service. You can also call Motorola Solutions at 1-800-927-2744.

V. WHAT THIS WARRANTY DOES NOT COVER

- 1 Defects or damage resulting from use of the Product in other than its normal and customary manner.
- 2 Defects or damage from misuse, accident, water, or neglect.
- 3 Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment.
- 4 Breakage or damage to antennas unless caused directly by defects in material workmanship.
- 5 A Product subjected to unauthorized Product modifications, disassembles or repairs (including, without limitation, the addition to the Product of non-Motorola Solutions supplied equipment) which adversely affect performance of the Product or interfere with Motorola Solutions normal warranty inspection and testing of the Product to verify any warranty claim.
- 6 Product which has had the serial number removed or made illegible.
- 7 Rechargeable batteries if:
 - any of the seals on the battery enclosure of cells are broken or show evidence of tampering.
 - the damage or defect is caused by charging or using the battery in equipment or service other than the Product for which it is specified.
- 8 Freight costs to the repair depot.
- 9 A Product which, due to illegal or unauthorized alteration of the software/firmware in the Product, does not function in accordance with Motorola Solutions published specifications or the FCC certification labeling in effect for the Product at the time the Product was initially distributed from Motorola Solutions.
- 10 Scratches or other cosmetic damage to Product surfaces that does not affect the operation of the Product.
- 11 Normal and customary wear and tear.

VI. PATENT AND SOFTWARE PROVISIONS

Motorola Solutions will defend, at its own expense, any suit brought against the end user purchaser to the extent that it is based on a claim that the Product or parts infringe a United States patent, and Motorola Solutions will pay those costs and damages finally awarded against the end user purchaser in any such suit which are attributable to any such claim, but such defense and payments are conditioned on the following:

- 1 Motorola Solutions will be notified promptly in writing by such purchaser of any notice of such claim,
- 2 Motorola Solutions will have sole control of the defense of such suit and all negotiations for its settlement or compromise, and
- 3 Should the Product or parts become, or in Motorola Solutions opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit Motorola Solutions, at its option and expense, either to procure for such purchaser the right to continue using the Product or parts or to replace or modify the same so that it becomes non-infringing or to grant such purchaser a credit for the Product or parts as depreciated and accept its return. The depreciation will be an equal amount per year over the lifetime of the Product or parts as established by Motorola Solutions.

Motorola Solutions will have no liability with respect to any claim of patent infringement which is based upon the combination of the Product or parts furnished hereunder with software, apparatus or devices not furnished by Motorola Solutions, nor will Motorola Solutions have any liability for the use of ancillary equipment or software not furnished by Motorola Solutions which is attached to or used in connection with the Product. The foregoing states the entire liability of Motorola Solutions with respect to infringement of patents by the Product or any parts thereof.

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VII. GOVERNING LAW

This Warranty is governed by the laws of the State of Illinois, U.S.A.

VIII. For Australia Only

This warranty is given by Motorola Solutions Australia Pty Limited (ABN 16 004 742 312) of Tally Ho Business Park, 10 Wesley Court, Burwood East, Victoria.

Our goods come with guarantees that cannot be excluded under the Australia Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Motorola Solutions Australia's limited warranty above is in addition to any rights and remedies you may have under the Australian Consumer Law. If you have any queries, please call Motorola Solutions Australia at 1800 457 439. You may also visit our website: http://www.motorolasolutions.com/XA-EN/Pages/Contact_Us for the most updated warranty terms.

Chapter 1

Read Me First

This user guide covers the basic operations of the radio models offered in your region.

Notations Used in This Manual

Throughout the text in this publication, you notice the use of **Warning**, **Caution**, and **Notice**. These notations are used to emphasize that safety hazards exist, and the care that must be taken or observed.



WARNING: An operational procedure, practice, or condition, and so on, which may result in injury or death if not carefully observed.



CAUTION: An operational procedure, practice, or condition, and so on, which may result in damage to the equipment if not carefully observed.



NOTE: An operational procedure, practice, or condition, and so on, which is essential to emphasize.

Special Notations

The following special notations are used throughout the text to highlight certain information or items:

Table 1: Special Notations

Example	Description
Menu key or PTT button	Bold words indicate a name of a key, button, or soft menu item.
Your radio shows Bluetooth On.	Typewriter words indicate the MMI strings or messages displayed on your radio.
<required ID>	The courier, bold, italic, and angle brackets indicate user input.
Setup→Tone→All Tones	Bold words with the arrow in between indicate the navigation structure in the menu items.

Feature and Service Availability

Your dealer or administrator may have customized your radio for your specific needs.



NOTE: Not all features in the manual are available in your radio. Contact your dealer or administrator for more information.

You can consult your dealer or system administrator about the following:

- What are the functions of each button?
- Which optional accessories may suit your needs?
- What are the best radio usage practices for effective communication?
- What maintenance procedures promote longer radio life?

1.1

Software Version

All the features described in the following sections are supported by the software version **R02.10.00** or later.

Contact your dealer or administrator for more information.

1.2

Specifications

For more information about your radio specifications, refer to the data sheet of your radio model at https://www.motorolasolutions.com/en_xp/products/mototrbo-story/mototrbo-ion.html.

Chapter 2

Radio Care

This section describes the basic handling precaution of the radio.

Table 2: IP Specification

IP Specification	Description
IP68	Allows your radio to withstand two meters of water for two hours, and adverse field conditions such as water drops, snow, dirt, grease, or other surface contaminants.



CAUTION: Do not disassemble your radio. This could damage radio seals and result in leak paths into the radio. Radio maintenance should only be done in service depot that is equipped to test and replace the seal on the radio.

- If your radio has been submersed in water, shake your radio well to remove any water that may be trapped inside the speaker grille and microphone port. Trapped water could cause decreased audio performance.
- If your battery contact area has been exposed to water, clean and dry battery contacts on both your radio and the battery before attaching the battery to radio. The residual water could short-circuit the radio.
- If your radio has been submersed in a corrosive substance (for example, saltwater), rinse radio and battery in fresh water then dry radio and battery.
- To clean the exterior surfaces of your radio, use a diluted solution of mild dishwashing detergent and fresh water (for example, one teaspoon of detergent to one gallon of water).
- Your radio is designed to be submersible to a maximum depth of 2 m and a maximum submersion time of 120 minutes. Exceeding maximum limit may result in damage to your radio.
- Only Underwriter Laboratory (UL) approved service centers can open and service UL certified radios. Opening or repairing at unauthorized locations invalidates hazardous location ratings of the radio.

Chapter 3

Radio Overview



Table 3: Radio Overview

Label	Name	Description
1	Emergency button	Allows you to turn on or off the Emergency operations.
2	Channel Selector knob	Allows you to select channel.
3	LED Indicator	Provides operating status.
4	On/Off/Volume knob	Allows you to turn the radio on or off and adjust volume.
5	Top Display	Provides notification of an activity or event.
6	Holster Catch Feature	Allows you to secure holster to the radio.
7	Push-to-Talk (PTT) button	Allows you to execute voice operations (for example, Group Call and Private Call).
8	3-Dot Programmable Feature button	Programmable button of an assignable radio function.

Label	Name	Description
9	1-Dot Programmable Feature button	Programmable button of an assignable radio function.
10	2-Dot Programmable Feature button	Programmable button of an assignable radio function.
11	Holster Rail	Provides guideline for the placement of holster and radio.
12	Front Microphone	Allows your voice to be sent when PTT or voice operations are activated.
13	Touchscreen	The radio display screen.
14	Display Sleep/Wake button	Allows you to put the radio to Sleep or on Wake mode.
15	Speaker	Outputs all tones and audio that are generated by the radio (for example, features like keypad tones and voice audio).
16	Antenna	Provides the needed RF amplification when transmitting or receiving.
17	Accessory Connector	Allows you to connect accessories to your radio.
18	Rear Microphone	Noise Cancellation Microphone.
19	LED Flash	Provides flash light function.
20	Camera	Allows you to take photos, videos, or scan QR code.
21	Battery Latch	Allows you to lock or unlock battery from the radio.
22	Battery	Provides power source to your radio.
23	Charging Contacts	Charging point for the battery.

3.1

Programmable Buttons

You can program the programmable buttons as shortcuts to the following radio functions through RadioCentral (RC).



NOTE:

If you try to launch features that are not supported in your current radio mode, a negative indicator tone sounds.

Contact your dealer for more information.

Table 4: Assignable Radio Functions

Function	Description
Active Site Search	Allows you to search for an active site.
Call Alert	Allows you to direct access to the contacts list and select the required contact to send call alert.
Channel Knob	Allows you to change channel.

Function	Description
Contacts	Provides direct access to the contacts list.
Current Site Information	Allows you to view current site information.
Flexible RX List	Allows you to enable or disable a dynamic Rx list. Provides you the flexibility to add or remove talkgroup members.
High/Low Power	Allows you to toggle between high and low power.
Intelligent Audio	Allows you to toggle intelligent audio to on or off.
Keyboard Wedge - Barcode Scan	Allows you to launch Scandit Keyboard Wedge application.
Mandown	Allows you to toggle the Man Down alarms to on or off.
Manual Dial For Private	Allows you to initiate Private Call by entering the subscriber ID.
Manual Site Roam	Allows you to start the manual site search.
Message	Allows you to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu (applicable to Display model only).
Mic AGC	Allows you to toggle the internal microphone automatic gain control (AGC) to on or off.
Monitor	Allows you to monitor a channel.
Neighboring Site Information	Allows you to access Neighboring Site Information.
Nuisance Delete	Allows you to temporarily remove an unwanted channel from the scan list, except the Selected Channel. The nuisance deleted channel will be restored into the scan list, for instance, when radio is powered off and back on again.
One Touch Access	Allows you to direct access to the predefined call features.
Permanent Monitor	Allows you to monitor a selected channel for all radio traffic until function is disabled.
Privacy	Allows you to toggle the privacy to on or off.
Radio Check	Allows you to check if the radio is active in the system.
Radio Enable or Disable	Allows a target radio to be remotely enabled or disabled.
Radio Name	Displays the radio alias on the radio display.
Recent Calls	Allow you to view recent calls.
Repeater or Talkaround	Allows you to toggle between using a repeater and directly communicating with another radio.

Function	Description
Ring Alert Type	Allows you to direct access the Ring Alert Type setting.
Scan	Allows you to toggle the scan to on or off.
Site Lock	Allows you to enable the site lock to search only in current site or disable the site lock to search in other sites as well.
Status	Allows you to select the status list menu.
Switch Speaker	Allows you to toggle the external audio feature on and off. External Audio re-routes the speaker audio from the attached wired accessory to the internal speaker. (applicable to LTE and LMR system audio).
Tight/Normal Squelch	Allows you to toggle between tight or normal squelch (applicable to Analog mode only).
Toggle AF Suppressor	Allows you to toggle the AF Suppressor feature to on or off (applicable to Digital mode only).
Toggle Call Priority Level	Allows you to enable your radio to enter Call Priority Level High or Normal.
Trill Enhancement	Allows you to toggle the trill enhancement to on or off.
TX Interrupt Remote Dekey	Allows you to stop an on-going voice call by dekeying the transmitting radio or terminate the repeater call hang time in order to free up the channel.
Unassigned	Indicates that the button function has not yet assigned.
Voice Control Activation	Allows you to initiate Voice Control commands.
Voice Operating Transmission (VOX)	Allows you to toggle the VOX to on or off.
Zone Selection	Allows you to select from a list of zones.

Table 5: Assignable Android Applications

Application	Application Type	Description
Barcode Scan	Custom	Enables you to launch your own barcode scanning application.
Browser	Standard	Enables you to launch a web browser.
Photo	Standard	Enables you to launch camera to take photos.
Video	Standard	Enables you to launch camera to record videos.

Application	Application Type	Description
Work Ticket	Custom	Enables you to launch your own work ticket application.



NOTE:

- The application type for Android applications can be standard or customized.
- Before configuring the Android applications to be launched using programmable buttons, the applications need to include the relevant Android intents based on the intended application functionality. For more details on intent definitions, see developer.motorolasolutions.com.

3.2

Voice Control

Voice Control allows you to manage your radio and perform information lookups using voice commands. This feature is purpose-built for better communication and is active when you press and hold the programmed **Voice Control** button and speak the commands. When there is an ongoing LTE call, you are unable to use this feature.



NOTE: Voice Control supports the American English accent only.

You are able to operate the radio with your voice using the following commands.

Table 6: Voice Control Commands

Feature	Examples
Zone and Channel	To identify your current zone and channel, say the following commands: • "Zone and channel" • "What is my zone and channel" • "Current zone and channel" • "What is my current zone and channel" To change to a new zone and channel, say the following commands: • "Zone <Zone Name>, channel <Channel Name>" • "Zone <Zone Name> and channel <Channel Name>" • "Zone to <Zone Name>, channel to <Channel Name>" • "Zone to <Zone Name> and channel to <Channel Name>" • "Change zone to <Zone Name>, channel to <Channel Name>" • "Change zone to <Zone Name> and channel to <Channel Name>" • "Change zone to <Zone Name>, channel <Channel Name>" • "Change to zone <Zone Name>, channel <Channel Name>" • "Change to zone <Zone Name> and channel <Channel Name>"

Feature	Examples
	• "Go to zone <Zone Name>, channel <Channel Name>" • "Go to zone <Zone Name> and channel <Channel Name>" • "Switch zone to <Zone Name>, channel to <Channel Name>" • "Switch zone to <Zone Name> and channel to <Channel Name>" • "Switch to zone <Zone Name>, channel <Channel Name>" • "Switch to zone <Zone Name> and channel <Channel Name>"
Zone	To identify your current zone, say the following commands: • "Zone" • "What is my zone" • "Current zone" • "What is my current zone" To change to a new zone, say the following commands: • "Zone <Zone Name>" • "Change zone to <Zone Name>" • "Change to zone <Zone Name>" • "Go to zone <Zone Name>" • "Switch zone to <Zone Name>" • "Switch to zone <Zone Name>"
Channel	To identify your current channel, say the following commands: • "Channel" • "What is my channel" • "Current channel" • "What is my current channel" To change to a new channel, say the following commands: • "Channel <Channel Name>" • "Change channel to <Channel Name>" • "Change to channel <Channel Name>" • "Go to channel <Channel Name>" • "Switch channel to <Channel Name>" • "Switch to channel <Channel Name>"
Volume	To identify the volume level of your radio, say the following commands: • "Volume"

Feature	Examples
	• "What is my volume" • "Current volume" To change the volume level of your radio, say "Volume <Volume Level>". The available commands and their respective volume levels are as follows: • <Low>, <min>, or <minimum> – 10% • <Medium> – 50% • <High>, <max>, or <maximum> – 100% • <1> to <10> – 10% to 100%
Battery	To identify your battery level, say the following commands: • "Battery" • "What is my battery" • "Battery check" • "Battery level" • "What is my battery level" • "Battery status" • "What is my battery status"
Time	To identify current time, say the following commands: • "Time" • "Current time" • "Time check" • "What is the time" • "What time is it"
Home Channel	To change to your home channel, say the following commands: • "Home channel" • "Change to home channel" • "Go to home channel" • "Switch to home channel"
Scan	To start or stop scanning, say the following commands: • "Start scan" • "Stop scan" • "Start scanning" • "Stop scanning"
Cancel Last Command	To cancel your previous command, say "Cancel".  NOTE: Cancel command works within a five-second window after the last command.

Chapter 4

System Overview

System overview explains what type of systems and modes available in the radio.

4.1

Capacity Max

Capacity Max is MOTOTRBO control channel based trunked radio system.

MOTOTRBO digital radio products are marketed by Motorola Solutions primarily to business and industrial users. MOTOTRBO uses the European Telecommunications Standards Institute (ETSI) Digital Mobile Radio (DMR) standard, that is, two-slot Time Division Multiple Access (TDMA), to pack simultaneous voice or data in a 12.5 kHz channel (6.25 kHz equivalent).

4.2

Conventional Analog and Digital Modes

Each channel in your radio can be configured as a conventional analog or conventional digital channel.

Certain features are unavailable when switching from digital to analog mode, whereas some are available in both.

There are minor differences on how each feature works but they do not affect the performance of your radio.

4.3

IP Site Connect

This feature allows your radio to extend conventional communication beyond the reach of a single site by connecting to different available sites by using an Internet Protocol (IP) network.

When the radio moves out of range from one site and into the range of another, the radio connects to the repeater of the new site to send or receive calls or data transmissions. This is done either automatically or manually depending on your settings.

In an automatic site search, the radio scans through all available sites when the signal from the current site is weak or when the radio is unable to detect any signal from the current site. The radio then locks on to the repeater with the strongest Received Signal Strength Indicator (RSSI) value.

In a manual site search, the radio searches for the next site in the roam list that is currently in range but which may not have the strongest signal and locks on to the repeater.



NOTE: Each channel can only have either Scan or Roam enabled, not both at the same time.

Channels with this feature enabled can be added to a particular roam list. The radio searches the channels in the roam list during the automatic roam operation to locate the best site. A roam list supports a maximum of 16 channels, including the selected channel.



NOTE: You cannot manually add or delete an entry in the roam list. Contact your dealer for more information.

4.4

Capacity Plus

Capacity Plus is a cost effective and entry-level digital trunked system. It expands the capacity and extends the coverage for single and multi-sites. The single and multi-sites dynamic trunking offers better capacity and coverage.



NOTE: If you try to access a feature not applicable to Capacity Plus–Single-Site or Capacity Plus–Multi-Site by using a programmable button, you hear a negative indicator tone.

Capacity Plus–Single-Site

Capacity Plus–Single-Site is a single-site trunking configuration of the MOTOTRBO radio system, which uses a pool of channels to support hundreds of users and up to 254 groups.

This configuration allows your radio to efficiently utilize the number of available programmed channels while in Repeater Mode.

Your radio also has features that are available in conventional digital mode, IP Site Connect, and Capacity Plus.

Capacity Plus–Multi-Site

Capacity Plus–Multi-Site is a multi-channel trunking configuration of the MOTOTRBO radio system, combining the best of both Capacity Plus and IP Site Connect configurations. It is also known as Linked Capacity Plus.

It allows your radio to extend trunking communication beyond the reach of a single site, by connecting to different available sites which are connected with an IP network. It also provides an increase in capacity by efficiently utilizing the combined number of available programmed channels supported by each of the available sites.

When your radio moves out of range of one site and into the range of another, it connects to the repeater of the new site to send or receive calls or data transmissions. Depending on your settings, this is done automatically or manually.

Automatically

Your radio scans through all available sites when the signal from the current site is weak or unable to detect any signal and locks on to the repeater with the strongest RSSI value.

Manually

Your radio searches for the next site in the roam list that is currently in range which may not have the strongest signal, and locks on to it.

Any channel with Capacity Plus Multi-Site enabled can be added to a roam list. Your radio searches these channels during the automatic roam operation to locate the best site.



NOTE: You cannot manually add or delete an entry in the roam list.

4.5

Direct Mode or Dual Capacity Direct Mode

If within the customer's required coverage area, any system user can directly communicate with all of the other system users with just the output power of the transmitter in their portable or mobile radio, then a direct mode or dual capacity direct mode system can be used.

Direct Mode or Dual Capacity Direct Mode (DCDM) is direct radio-to-radio communication for systems that do not use a repeater. When radios operate in direct mode or dual capacity direct mode, the radios always transmit and receive on the same frequency. Direct mode and dual capacity direct mode provide similar services to the end users, with the exception that dual capacity direct mode is only available in digital mode, and supports two simultaneous voice or data paths on a 12.5 kHz bandwidth

channel while direct mode supports only one. Additionally, there are some minor differences. For example, dual capacity direct mode channels may not be used as GPS revert channels.

The radios are not limited to one direct mode/dual capacity direct mode frequency. They can be programmed to have different frequencies, which are selectable with the channel selector knob.

Direct mode or dual capacity direct modes do not need over-the-air hang time for voice calls. The radio has an internal call ("talk back") timer. The channel access method used before the call timer expires is impolite, since the radio is still a member of an active call. This is independent of the Channel Access selection for call initiation (polite or impolite).

Chapter 5

Seamless Voice

Seamless Voice is a feature that allows you to stay connected to the radio network even when you are outside of the radio coverage. Seamless Voice uses broadband connectivity as a backup path to the LMR System. The Seamless Voice feature is supported in Capacity Max and Capacity Plus (Single-Site and Multi-Site) systems.

You are able to switch between networks automatically or manually. For Converged channel, if the Auto Network feature is enabled and both LMR and Broadband connections are available, your radio prioritizes the LMR connection.

The Broadband PTT application and Seamless Voice are mutually exclusive. You are required to uninstall the Broadband PTT application before using Seamless Voice.

For more information on the feature dependency, see MN008940A01, *MOTOTRBO Ion Seamless Voice Provisioning Guide* on <https://learning.motorolasolutions.com/ion>.

Seamless Voice can be used in the following features:

- [Zone and Channel Selections](#)
- [Private Call](#)¹
- [Group Call](#)
- [Call Alert](#)¹
- [Emergency Operation](#)
- [Lone Worker](#)
- [Man Down \(Fall Alert\)](#)
- [Transmit Interrupt \(Supervisory Override\)](#)¹

5.1

Uninstalling Broadband PTT Application

Procedure:

- 1 Upon turning on the radio, perform one of the following actions:

Option	Actions
Uninstalling the Broadband PTT application from the Radio Control Notification	- a Use the WAVE service. - b At the received Radio Control notification, tap Uninstall.
Uninstalling the Broadband PTT application from the Radio Settings	- a From  Settings, tap Apps & notifications→Broadband PTT→Uninstall→OK. - b Swipe down the notification panel. - c Tap Uninstall on the Broadband PTT Service Failure notification.

¹ This feature is only applicable to Seamless Voice in Capacity Max system.

- 2 Power cycle your radio.



NOTE:

You are able to use the Seamless Voice feature after the power cycle.

Your radio automatically logs in and out of the WAVE and Converged WAVE channels when you turn on or off your radio.

5.2

Seamless Voice Authentication

Your radio automatically logs in and out of the WAVE and Converged WAVE channels when you turn on or off your radio.

When you have log in successfully, your radio shows `Successfully contacted WAVE`.

When you fail to log in, see the following scenarios:

Table 7: Log In Failure Scenarios

Types of Failure	Actions
Activation Failure	Contact your Corporate Administrator for new activation code.
No WAVE Server	Contact your Corporate Administrator.
• Service Suspended • Account Deleted • Login Failures	In the meantime, your radio shows a pop-up message. Perform one of the following actions: • To switch to the LMR channel, tap Switch. • To remain on the channel, tap Dismiss.
No Network Connection	Make sure your cellular or Wi-Fi is turn on in Settings.

5.3

Network Switch Settings

Your radio supports both Auto Network and Broadband Network in Converged channels.

The Auto Network switch allows you to enable the switching between LMR and WAVE networks automatically depending on the signal strength of the network.

The Broadband Network switch allows you to switch between LMR and WAVE networks manually.

For Converged Channels in LMR, you are allowed to toggle either **Auto Network** or **Broadband**

Network to on. The  **Converged LMR** icon or  **Converged WAVE** icon appears in the Radio Control Widget when the setting is enabled.



NOTE: This feature is not supported for LMR only and WAVE only channels.

5.3.1

Turning Auto Network Switch to On or Off

Turning Auto Network Switch to On

Procedure:

Perform one of the following actions:

Option	Actions
Enabling Auto Network Switch with Menu Feature Launcher	a From the Menu Feature Launcher Widget, tap  More→Radio Network Set.. b Toggle Auto Network to on.
Enabling Auto Network Switch with Radio Quick Settings	a From the Radio Control Widget, tap  Radio Quick Settings. b Toggle Auto Network to on.

Turning Auto Network Switch to Off

Procedure:

Perform one of the following actions:

Option	Actions
Disabling Auto Network Switch with Menu Feature Launcher	a From the Menu Feature Launcher Widget, tap  More→Radio Network Set.. b Toggle Auto Network to off.
Disabling Auto Network Switch with Radio Quick Settings	a From the Radio Control Widget, tap  Radio Quick Settings. b Toggle Auto Network to off.

5.3.2

Turning Broadband Network Switch to On or Off

Turning Broadband Network Switch to On

Prerequisites: Make sure you are in a Converged Channel. Turn off the **Auto Network** in order to enable Broadband Network.

Procedure:

Perform one of the following actions:

Option	Actions
Enabling Broadband Network Switch with Menu Feature Launcher	a From the Menu Feature Launcher Widget, tap  More→Radio Network Set.. b Toggle Broadband Network to on.
Enabling Broadband Network Switch with Radio Quick Settings	a From the Radio Control Widget, tap  Radio Quick Settings.

Option	Actions
	b Toggle Broadband Network to on.

When Broadband Network switch toggles to on, you are using the WAVE Network on Converged Channels.

Turning Broadband Network Switch to Off

Procedure:

Perform one of the following actions:

Option	Actions
Disabling Auto Network Switch with Menu Feature Launcher	a From the Menu Feature Launcher Widget, tap  More → Radio Network Set.. b Toggle Broadband Network to off.
Disabling Auto Network Switch with Radio Quick Settings	a From the Radio Control Widget, tap  Radio Quick Settings. b Toggle Broadband Network to off.

When Broadband Network switch toggles to off, you are using the LMR Network on the Converged Channels.

5.4

Enable and Disable PTT Service

When you are in WAVE and Converged WAVE channels, your radio only receives Enable and Disable PTT service triggered by an authorized user. You are unable to initiate the Enable or Disable PTT service.

When the authorized user initiates Disable PTT, your radio shows the following indications:

- The top display shows `No WAVE Server`.
- The display shows `Service Suspended` pop-up message.
- If you press the **PTT** button, a negative tone sounds.

When the authorized user initiates Enable PTT, your radio shows `PTT is enabled`.

Chapter 6

Getting Started

Getting Started provides instructions to prepare your radio for use.

6.1

Inserting or Removing MicroSD Card

Procedure:

- 1 Slide the battery latch into unlock position.
- 2 Remove the battery from the slot at the bottom of the radio.
- 3 Remove the microSD card cover and the microSD card tray.
- 4 Perform one of the following actions:
 - To insert, place the microSD card into the tray.
 - To remove, take the microSD card out from the tray.



NOTE: Only FAT32 microSD card format is supported. If you insert an unsupported microSD card, you are prompted to format the microSD card. Formatting leads to data erasure.

6.2

Inserting or Removing SIM Card



NOTE: This task is not applicable to eSIM.

Your radio supports private or public SIM card.

Procedure:

- 1 Slide the battery latch into unlock position.
- 2 Remove the battery from the slot at the bottom of the radio.
- 3 Remove the SIM card cover and the SIM card tray.
- 4 Perform one of the following actions:
 - To insert, place the SIM card into the tray.
 - To remove, take out the SIM card from the tray.

6.3

Attaching or Detaching the Battery

Attaching the Battery

Procedure:

- 1 Fit the battery into the slot at the bottom of the radio.
- 2 Push the top of the battery down until the latch snaps into place.

Detaching the Battery

Procedure:

- 1 Slide the battery latch into unlock position.
- 2 Remove the battery from the slot at the bottom of the radio.

6.4

Attaching or Detaching the Accessory Connector Cover

To prevent damage to the accessory connector, shield it with the connector cover when not in use.

Attaching the Accessory Connector Cover

Procedure:

- 1 Insert the hooked end of the cover into the slot above the connector.
- 2 Press the top of the cover down to seat it in the slot.
- 3 Rotate the thumbscrew clockwise to tighten the cover.

Detaching the Accessory Connector Cover

Procedure:

- 1 Rotate the thumbscrew counterclockwise until it disengages from the radio.
- 2 Rotate outwards and lift the connector cover to disengage it from the radio.

6.5

Attaching or Detaching the Antenna

Attaching the Antenna

Procedure:

- 1 Set the antenna in the receptacle.
- 2 Turn the antenna clockwise.

Detaching the Antenna

Procedure:

- 1 Turn the antenna counterclockwise.
- 2 Remove the antenna from the receptacle.

6.6

Charging the Battery

Your radio does not show charging icon or LED indication on the front or top display during charging. The charging based estimation is with 25% granularity (5% 25%, 50%, 75%, 100%). The radio front display shows 50% charging when the radio powers up, and returns to normal battery percentage indicator after the synchronization completes.

Procedure:

- 1 Turn off the radio.
- 2 Place the radio in a Motorola Solutions approved charger.



The charger LED illuminates.



NOTE:

- If the charger LED blinks in red when charging, reinsert your radio.
- If the charger detects the new IMPRES battery, it automatically starts initialization. Initialization is the first calibration and reconditioning of an IMPRES battery. For more information about Motorola Solutions approved charger, see Manual Part Number: **MN006348A01** at <https://learning.motorolasolutions.com/>.

- 3 To remove the radio from the charger, pull the radio upwards.



NOTE:

- Your radio takes approximately six to ten seconds to update the battery information once the radio is removed from the charger.
- For more information, see [Battery Information on page 58](#).

6.7

Turning the Radio On or Off

Turning the Radio On

Procedure:

Turn the **On/Off/Volume** knob clockwise until a click sounds.

Turning the Radio Off

Procedure:

Turn the **On/Off/Volume** knob counterclockwise until a click sounds.

6.8

Holding Your Radio While Transmitting Audio

Procedure:

- 1 When using high audio, hold your radio vertically with the top microphone 5–10 cm away from your mouth.
- 2 Speak into the top microphone.



NOTE: Do not speak facing the bottom or the back of your radio.

- 3 Listen through speaker.
- 4 Keep the antenna at least 2.5 cm from your head and body.

The following shows the correct way of holding your radio while transmitting audio.



6.9

Adjusting the Volume

Procedure:

- 1 Perform one of the following actions:
 - To increase the volume, turn the **On/Off/Volume** knob clockwise.

- To decrease the volume, turn the **On/Off/Volume** knob counterclockwise.



NOTE:

Your radio can be programmed to have a minimum volume offset where the volume level cannot be lowered past the programmed minimum volume.

Adjusting the volume actions is applicable for both Long Term Evolution (LTE) and Land Mobile Radio (LMR) volume control.

6.10

Activating eSIM

Prerequisites: Ensure your radio is connected to the Wi-Fi.

Procedure:

- 1 From  **Settings**, tap **Network & internet**→**Mobile network**→**Download a SIM instead?**→**Next**.

- 2 Aim your camera to the QR code of your eSIM.



NOTE: Ensure the QR code is captured in the box.

- 3 Tap **Activate**→**Done**.

The eSIM profile is activated.

- 4 To connect using eSIM, turn off the Wi-Fi.



NOTE: See [Turning Wi-Fi On or Off on page 63](#).

6.11

Removing Camera Lens Protective Cover

Procedure:

Lift the protective film from the camera lens.

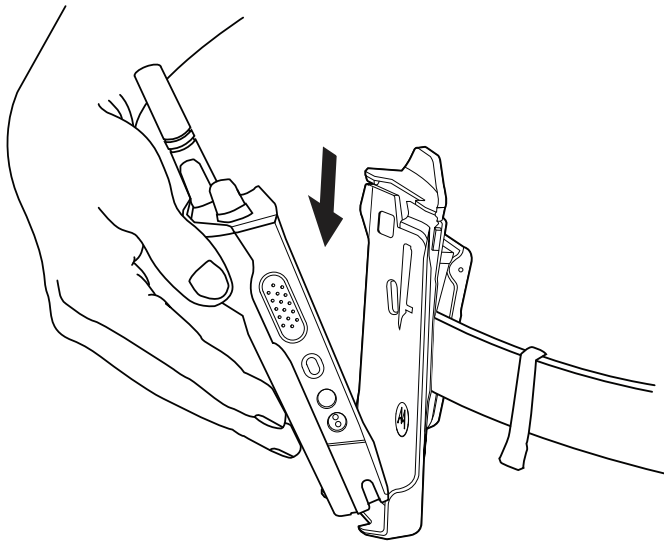
6.12

Using the Carry Holster

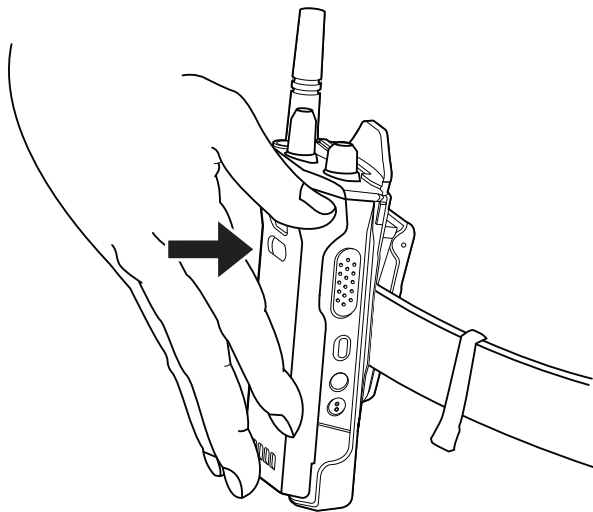
Inserting the Radio into the Carry Holster

Procedure:

- 1 Insert the radio with the display screen facing the carry holster.



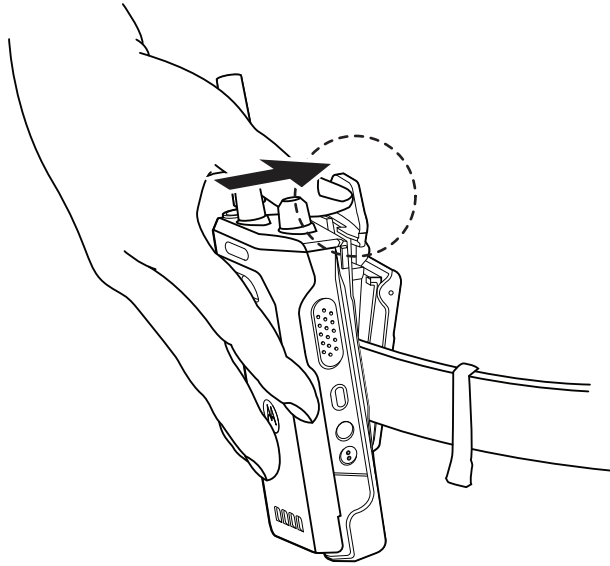
- 2 Push the radio towards the carry holster until it clicks in place.



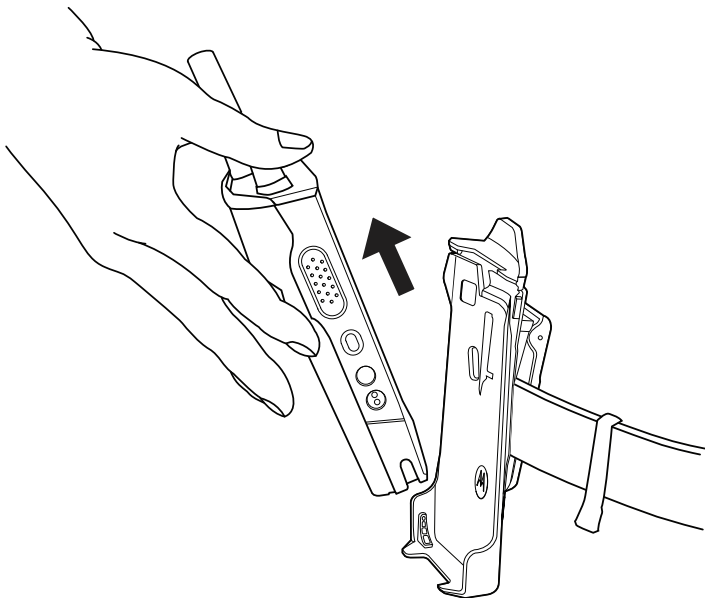
Removing the Radio from the Carry Holster

Procedure:

- 1 Press the tab to release the radio from the carry holster.



- 2 Remove the radio from the carry holster.



6.13

On-Screen Keyboard Overview

Use the keyboard in portrait or landscape orientation to enter alphanumeric text on your radio. The keyboard supports auto-capitalization and word suggestions in the Messaging feature.

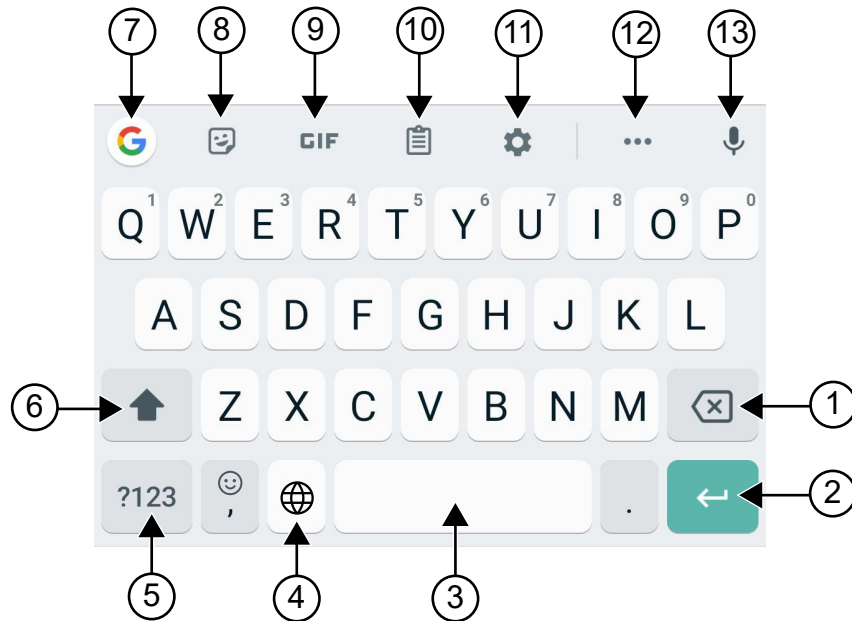


Table 8: On-Screen Keyboard Overview

No.	Name	Description
1	Backspace	To delete a character.
2	Enter	To go to the next line.
3	Spacebar	Tap to insert space. Double-tap to insert a period.
4	Globe	To change the keyboard language. NOTE: Only applicable if your radio has more than one language. If the user input character from the Android keyboard is not supported by the LMR system, the top display shows ? symbol for unsupported character.
5	?123	Tap to input numbers, punctuation, or symbols.
6	Caps Lock	Tap to type in uppercase.

No.	Name	Description
		Double-tap for caps lock.
7	Google Search	Tap to perform Google search using Chrome.
8	Stickers	Tap to access Stickers.
9	GIF	Tap to access GIF.
10	Clipboard	Text copied will automatically show here.
11	Settings	Tap to access Gboard Settings.
12	More	Tap to view more features.
13	Text-to-Speech	Tap to access Text-to-Speech.



NOTE: Based on the language settings of your radio, you can tap and hold a character to input alternate characters.

6.14

Touchscreen Navigation

Table 9: Touchscreen Actions

Action	Results
Tap 	You can tap to perform the following actions: • Select items on the screen • Type letters and symbols using the onscreen keyboard • Press on-screen buttons
Tap and hold 	You can tap and hold to perform the following actions: • Drag an application on the home screen to move it to a new location or to remove it • Create a shortcut of an application on the home screen • At an empty area of the home screen, tap and hold to launch a menu to select wallpapers, widgets and Home settings
Swipe	You can move your finger up, down, left, or right on the screen to perform the following actions: • Unlock the screen

Action	Results
	• View additional home screens • View additional application icons in the Launcher window • View more information on an application screen
Double-tap	You can tap twice on a webpage, map, or other screen to zoom in and out.
	
Pinch	In some applications, you can zoom in and out by placing two fingers on the screen and pinching them together (to zoom out) or spreading them apart (to zoom in).
	

Chapter 7

Home Screen Overview

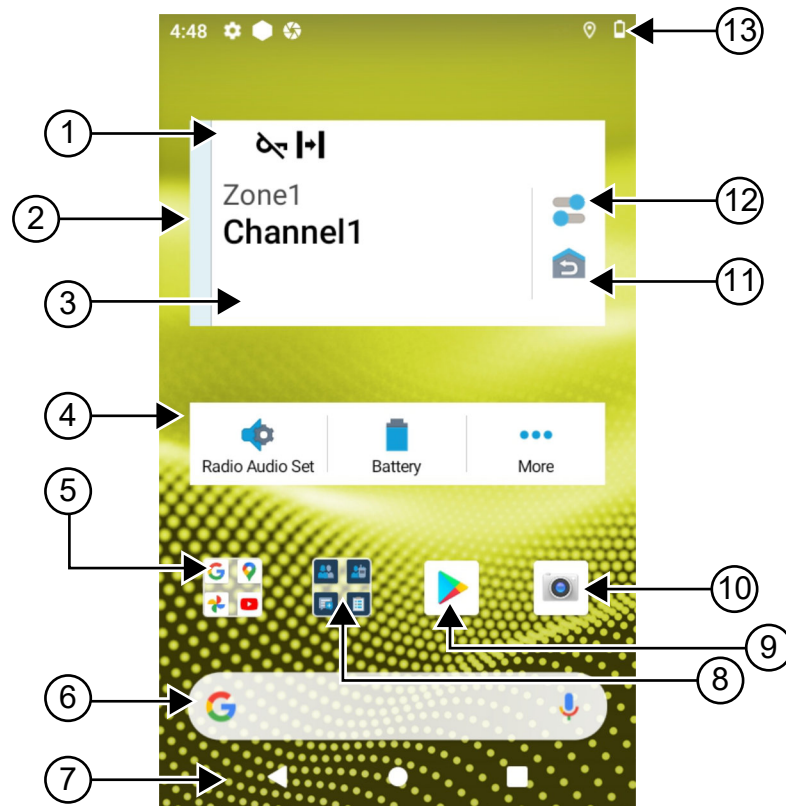


Table 10: Home Screen Overview

No.	Name	Description
1	Channel Status Icons	Provides information or status specific to the selected channel.
2	Light Bar	Reflects the active call state of the radio.
3	Radio Control Widget	Displays channel errors, trunking statuses, call states, and notifications. Allows you to change zone and channel from the home screen.
4	Menu Feature Launcher Widget	Displays the top three priority features provisioned in the RadioCentral™. The  More option appears if more than three priority features are provisioned in the RadioCentral.

No.	Name	Description
		The  More option contains all other programmed menu items.
5	Google Folder	A folder that keeps all the Google applications.
6	Google Search bar	A shortcut widget used to perform Google search using Google Chrome.
7	Back button	Allows you to return to previous screen or exit application windows.
	Home button	Allows you to return to home screen.
	Overview button	Allows you to view a list of applications that are currently active on your radio.
8	M-Apps Folder	M-Apps folder contains Motorola Solutions applications: • M-Contacts • M-Dialer • M-Menu • M-Messenger • M-Radio Control • M-Shift Manager If you open another application, M-Apps closes automatically. If you press the Overview softkey, M-Apps does not appear in Overview.
9	Google Play	Google Play is your entertainment unbound.
10	Camera	Allows you to take photos and videos.
11	Home Channel Revert	Allows you to revert to the Home Channel or Talkgroup.
12	Radio Quick Settings	Allows you to quickly toggle the radio communication settings. The settings are channel specific.
13	Status Bar	Status icons appear in the status bar to provide device status and feature notifications.

7.1

Shift Manager Widget

The Shift Manager Widget displays the status of the radio with the Sign In ID. This widget allows you to send the operational status directly from the home screen.

Figure 1: Shift Manager Widget



You are able to sign in or sign out with your login ID and view the status in the widget. The status is only available when your current channel is using Capacity Max systems with status list assigned. When the sign in is successful, the first line of the widget displays the alias or ID of the user, whereas the second line of the widget displays the current status of the user.

When secure sign in is enabled, the user login ID or alias is not visible on the widget for security purposes.

7.1.1

User Login Feature

You can login the radio with your login ID and send status to your required contacts.

If the current user is not you, you can logout from the account and login to your own login ID.

7.1.1.1

Logging In to Automatic Registration Service

Procedure:

- 1 Tap  **Shift Manager launcher**→**User Login**.
- 2 Perform one of the following actions:
 - To log in with an existing ID, tap your ID.
 - To log in with a new ID, tap **Login with new ID**→<preferred User Login ID>→  **Done**.
- 3 While sign in is in progress, tap **Hide**.

When login is completed, a message shows `Login Success` and the **Shift Manager Widget** shows the login ID.

If secure sign in is enabled, the login ID is not visible on the widget for security purposes.

7.1.1.2

Logging Out of Automatic Registration Service

Procedure:

- 1 Tap  **Shift Manager Launcher**→<your ID>→**Yes**.
- 2 Perform one of the following actions:
 - To clear the private data, tap **Yes**.
 - To keep your private data, tap **No**.

7.1.2

Managing Operational Status

Procedure:

- 1 Tap  **Shift Manager Launcher**.
- 2 Select the available status.

The display shows `Sending Status`.

When the acknowledge is received, the display shows `Acknowledge received` and the status in the Shift Manager Widget is updated.

When the status is denied from the system, the displays shows **Denied Status** and the last acknowledged status remains in the Shift Manager Widget.



NOTE: When the status is denied, tap **Tap to Retry** in the Denied Status screen or **Close** to exit screen.

7.1.3

Sending Status

Procedure:

Perform one of the following actions:

Option	Actions
Sending status to a contact	a Tap  Shift Manager Launcher → My Status →<required status>→<required contact>.
Sending status through M-Contacts	a From the menu, tap  M-Contacts . b Tap <required contact>→ Status →<required status>.
Sending status through M-Dialer	a From the menu, tap  M-Dialer . b Enter <required numbers>, and select  More Op- tions → Status → Close . c Tap Status →<required status>.

7.2

Status Indicators

Status Indicators explain the Icons and LED indicators used in your radio.

7.2.1

Status Icons

These icons appear at the status bar to provide device-specific information or status. There is a limit on the numbers of icons shown in the status bar. If the status bar is full, you might not get to see the icon even if the icon is active.



NOTE: If the following icons are not visible on your radio, enable it from the radio  **Settings**.

Icon	Name	Description
 (Front display)	Battery	Indicates the remaining battery level of the radio. The icon blinks when the battery level drops to 10% or lower.

Icon	Name	Description
 (Top display)		
	Bluetooth On	Steady – Bluetooth is on and ready for Bluetooth connection. Inverted – Bluetooth is connected to an external Bluetooth device.
	Location	Location is enabled and its signal is available.
	No SIM	SIM card is not inserted or detected.
 to 	LTE Network Strength	The radio is connected to an LTE network. The number of bars represents the signal strength of the LTE network.
	LTE No Service	The radio is not connected to an LTE network.
	Data Disabled	The radio is connected to an LTE network but the data is disabled.
	Notification (Top display only)	The radio receives notification of an activity or event.
	Time	Indicates the current time.
	Wi-Fi	The radio is connected to a Wi-Fi network. The number of bars represents the signal strength of the Wi-Fi network.
	WAVE Service	WAVE Service is running.

7.2.2

Radio Control Widgets Icons

These icons appear at the Radio Control Widget to provide information or status of Converged, LMR, and WAVE-specific features. The following shows the icon's look if the Dark theme is disabled. If the Dark theme is enabled, the icon's color will be inverted.

Icon	Name	Description
	Broadcast Call ²	The radio is receiving broadcast call from broadcasters.
	Call Priority High	Allows the system to preempt one of the ongoing non-priority calls and initiate the requested high priority call when all channels are busy.

² Broadcast Call icon only appears in Converged WAVE and WAVE only channels.

Icon	Name	Description
	Converged LMR	A converged channel that linked both LMR and WAVE. The icon indicates that the current talkgroup is using the LMR transport.
	Converged WAVE	A converged channel that linked on both LMR and WAVE. The icon indicates that the current talkgroup is using the Broadband transport.
	Dynamic Group Number Assignment (DGNA)	Allows the console to assign and remove a new talkgroup from your radio over the air.
	Direct	The radio is configured for direct radio-to-radio communication in conventional operation.
	High Volume Data	The radio is receiving high volume data and the channel is busy.
	Monitor	The selected channel is being monitored in conventional operation.
	Power Level	Off – The radio is set at high power. On – The radio is set at low power.
	Response Inhibit	Prevent your radio from responding to any incoming transmissions.
	Receiving	The radio is receiving a call or data.
	Received Signal Strength Indicator (RSSI)	The number of bars represents the received signal strength of the current site in trunking and conventional mode.
	Roaming	Site Roaming feature is enabled.
	Transmit Inhibit	The radio is blocking all transmissions.
	Scan	The radio is scanning a scan list.
	Scan Priority 1or Scan Priority 2	Blinking Dot- The radio is in Scan Priority 1. Steady Dot – The radio is in Scan Priority 2.
	Secure	Blinking – The radio is receiving an encrypted voice call. Steady – The radio is operating in a secure channel.
	Shared Frequency	The radio is locked, allowing control channel to be shared.

Icon	Name	Description
	Supervisory Override	The radio is receiving supervisory override from talkgroup member that has supervisor role.
	Transmitting	The radio is transmitting a call or data.
	Unsecure	The radio is operating in an unsecure channel.
	Voice Operating Transmission (VOX)	Allows you to initiate hands-free voice-activated calls on a programmed channel.

7.2.3

LED Indicators

The LED indicates the types of behavior of your radio.

LED Behavior	Description
Blinking Red	Radio is transmitting in low battery state or indicating battery mismatch.
Double Blinking Red	Radio is receiving an emergency transmission.
Rapidly Blinking Red	Radio has failed the self-test upon powering up and is out of range.
Solid Green	Radio is powering up and transmitting.
Blinking Green	Radio firmware upgraded successfully.
Double Blinking Green	Radio is receiving a privacy-enabled call or data.
Solid Yellow	Radio is entering Permanent Monitor state.
Blinking Yellow	Radio is performing scan.
Rapidly Blinking Yellow	Radio is receiving Call Alert.

7.2.4

Backlight Indicators

The top display backlight indicates the types of behavior of your radio. You can configured the backlight timer settings to your preferred time or disable it.

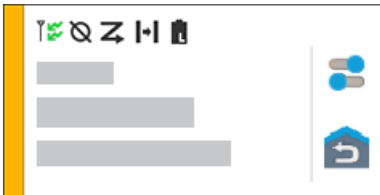
Backlight Behavior	Description
White 	When radio receives Over-the-Air activity, or user input such as turning the channel selector knob and after pressing the PTT or side button.

Backlight Behavior	Description
Orange 	When radio initiates or receives Emergency Alarm or Call.
Red 	When radio is on the following critical alerts: • Low Battery • Out of Range • Inability to establish a full connection with the system. • Inability to authenticate or register with the system. • Lost GPS signal or GPS function fails.
Green 	When radio receives the following calls: • Private Call • Call Alert • Selective Call • Entering Geofence

7.2.5

Lightbar Indicators

The Lightbar Indicator indicates the active call state of the radio.

Color	Call State
Light Blue 	Open/Standby
Yellow 	Receiving Call

Color	Call State
Red The icon for the Red Home Screen Overview shows a red vertical bar on the left. To its right are three horizontal bars of varying lengths. Further right are icons for a toggle switch (top), a house with a circular arrow (bottom), and a battery level indicator (far right).	Transmitting Call
Gray The icon for the Gray Home Screen Overview shows a gray vertical bar on the left. To its right is a single horizontal bar. Further right are icons for a toggle switch (top) and a house with a circular arrow (bottom).	Unprogrammed

Chapter 8

General Radio Settings

This section explains the general settings that you can adjust on your radio.

8.1

Accessing Radio Settings

Procedure:

- 1 To access radio settings, perform one of the following actions:
 - From home screen, swipe up.
 - Swipe down the notification panel.
- 2 Tap  **Settings**.

8.2

Creating Radio Settings as Shortcut in Home Screen

Procedure:

- 1 Locate  **Settings**.
- 2 Long press and drag  **Settings** to home screen.

8.3

Adjusting Display Brightness

Procedure:

Swipe down the notification panel and perform one of the following actions:

- To set a custom brightness level, drag the **Brightness Slider**.
- To automatically adjust the screen brightness based on the lighting conditions, tap **Auto Brightness**.

8.4

Turning On or Off Dark Theme

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap  **Dark theme**.
- From  **Settings**, tap **Display**→**Dark theme**.

8.5

Setting the Clock

Procedure:

- 1 From  **Settings**, tap **Clock**.
- 2 Perform one of the following actions:

Option	Actions
Toggling 24-hour format on or off	Tap Use 24-hour format .
Toggling automatic time zone on or off	Tap Set Automatic .
Select time zone manually	- a Toggle Set Automatic to off. - b Tap Select Time Zone.

8.6

Setting the Front Display Timer

This setting determines the period before the front display dims and turns off due to inactivity.

Procedure:

From  **Settings**, tap **Display**→**Front Display Timer**→<required period>.

8.7

Screen Lock

You can set your radio screen to lock automatically by specifying a pattern, PIN, or a password to keep your data secure.



IMPORTANT: If your radio screen lock option is set to **None** or **Swipe**, your data is not secured and can be accessed by anyone.

When your radio is on, you can lock your radio by pressing the **Display Sleep/Wake** button, and unlock by providing a pattern, PIN or a password.

If you did not specify a pattern, PIN, or a password you can also unlock your radio by swiping up the screen, or only by pressing the **Display Sleep/Wake** button if no locking option was set.

When your radio is locked, the cellular network signal, phone calls, notification of new messages, missed calls, and upcoming appointments are still available and can be received.

You can also set your radio to automatically lock after a specified time.

8.7.1

Unlocking Screen

Procedure:

- 1 Press the **Display Sleep/Wake** button.
- 2 Swipe up the home screen.
- 3 Perform one of the following actions:

Option	Actions
Unlocking the screen with pattern	Draw the specified pattern on the screen using your finger.
Unlocking the screen with a PIN or password	a Enter your pin or password. b Tap  Save.

8.7.2

Unlocking the Forgotten Password Radio

Procedure:

- 1 Turn your radio on.
- 2 Once the Motorola Solutions logo appears, within 10 seconds, press the **1-Dot Programmable Feature** button five times in succession.

Your radio shows the following indications:

- A beep tone sounds.
- The top display shows your radio version numbers and subscriber-specific information.
- Your radio resets and enters the Front Display test mode.

- 3 Select **Reboot to Recovery**→**OK**→**Wipe Data/Factory Reset**.
- 4 Once your radio shows *Data wipe complete*, power-cycle your radio.
- 5 If your radio is synchronized with your Google account, from the **Verify PIN** screen, select **Use my Google account instead** and go through the Setup Wizard steps.



NOTE: If your radio is not synchronized with your Google account, your radio directly shows the home screen.

8.8

Setting Languages

Procedure:

From  **Settings**, tap **Languages**→<*required Languages*>.

If the selected language is not supported by the Land Mobile Radio (LMR) setting, the selected language will revert to English whenever your radio operates in LMR setting.

8.9

Audio Settings

This section contains information on Audio Settings for Long Term Evolution (LTE) and Land Mobile Radio (LMR) system.

If there is concurrent audio coming from both LTE and LMR system, your radio prioritizes the audio from LMR system.

Depending on your radio Audio Settings when using a microphone, the LTE Audio may go on silent.

8.9.1

Turning Do Not Disturb On or Off

The Do Not Disturb setting allows you to mute alarms, reminders, events, messages, and calls.



NOTE: Ensure that the Do Not Disturb setting is disabled if there is a codeplug and firmware update plan.

Turning Do Not Disturb On

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Do Not Disturb**.
- From  **Settings**, tap **Sound**→**Do Not Disturb**→**Turn On Now**.

Turning Do Not Disturb Off

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Do Not Disturb**.
- From  **Settings**, tap **Sound**→**Do Not Disturb**→**Turn Off Now**.

8.9.1.1

Setting Do Not Disturb

Procedure:

- 1 From  **Settings**, tap **Sound**→**Do Not Disturb**.
- 2 Perform one of the following actions:

Option	Actions
Setting Do Not Disturb Exceptions for Calls	- a Tap Calls. - b Set the exception for the following options: • Allow Call • Starred Calls • Allow Repeat Callers
Setting Do Not Disturb Exceptions for Messages	- a Tap SMS, MMS and messaging apps. - b Tap Allow messages.
Setting Do Not Disturb Exceptions for Other Features	- a Tap See all exceptions. - b Set the exception for the following options: • Allow Alarms • Play Media Sounds

Option	Actions
	• Allow Touch Sounds • Allow Reminders • Allow Events
Setting Restriction for Notifications	a Tap Restrict Notifications. b Set the restriction for the following options: • No sound from notifications • No visuals or sound from notifications • Custom
Setting Default Duration for Do Not Disturb	a Tap Default Duration. b Perform one of the actions: • Tap Until you turn off. • Tap and edit the <i><required duration></i>. • Tap Ask every time.

8.9.2

Accessing Radio Audio Settings

Procedure:

- 1 Perform one of the following actions:

- From the Menu Feature Launcher Widget, tap  **More**→**Radio Audio Settings** .
- From  **Settings**, tap **Sound**→**Radio Audio Settings**.

- 2 To change the radio audio settings, select the following options:

- **Audio Preference**
 - Default
 - Level 1
 - Level 2
 - Level 3
 - Treble Boost
 - Mid Boost
 - Bass Boost
- **Noise Suppressor**
 - Disabled
 - Basic
 - Enhanced Auto (Default)
- **AF Suppressor**
- **Intelligent Audio**
- **Mic AGC**

8.9.2.1

Setting Audio Preference

Procedure:

1 Perform one of the following actions:

- From the Radio Control Widget, tap  **Radio Quick Settings**→**Audio Preference**.
- From the Menu Feature Launcher Widget, tap  **More**→**Audio Preference**.

2 Perform one of the following actions:

- To disable the previous selected Audio Preference and return to the default factory settings, tap **Default**.
- For audio profiles that compensate noise-induced hearing loss in adults above 40 years old, tap **Level 1**, **Level 2**, or **Level 3**.
- If you prefer audio profiles with tinnier, more nasal, or deeper sounds, tap **Treble Boost**, **Mid Boost**, or **Bass Boost**.

8.10

Airplane Mode

When Airplane Mode is enabled, Bluetooth, Wi-Fi, and Cellular connections are automatically turned off. Land Mobile Radio (LMR) Rx and Tx operations are not blocked during Airplane mode.



NOTE:

- You must turn off the radio during flight to prevent radio frequency interference.
- You can turn on Bluetooth, GPS, and Wi-Fi connections manually during Airplane Mode.

8.10.1

Entering Airplane Mode

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Airplane Mode**.
- From  **Settings**, tap **Network & internet**→**Airplane Mode**→**On**.

Your radio shows the **Airplane mode** icon in the **Status** bar.

For Capacity Max, your radio displays an informative dialog message.

8.11

USB Desense

When your radio is connected to another device using a USB cable, any receiving and transmitting activities are disabled.

You will face the following scenarios:

- You can only control the volume using **Volume** knob.
- You cannot press the **PTT** button.
- You cannot tap the **Menu Feature Launcher Widget**.

For Capacity Max system, if you enable the airplane mode and disable the USB Desense, your radio displays the following indications:

- Airplane mode and USB desense informative dialog boxes.
- Airplane mode icon.

8.12

Battery

8.12.1

Viewing Battery IMPRES 2 Information

Procedure:

Perform one of the following actions:

- From  **Settings**, tap **Battery**→**Battery IMPRES Info**.
- From the Menu Feature Launcher Widget, tap  **More**→**Battery Info**.

Your radio display the battery conditions. For more information, refer *Battery Information*.

8.12.1.1

Battery Information

Battery information displays the current status of your battery. Depending on the battery conditions, your radio shows the following information.

Battery Condition	Information Display on Radio
Good Condition	• Remaining Capacity • First Used • Service Life • Kit Number
Radio is inserted into the charger during ON state	Battery needs recondition
Battery Needs Recondition	
Wrong Battery	• The top display shows WRONG BATT. • Battery IMPRES info displays Wrong Battery. • The display shows Wrong Battery notification. • Upon powering up your radio, the display shows Wrong Battery dialog box.
Radio is turned on in the charger	Unknown Battery
Unknown	

8.12.2

Setting Battery Saver

Procedure:

- 1 From  **Settings**, tap **Battery**→**Battery Saver**.
- 2 Perform one of the following actions:

Option	Actions
Setting a schedule for battery saver	- a Tap Set a schedule. - b Set the <i><required time></i>.
Toggling automatic battery saver off when fully charged	Toggle Turn off when fully charged .
Turning on battery saver manually	Tap TURN ON NOW .
Turning off battery saver manually	Tap TURN OFF NOW .

8.12.3

Turning Battery Percentage On or Off

Turning Battery Percentage On

Procedure:

From  **Settings**, tap **Battery**→**On**.

The front radio display shows the current percentage of the battery.

Turning Battery Percentage Off

Procedure:

From  **Settings**, tap **Battery**→**Off**.

The current percentage of the battery on the front radio display disappears.

Chapter 9

About Device

You can view details about your device and access **Radio Advanced** for more information.

You can view the following details in **About Device**:

- Device name
- SIM Status
- **Radio Advanced**

The following describes the available information in **Radio Advanced**:

Table 11: Radio Advanced Information

Radio Advanced Information	Description
Certificates	Provides information on available certificates in your radio.
Internet of Things (IoT) Status	Provides IoT connection status.
Radio Information	Provides the following information about your radio: • Radio Alias • Radio ID • Software Version • ESN-AP • Codeplug Version
Regulatory Label	Provides information about your radio regulatory label.
Control Map	Provides the following information about your radio buttons or knobs: • Side Button 1 • Side Button 2 • Side Button 3 • Orange Button • Rotary Knob 1 • Rotary Knob 2

9.1

Accessing Online Quick Reference Guide

Procedure:

From  **Settings**, tap **About Device**→**Quick Reference Guide**.

9.2

Accessing Radio Advanced

Procedure:

Perform one of the following actions:

- From the Menu Feature Launcher Widget, tap  **More**→**Info**.
- From  **Settings**, tap **About Device**→**Radio Advanced**.

9.2.1

Accessing Regulatory Label

Procedure:

1 Perform one of the following actions:

- From the Menu Feature Launcher Widget, tap  **More**→**Info**.
- From  **Settings**, tap **About Device**→**Radio Advanced**.

2 Select **Regulatory Label**.

Chapter 10

Connectivity

You can connect your radio to other devices, accessories, or network through different types of connectivity.

10.1

LTE

Long Term Evolution (LTE) is to extend the data coverage of the radio when the Wi-Fi connection is unavailable.

The following bands are available based on regions:

Table 12: Available Bands Based on Regions

Region	Type of Bands	Bands Available
North America Group (NAG)	LTE	B2, B4, B5, B7, B12, B13, B14, B17, B30, B48
	3G	Not Available
International	LTE	1, 2, 3, 4, 5, 7, 8, 20, 28, 38, 39, 40, 41
	3G	1, 2, 4, 5, 8



NOTE: Contact your dealer or administrator upon eSIM availability.

10.2

Wi-Fi Operation

Wi-Fi® is a registered trademark of Wi-Fi Alliance®. You can set up and connect Wi-Fi network to update your radio firmware, codeplug, language pack, and voice announcement.

Your radio supports the following Wi-Fi networks.

Wi-Fi Enhanced Open

A new WFA security standard for public networks which provides encryption and privacy on open, non-password-protected networks in areas such as cafes, hotels and airports.

WEP/WPA/WPA2/WPA3-Personal Wi-Fi network

Uses pre-shared key/password based authentication. Pre-shared key/password can be entered by using the menu or MDM.

WPA/WPA2/WPA3-Enterprise Wi-Fi network

Designed for enterprise networks and requires a RADIUS authentication server. Your radio must be pre-configured with a certificate if certificate-based authentication is deployed and client certificate verification is required.

10.2.1

Turning Wi-Fi On or Off

Turning Wi-Fi On

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Wi-Fi**.
- From  **Settings**, tap **Network & internet**→**Wi-Fi**→**On**.

Your radio shows a list of available networks.

Turning Wi-Fi Off

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Wi-Fi**.
- From  **Settings**, tap **Network & internet**→**Wi-Fi**→**Off**.

10.2.2

Accessing Network

Procedure:

- 1 From  **Settings**, tap **Network & internet**→**Wi-Fi**.
- 2 Perform one of the following actions:

Option	Actions
Connecting to network	Tap <i><required network></i> → <i><password></i> .
Adding new network	- a Tap Add network→<i><required SSID></i>→<i><required Security Type></i>. - b To set the network configuration, tap and expand Advanced options and set accordingly. - c Tap Save.
Editing network	a Tap <i><required network></i>→ Settings→ Ed- it→<i><modify the network></i>→Save.
Forgetting network	Tap <i><required network></i> → Forget .
Installing Enterprise Wi-Fi Certificate	Tap Advanced → Install network certification .

10.3

Bluetooth®

This feature allows your radio to connect to any Bluetooth enabled device through Bluetooth connection.

Your radio supports Bluetooth connections to Commercially available Off-The-Shelf (COTS) headsets with HSP profiles as well as MSI BLE GATT accessories such as WM500 Corona RSM and EP910w PTT headset. Simultaneous connections to Bluetooth headsets are not supported.

The Bluetooth operates with a range of 10 m (32 ft) line of sight or better. The Bluetooth function of your radio has a typical power of 4 dBm.

This is an unobstructed path between your radio and your Bluetooth enabled device. For high degree of reliability, Motorola Solutions recommends to not separate the radio and the Bluetooth enabled device.

If the voice and tone quality gets distorted or unclear, position your radio and the Bluetooth enabled device close to each other to re-establish clear audio reception.

10.3.1

Turning Bluetooth Mode On or Off

Turning Bluetooth Mode On

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Bluetooth**.
- From  **Settings**, tap **Connect devices**→**Connection preferences**→**Bluetooth**→**On**.

Turning Bluetooth Mode Off

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Bluetooth**.
- From  **Settings**, tap **Connect devices**→**Connection preferences**→**Bluetooth**→**Off**.

10.3.2

Connecting to Bluetooth Devices

Procedure:

- 1 From  **Settings**, tap **Connected devices**.
- 2 Perform one of the following actions:

Option	Actions
Connecting to an existing device	a To search for nearby devices, tap Connection preferences→Bluetooth→On b Tap <required device>→Connect.

Option	Actions
Connecting to an existing device that has been cleared pairing from the device itself	a Tap <i><required device></i>→Disconnect b Tap <i><required device></i>→Forget.  NOTE: You need to disconnect then forget the device from the connected device list to pair with the radio again. c To search for nearby devices, tap Connection preferences→Bluetooth→On d Tap Pair new device→<i><required device></i>→Connect.
Connecting to a new device	a To search for nearby devices, tap Connection preferences→Bluetooth→On b Tap Pair new device→<i><required device></i>→Connect.



NOTE: If the Bluetooth Pairing PIN feature is enabled, verify that the codes are correct before you begin pairing.

10.3.3

Disconnecting from Bluetooth Devices

Procedure:

From  **Settings**, tap **Connected devices**→**Connection preferences**→**Bluetooth**→*<required device>*→**Disconnect**.

10.3.4

Forgetting Bluetooth Devices

Prerequisites: Disconnect your radio from the *<required device>*.

Procedure:

From  **Settings**, tap **Connected devices**→*<required device>*→**Forget**.

10.3.5

Viewing Device Details

Procedure:

From  **Settings**, tap **Connected devices**→*<required device>*→**View Details**.

10.3.6

Editing Device Name

Procedure:

From  **Settings**, tap **Connected devices**→<required device>→**Edit Name**→<New Name>.

The display shows Device Name Saved.

10.3.7

Deleting Device Name

Procedure:

From  **Settings**, tap **Connected devices**→<required device>→**Delete**.

The display shows Device Deleted.

10.3.8

Bluetooth Profiles

Your radio supports a wide range of Bluetooth services.

Table 13: Bluetooth Profiles

Profile	Description
Dial-Up Networking (DUN)	Provides access to the Internet and other dial up services over Bluetooth.
Generic Access Profile (GAP)	This profile defines how Bluetooth enabled devices can make themselves available and how two devices can communicate directly with each other.
Generic Attribute Profile (GATT)	Allows profile discovery and description services for Bluetooth Low Energy protocol.
Headset Profile (HSP)	Provides support for the popular Bluetooth headsets to be used with mobile phones with ability to ring, answer a call, hang up, and adjust the volume.
Object Push Profile (OPP)	Allows the device to send objects such as images over Bluetooth.
Personal Area Network (PAN)	Allows the device to share Internet connection with another device (for example a laptop) and to access the Internet shared by another device (for example a Bluetooth enabled phone).

Chapter 11

Basic Radio Operation

This section explains the basic operation that you can perform on your radio.

11.1

Responding to Notifications

Procedure:

- 1 Swipe down the notification panel and perform one of the following actions:
 - To respond to a notification, tap the assigned action message.
 - To clear all notifications, tap **Clear All**.



NOTE: You are unable to view the notifications once it is cleared.

- 2 To exit notification panel, swipe up.

11.2

Managing Home Screen Widgets



NOTE: The home screen supports up to two widgets per screen only.

Procedure:

Perform one of the following actions:

Option	Actions
Adding widgets to home screen	- a Tap and hold an empty space on the home screen. - b Tap widgets. - c Tap and hold the <i><required widget></i>. - d Drag the <i><required widget></i> to the <i><required location></i>.
Moving widgets within home screen	- a Tap and hold the <i><required widget></i>. - b Drag the <i><required widget></i> to the <i><required location></i>.
Moving widgets to the next screen	- a Tap and hold the <i><required widget></i>. - b Drag the <i><required widget></i> to the right of the screen. - c Release the <i><required widget></i> to the <i><required location></i>.
Deleting widgets from home screen	a Tap and hold the <i><required widget></i>.

Option	Actions
	b Tap remove .

11.3

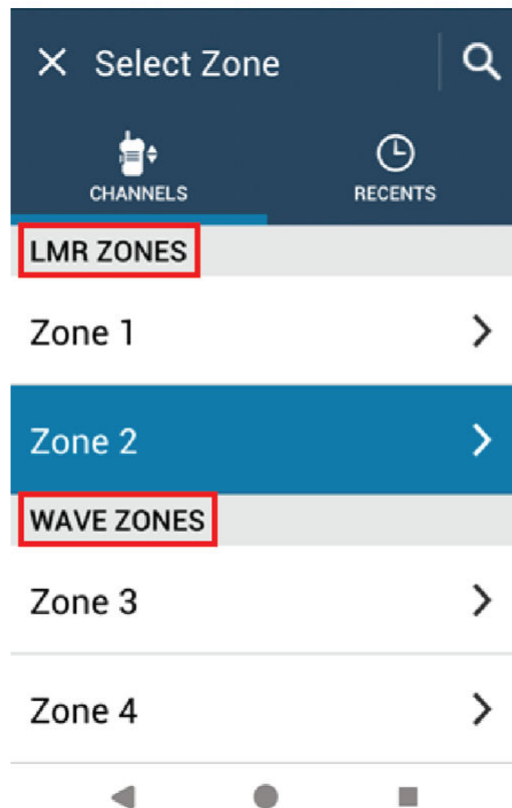
Zone and Channel Selections

A zone is a group of channels. You can program each channel with different features that support different groups of users.

For non-Seamless Voice, in the **Select Zone** screen, you will see a list of LMR only channels.

For Seamless Voice, the types of channels are distinguished by the text headers in **Select Zone** screen. LMR only channels and Converged channels are under the **LMR ZONES**. For WAVE only channels, it is located under **WAVE ZONES**.

Figure 2: Select Zone Screen for Seamless Voice



NOTE: For WAVE only channels, all LMR features are disabled.

Table 14: Number of Supported Zones and Channels

Network	Zones	Channels	Channels per Zone
LMR	250	1000	160

Network	Zones	Channels	Channels per Zone
WAVE	6	96	16

11.3.1

Selecting Zone

Procedure:

Perform one of the following actions:

- To select a zone, tap **Radio Control Widget**→**Current Zone**→<required zone>→<required channel>.
- To select a zone from Recent tab, tap **Radio Control Widget**→**Recent**→<required zone and channel>.
- To search for zone,  **More**→  **Ch Search**→<required zone>→<required channel>

11.3.2

Selecting Channel

Procedure:

Perform one of the following actions:

- To select a channel, tap **Radio Control Widget**→<required channel>.
- To select a channel from Recent tab, tap **Radio Control Widget**→**Recent**→<required zone and channel>.
- To search for channel, tap  **More**→  **Ch Search**→<required channel>.
- To select a channel using the **Channel Selector** knob, rotate the **Channel Selector** knob to the required position.

11.3.2.1

Channel Error Messages

If there is a channel error, your radio displays the following error messages on the Radio Control Widget.

Type	Description
Unprogrammed	The mode is set to an unprogrammed channel.
Fail 001	The selected channel is assigned to an incorrect frequency band.

11.4

Talkaround

This feature allows you to continue communicating when your repeater is non-operational, or when your radio is out of range from the repeater but within the talk range of other radios.

The talkaround setting is retained even after powering down.

11.4.1

Toggle Between Repeater and Talkaround Mode

Procedure:

Perform one of the following actions:

- From the Radio Control Widget, tap  **Radio Quick Settings**→**Repeater or Talkaround**.
- From the Menu Feature Launcher Widget, tap  **More**→**Repeater or Talkaround**.
- Press the programmed **Repeater or Talkaround** button.

11.5

Power Level

This feature allows you to reduce the transmit power level for a specific case that requires a lower power level.

The reduced transmitted power level does not affect the receiving performance of your radio nor diminish the data functionality of the radio.

Low power level enables a shorter transmitting distance and helps conserve power.

High power level enables a longer transmitting distance.

11.5.1

Setting Power Levels

Procedure:

Perform one of the following actions:

- From the Radio Control Widget, tap  **Radio Quick Settings**→**Power**.
- From the Menu Feature Launcher Widget, tap  **More**→**Power**.

11.6

Setting LED Indicator

Procedure:

From the Menu Feature Launcher Widget, tap  **More**→**LED Indicator**.

11.7

Setting Squelch Levels

Procedure:

- 1 Perform one of the following actions:

- From the Radio Control Widget, tap  **Radio Quick Settings**→**Squelch**.
- From the Menu Feature Launcher Widget, tap  **More**→**Squelch**.

2 Perform one of the following actions:

- For a normal squelch level, tap **Normal**.
- To filter out unwanted calls or background noise, tap **Tight**.

11.8

Toggling the Controls and Buttons Tones On or Off

Procedure:

- 1 From the home screen, tap  **More**.
- 2 To toggle the controls and buttons tones on or off, tap **Tones**.

Chapter 12

Types of Radio Calls

There are several ways that you can make a call with your radio depending on the types of calls

Call Type	LMR Only	Converged	WAVE Only
All Call An All Call is a call from an individual radio to every radio on the site or every radio at a group of sites. All Call is used to make important announcement.	✓	✗	✗
Broadcast Call A Broadcast Call is a one-way voice call from any user to an entire talkgroup. The Broadcast Call feature allows only the call initiating user to transmit to the talkgroup, while the recipients of the call cannot respond.	✓	✓	✓
Call Alert Call Alert paging enables you to alert the recipient to call you back when they are able to do so. Call Alert is applicable for subscriber aliases or IDs only.	✓	✓ ³	✓
Group Call A Group Call is a point-to-multi-point call operation. Your radio must be configured as a member of the group for you to communicate with each other.	✓	✓	✓
Open Voice Channel Mode (OVCM) Call An OVCM Call allows a radio that is not preconfigured to work in a particular system to both receive and transmit during a group or individual call.	✓	✗	✗
Private Call A Private Call is a call from an individual radio to another individual radio. There are two types of Private call in LMR which are:	✓	✓ ³	✓

³ This feature is only applicable to Seamless Voice in Capacity Max system.

Call Type	LMR Only	Converged	WAVE Only
- Off Air Call Set-Up (OACSU) - Full Off Air Call Set-Up (FOACSU)			
Selective Call A Selective Call is a call from an individual radio to another individual radio. It is a Private Call on an analog system.	✓	✗	✗
Unaddressed Call An Unaddressed Call is a group call to one of the 16 predefined group IDs.	✓	✗	✗

12.1

Making Calls

Procedure:

- To make calls, perform one of the following actions:

Option	Actions
Making calls from Contact list	a From the menu, tap  M-Contacts → <i><required contact></i> →  Call. b To start the call, press and hold the PTT button. c To end the call, tap End.
Making calls using dialer	a From the menu, tap  M-Contacts →  Floating Action Button → Dialer. b Enter the <i><required numbers></i>. c Tap  More → <i><required call type></i>. d To start the call, press and hold the PTT button. e To end the call, tap End.  NOTE: This is not applicable to WAVE mode.

Option	Actions
Making calls from Recent Calls	a From the menu, tap  More→Recent Calls→<required contact>→  Call. b To start the call, press and hold the PTT button. c To end the call, tap End.
Making WAVE Private Call from the Quick Action icon	a From the menu, tap  M-Con-tacts<required Converged WAVE contact or WAVE contact>. b Tap and hold the  Quick Action. c Tap  Call. d To start the call, press and hold the PTT button. e To end the call, tap End.
Making calls using Channel Knob and PTT button	a To select a channel with an active ID or alias, toggle the Channel Selector knob. b To start the call, press and hold the PTT button. c Wait for the Talk Permit Tone to end, and speak into the microphone. d To listen, release the PTT button.

12.2

Responding to Calls

Procedure:

Perform one of the following actions:

- To speak, press and hold the **PTT** button.
- To listen, release the **PTT** button.
- To deny call, tap **Dismiss**.
- To end an ongoing call, tap **End**.

Chapter 13

Emergency Operation

Emergency Alarms are used to indicate critical situations. You can initiate an Emergency Alarm at any time even when there is activity on the current channel.

You can only assign one type of Emergency Mode to the Emergency button for each channel. Your radio supports the following Emergency Modes:

Table 15: Emergency Modes

Emergency Mode	Description
Emergency Alarm ⁴	An Emergency Alarm is not a voice call. This alarm is an emergency notification sent to radios that are programmed to receive them.
Emergency Alarm with Call	Your radio transmits an Emergency Alarm. When the Emergency Alarm is acknowledged, the group of radios can communicate over the assigned emergency channel. Press and hold the PTT button to talk.
Emergency Alarm with Voice to Follow	Your radio transmits an Emergency Alarm. When the Emergency Alarm is acknowledged, your radio microphone is automatically activated which is known as Hot Mic. Hot Mic allows you to communicate with the group of radios without pressing the PTT button.  NOTE: • If the Emergency Cycle Mode is enabled, repetitions of Hot Mic and receiving period are made for a programmed duration. • If you press and hold the PTT button during the programmed Hot Mic receiving period, your radio proceeds to make a call and stops Hot Mic receiving period timer. Your radio remains in emergency mode. Once PTT button is released, Hot Mic receiving period timer restarts. • If the Emergency Alarm request fails, the radio does not retry to send the request, and enters the Hot Mic directly.
Silent Emergency Alarm ⁴	Your radio transmits an emergency notification without any audio or visual indicators.
Silent Emergency Alarm with Call ⁴	Your radio transmits an emergency notification without any audio or visual indicators. Your radio suppresses all audio and visual indicators of the emergency until you press and hold the PTT button to talk.
Silent Emergency Alarm with Voice to Follow ⁴	Your radio transmits an emergency notification without any audio or visual indicators. When the Emergency Alarm is acknowledged, the Hot Mic is activated. You can communicate with the group of radios without pressing the PTT button.  NOTE: The indicators only appear when you press the PTT button.

⁴ This feature is not applicable to Converged WAVE and WAVE only mode.

Your dealer can set the Emergency On or Off function and button-press duration of the Emergency button. Contact your dealer for more information.

Your dealer can program the Emergency Search tone. When the tone is programmed, the Emergency Search tone sounds. The tone mutes when your radio transmits or receives voice, and stops when your radio exits Emergency mode.

13.1

Sending Emergency Alarms

Procedure:

Press the programmed **Emergency On** button.

If the alarm is successfully sent, your radio shows the following indications:

- The Emergency tone sounds.
- The display shows `Acknowledge Received` and exited the Emergency Alarm.

If the alarm is unsuccessful after all retries, your radio shows the following indications:

- A negative tone sounds.
- The display shows `No Acknowledge` and exited the Emergency Alarm.



NOTE: For Converged Setup in Capacity Plus (Single-Site and Multi-Site) systems, the radio that is configured to provide ACK to an Emergency Alarm are always in the LMR network.

13.2

Sending Emergency Alarms with Call

Procedure:

- 1 Press the programmed **Emergency On** button.

If the alarm is successfully sent, your radio shows the following indications:

- The Emergency tone sounds.
- The green LED blinks.
- The display shows `Acknowledge Received`.

If the alarm is unsuccessful after all retries, for Converged WAVE and WAVE only channel, the Radio Control Widget shows `Emergency Fail` and the top display shows `EMER FAIL`.

- 2 To call, press and hold the **PTT** button.
- 3 Wait for the Talk Permit Tone to end, and speak into the microphone.
- 4 To listen, release the **PTT** button.

If your radio does not detect voice activity for a predetermined period, the call ends.



NOTE: For Converged Setup in Capacity Plus (Single-Site and Multi-Site) systems, the radio that is configured to provide ACK to an Emergency Alarm are always in the LMR network.

13.3

Sending Emergency Alarms with Voice to Follow

Procedure:

- 1 Press the programmed **Emergency On** button.

If the alarm is successfully sent, the Emergency tone sounds and Hot Mic is activated.

If the alarm is unsuccessful after all retries, for Converged WAVE and WAVE only channel, the Radio Control Widget shows *Emergency Fail* and the top display shows *EMER FAIL*.

- 2 Speak into the microphone without pressing the **PTT** button.

Your radio automatically stops transmitting when:

- The cycling duration between hot mic and receiving calls expires if Emergency Cycle Mode is enabled.
- The hot mic duration expires if Emergency Cycle Mode is disabled.



NOTE: For Converged WAVE and WAVE only channels, the hot mic duration is unable to configure.

13.4

Receiving and Responding to Emergency

When you receive an Emergency, your radio shows the following indications:

- A tone sounds.
- The red LED blinks.
- For LMR and Converged LMR channel, received Emergency Alarm Received notification shows sender's information including ID, zone, channel, and talkgroup.
- For Converged WAVE and WAVE only channel, received Emergency Alarm Received notification shows sender's information including ID and talkgroup.
- The Emergency notification appears and is added to the Recent Calls.
- The Radio Control Widget shows *Emergency Alarm Received* and the ID of the sender.
- The top display shows *EA RECEIVED* and ID of the sender.

Procedure:

- 1 Perform one of the following actions:

Option	Actions
Dismissing the Emergency	Tap DISMISS on the notification.
Viewing the Emergency details	Tap  More → Recent Calls →<preferred <i>Emergency received</i> >.

Option	Actions
Calling back	a Tap  More→Recent Calls→<preferred <i>Emergency received</i>>. b Tap and hold the  Quick Action. c Tap  Call. d To start the call, press and hold the PTT button. e To end the call, tap End.



NOTE: If you receive an Emergency from a sender with a different zone or channel, the information in the Recent Calls will be grayed out and unable to call back.

13.5

Exiting Emergency Mode

Your radio automatically exits emergency mode when you are having the following scenarios:

- An acknowledgment is received from the system (for emergency alarms only).
- All retries to send the alarm are exhausted.
- Turning off your radio. When you turn on your radio, the emergency will not reinitiate automatically.

Procedure:

Perform one of the following actions:

- Press the programmed **Emergency Off** button.
- If you receive emergency notification, tap **CANCEL**→**YES**

If you exited the Emergency successfully, your radio shows the following indications:

- The tone ceases.
- The red LED extinguishes.



NOTE: If you exit the emergency mode while you receiving emergency alarm, The canceled emergency record populates the Recent list.

13.6

Emergency Remote Actions

The Authorized user or Console admin can initiate or cancel the Emergency Alarm remotely depending on the types of network system.

For Converged WAVE and WAVE only channels, the Authorized user with Broadband PTT application can initiate and cancel the emergency remotely, your radio shows a pop-up message indicating the Emergency Alarm is turned on or cancelled by the name of the Authorize user.

For WAVE only and Capacity Max channels, if your radio is currently receiving an emergency alarm and the Authorized user or Console admin cancels the emergency alarm, you can view the emergency cancelled logs in the Recent Calls.

For Capacity Max, the Console admin can cancel the emergency remotely, your radio shows a pop-up message indicating the Emergency Alarm is cancelled by console.

Chapter 14

Man Down (Fall Alert)

The Man Down feature (henceforth known as Fall Alert) enables your radio to alert others when you are in danger.

If your radio tilts at a specified angle, is moving, or is stationary for a time, it prompts you with an Alert Tone. If you do not respond to the prompt before the predefined reminder timer expires, your radio automatically sends an Emergency Alarm or Emergency Call.

To prevent your radio from sending an Emergency Alarm or Emergency Call, you can take the following measures:

- For Tilt Alarm, you must restore the radio to the vertical position.
- For Movement Alarm, you must stop your radio from moving.
- For Anti-Movement Alarm, you must move your radio.

If more than one Man Down Alarm is enabled, your radio plays the Alert Tone when it detects the first movement violation.



NOTE:

Man Down Alarms are not supported when operating in Fallback Mode.

This feature is supported in LMR only channels and Converged channels.

14.1

Turning the Man Down Feature On or Off

Turning the Man Down Feature On

Procedure:

- 1 From the Radio Control Widget, tap  **Radio Quick Settings**.
- 2 Toggle **Man Down** to on.

Turning the Man Down Feature Off

Procedure:

- 1 From the Radio Control Widget, tap  **Radio Quick Settings**.
- 2 Toggle **Man Down** to off.

14.2

Exiting Man Down

Procedure:

To exit Man Down, tap **Cancel**.

Chapter 15

Lone Worker

This feature prompts an emergency if there is no user activity (button press or channel selector activation) for a predefined time.



NOTE:

This feature is supported in LMR only channels and Converged channels.

When there is no user activity for a predefined time, the radio prewarns you using an audio indicator and on-screen notification on both front and top display once the inactivity timer expires. You can cancel the notification and the timer for lone worker resets. The wake-up and sleep button, and touch interface do not reset the timer.

If there is no acknowledgment from you before the predefined reminder timer expires, the radio initiates an emergency condition as programmed by the dealer.

Chapter 16

Privacy

This feature prevents eavesdropping by unauthorized users on a channel by the use of a software-based scrambling solution. The signaling and user identification portions of a transmission are clear.

Your radio must have privacy enabled on the channel to send a privacy-enabled transmission, although this is not a requirement for receiving a transmission. While on a privacy-enabled channel, the radio is still able to receive clear transmissions.

Some radio models may not offer Privacy feature, or may have different configuration. Contact your dealer for more information.


NOTE:

Only one type of privacy can be assigned at a time.

This feature is not applicable in Citizens Band channels that are in the same frequency.

The following table describes the type of privacy and the settings that appear on your radio.

Table 16: Privacy Types and Settings

Type	Setting
AES Privacy	AES Priv
Basic Privacy	Privacy
Enhanced Privacy	Enhanced Privacy

To unscramble privacy-enabled call or data transmission, your radio must be programmed to have the same type of Privacy Key as the transmitting radio. If your radio receives a scrambled call that is of a different Privacy Key, you hear a garbled transmission.

16.1

Turning Privacy On or Off

Procedure:

Perform one of the following actions:

- From the Radio Control Widget, tap  **Radio Quick Settings**→**Privacy**.
- From the Menu Feature Launcher Widget, tap  **More**→**Privacy**.
- Press the programmed **Privacy** button.

If privacy is turned on, your radio shows the following indications:

- The top display momentarily shows **PRIVACY ON**.
- The secure icon appears in the top display and Radio Control Widget.

If privacy is turned off, your radio shows the following indications:

- The top display momentarily shows **PRIVACY OFF**.
- The secure icon disappears from the top display and Radio Control Widget.

Chapter 17

Contacts Settings

The contacts are defined by the network settings. The Contacts Settings provides an address book function on your radio that supports LMR contacts, WAVE contacts, and Converged contacts. Each entry corresponds to an ID for making calls. The entries are alphabetically sorted and different for LMR and WAVE mode.

Each entry within Contacts contains the following information:

- Call Alias
- Call ID
- Call Type
- System ID

When your radio is in LMR mode, the contact list will show LMR and Converged contacts. When your radio is in WAVE mode, the contact list will show WAVE and Converged contacts.

In LMR mode, your radio supports Call, Call Alert, Remote Monitor, Message, Status, and Radio Check. See [Accessing Contact Settings on page 84](#).

In WAVE mode, the  **Floating Action Button (FAB)** is not supported. Your radio only supports

WAVE Private Call and WAVE Call Alert. You can launch the features by tapping and holding the  **Quick Action**. Each contacts displayed the current available status such as Available, Unavailable, or Do Not Disturb (DND).

The Converged contact number changes when you switch between the modes.

17.1

Contacts Overview

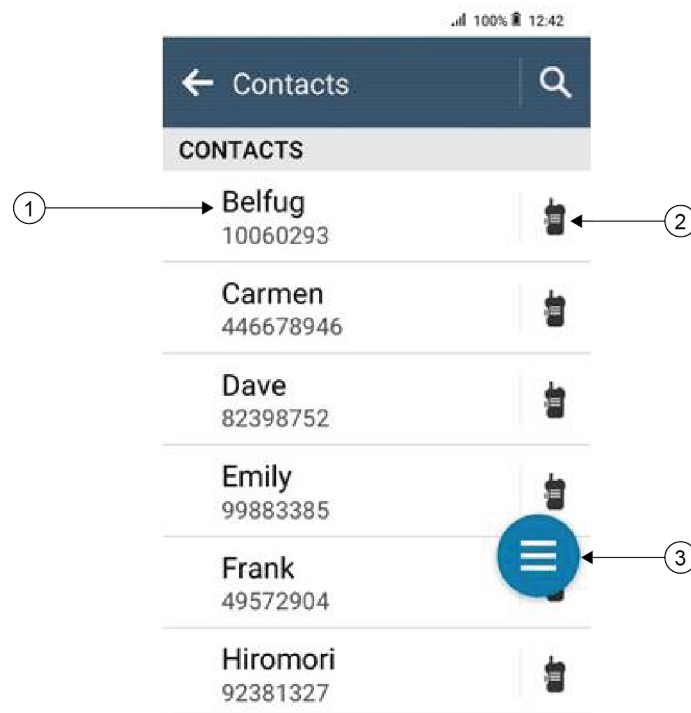


Table 17: Converged LMR or LMR only Overview

Label	Name	Description
1	Saved Contacts	You radio display the numbers and names of saved contacts.
2	Quick Action	Allows you to perform the assigned radio function.
3	Floating Action Button (FAB)	Allows you to access contact options.

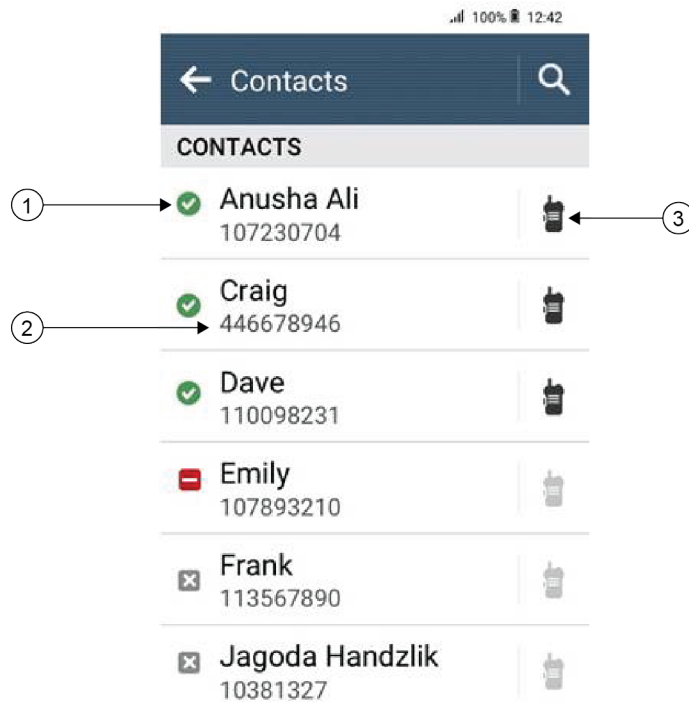


Table 18: Converged WAVE or WAVE only Overview

Label	Name	Description
1	Contact Status	You radio display the contact status such as available, unavailable, and do not disturb (DND).
2	Saved Contacts	Your radio displays the numbers and names of saved contacts.
3	Quick Acton	Allows you to perform the assigned radio function.

17.2

Accessing Contact Settings

Procedure:

- 1 From the menu, tap  **M-Contacts**.
- 2 Perform one of the following actions:

Option	Actions
Viewing My Information	Navigate to My Information section.

Option	Actions
Accessing dialer	Tap  Floating Action Button→Dialer
Searching contacts	a Tap  Search. b Enter the <i><required contact name></i>.
Creating new contacts	a Tap  Floating Action Button→New Contact. b Enter the <i><required contact name></i> and <i><required contact number></i>. c To change the tones, select the <i>< required ringtone></i> and <i><required message alert></i>. d Tap  Save.
Viewing contact details	a Tap <i><required contact></i>. b To view the secondary information, tap  down.
Editing contacts	a Tap <i><required contact></i>→  More→Edit Contact. b Make the required changes.  NOTE: In analog mode, you can only edit tones. c Tap  Save.
Deleting contacts	Tap <i><required contact></i>→  More→Delete Contact.

17.2.1

Quick Actions

You can assign the following radio functions as **Quick Action** through the contact setting.

Table 19: Assignable Radio Functions for Individual Contacts

Icon	Name	Description
	Call	Allows you to initiate Private Call to the required contact.

Icon	Name	Description
	Call Alert	Allows you to send call alert to the required contact.
	Message	Allows you to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu.
	Radio Check	Allows you to check if the radio is active in the system.
	Remote Monitor	Allows you to monitor remotely the required contact.
	Status	Allows you to send status to the required contact.

Table 20: Assignable Radio Functions for Group Contacts

Icon	Name	Description
	Call	Allows you to initiate Group Call to the required contact.
	Message	Allows you to access the Text Message feature in Digital mode and MDC Message feature in Analog mode through the radio menu.

17.2.1.1

Setting Quick Action

Procedure:

- 1 From the menu, tap  **M-Contacts**.
- 2 Navigate to the *<required contact>*.
- 3 Tap and hold the **Quick Action** icon.
 **Call** is the default **Quick Action**.
- 4 Perform one the follow actions:
 - Tap *<required radio function>*.
 - Tap  **More** → *<required radio function>*.

17.2.1.2

Using Quick Action

Procedure:

- 1 From the menu, tap  **M-Contacts**.
- 2 Navigate to *<required contact>*.

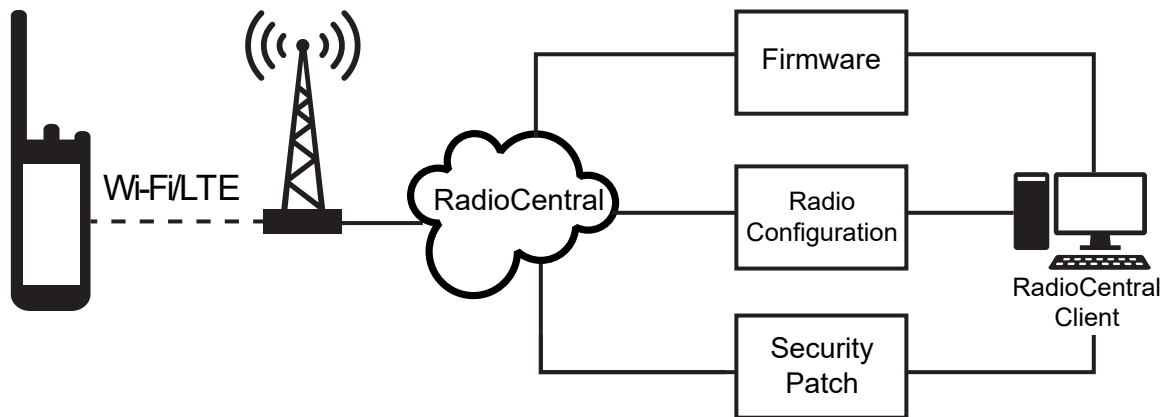
3 Tap the assigned Quick Action.

- If the **Quick Action** requires you to push the **PTT** button, your radio shows the following indications:
 - The **Quick Action** icon turns blue.
 - Quick Action notification appears.
- If the **Quick Action** does not requires you to push the **PTT** button, your radio launch the app for the assigned **Quick Action**.

Chapter 18

Seamless Over-The-Air-Programming

The Seamless Over-The-Air-Programming service enables radio programming and updates over Wi-Fi/LTE broadband connection while the radios are in use.



Seamless updates of firmware (full and differential), radio configuration, and security updates are scheduled by the radio system administrator. As a user, you are given a choice to install immediately or delay for later.

With Seamless Over-The-Air-Programming, you can apply a software feature to your radios on the go. After the new software features license is loaded into RadioCentral, a provisioning job can be scheduled to enable the feature through Wi-Fi/LTE. Your radio service provider can also schedule a software update for your radio.

When an update is available, your radio automatically downloads the update package. After the package is downloaded, you can choose to install immediately or later.

You or your service provider can reset your radio to factory settings by using this feature.

Chapter 19

Voice Operating Transmission

Voice Operating Transmission (VOX) allows you to initiate hands-free voice-activated calls on a programmed channel. When your VOX-capable accessory detects voice, your radio automatically transmits for a programmed period.

Google Assistant and Voice Control are mutually exclusive with VOX.



NOTE:

VOX is unable to initiate hands-free voice-activated calls if your radio is connected to any Bluetooth accessories.

This feature is not applicable in Citizen Band channels that are in the same frequency.

Contact your dealer or administrator for more information.

19.1

Setting Voice Operating Transmission

Procedure:

Perform one of the following actions:

- From the Radio Control Widget, tap  **Radio Quick Settings**→**VOX**.
- From the Menu Feature Launcher Widget, tap  **More**→**VOX**.

Chapter 20

Text Messaging

This feature allows you to quickly send and receive messages directly from your radios. The maximum length of a text message is 200 characters. Local date and time is time stamped on the messages.

20.1

Accessing Text Messages

Procedure:

Perform one of the following actions:

Option	Actions
Viewing text message	From the menu, tap  M-Messenger →<required conversation>.
Searching for text message	Tap  Search →<user input>.
Sending text message through M-Contacts	a From the menu, tap  M-Contacts→<required contact>→Message. b Compose the message, and tap  Send.
Sending text message through dialer	a From the menu, tap  M-Contacts→ Floating Action Button→Dialer. b Enter <required phone number>, and tap  More→Message→ Tap to Message. c Compose the message, and tap  Send.
Creating a new message	a From the menu, tap  M-Messenger→ Add or  Add. b Select <required contact>. c Compose the message, and tap  Send.

Option	Actions
Responding to text message with Quick Text	a From the menu, tap  M-Contacts→<required contact>→Message. b Press the programmed One Touch Message button.
Forwarding a message	a From the menu, tap  M-Messenger→<required conversation>. b Tap and hold the selected message, tap Forward→<required contact>→ Send.
Copying a message	a From the menu, tap  M-Messenger→<required conversation>. b Tap and hold the selected message, tap Copy. c Tap and hold the input field, tap Paste.
Deleting a single message	a From the menu, tap  M-Messenger→<required conversation>. b Tap and hold the selected message, and tap Delete→Delete.

20.2

Setting Message Alert Tone

Procedure:

- From the menu, tap  **M-Contacts**.
- Tap <required contact>→ **More**→**Edit Contact**→**Message Alert**.
- Select the preferred message alert:
 - Repetitive
 - Momentary
- Tap  **Save**.

Chapter 21

Security

This feature allows the administrator or other radio subscriber to put a radio into a non-functional state when the radio is missing or in an unknown hand. The radio stays in this state regardless of its power changes.

The radio can only be uninhibited by receiving an uninhibited command from the administrator or other radio subscriber.

21.1

Disabling Radio

Procedure:

- 1 Perform one of the following actions:

Option	Actions
Disabling radio through M-Contacts	a From the menu, tap  M-Contacts. b Tap <required contact> →  More → R. Disable.
Disabling radio with Authentication through M-Contacts	a From the menu, tap  M-Contacts. b Tap <required contact> →  More → R. Disable → <authorized pin> →  Save.  NOTE: Applicable to Conventional Digital only.
Disabling radio through programmable feature button	a Press the programmed Radio Enable/Disable button. b Tap <required contact> →  down → Disable.

21.2

Enabling Radio

Procedure:

- 1 Perform one of the following actions:

Option	Actions
Enabling radio through M-Contacts	a From the menu, tap  M-Contacts.

Option	Actions
	b Tap <i><required contact></i> →  More → R. Enable.
Enabling radio with Authentication through M-Contacts	a From the menu, tap  M-Contacts. b Tap <i><required contact></i> →  More → R. Enable → <i><authorized pin></i> →  Save.  NOTE: Applicable to Conventional Digital only.
Enabling radio through programmable feature button	a Press the programmed Radio Enable button. b Tap <i><required contact></i> →  down → Enable.

Chapter 22

Call Indicator Settings

This feature allows you to configure call or text message tones.

22.1

Assigning Ring Styles

Procedure:

- 1 From the home screen, tap  **More** →  **M-Contacts** → *<required contact>* →  **More** → **Edit Contact**.
- 2 Perform one of the following actions:
 - To assign ringtone, tap **Ringtone** → *<preferred tone>* → **OK** → **Save**.
 - To assign message alert, tap **Message Alert** → *<preferred alert>* → **OK** →  **Save**.

Chapter 23

Recent Calls

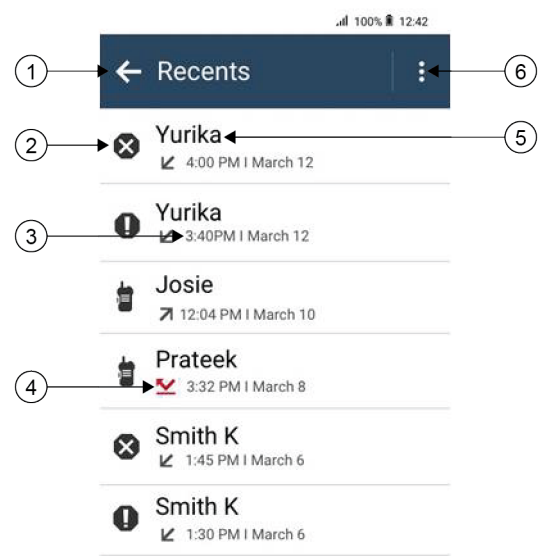
You can view missed, answered, outgoing private calls, call alerts, and emergency alerts in Recent Calls.

In the list of recent calls, it is arranged in an ascending order of time with the most recent first. The list can store up to 50 recent calls and the oldest ones are deleted automatically.

For recent calls that you have not visited, it will appear in a bold font. You can choose to initiate a call straight away from the recent calls screen.

The following shows the details from the Recent Calls screen:

Figure 3: Recent Calls Screen



No.	Description
1	Back to previous screen
2	Call Type
3	Timestamps
4	Call type activity status
5	Dialed Number
6	Delete options

23.1

LMR Contacts Icons

Table 21: Call Type Icons

Icon	Name
	Emergency Call
	Call
	Call Alert
	Emergency Cancel
	Status

Table 22: Activity Status Icons

Icon	Name
	Missed Call
	Received Call
	Transmitted Call

23.2

Accessing Recent Calls

Procedure:

- 1 From the home screen, tap  **More**→**Recent Calls**.
- 2 Perform one of the following actions:
 - To view recent calls, scroll through the list.
 - To delete a selected contact, tap  **More**→**Select to Delete**→<required contact>
→  **Delete**→**Delete**.
 - To delete all contacts, tap  **More**→**Delete All**→**Delete**.

- To add new contacts, tap *<required contact>* →  **More** → **Add to Contact** → *<contact information>* →  **Save**.
- To edit existing contact, tap *<required contact>* →  **More** → *<updated information>* →  **Save**.
- To call the contact, tap *<required contact>* → **PTT**.



NOTE: You can only add, edit, or delete WAVE contacts through WAVEOnCloud portal.

Chapter 24

Call Queue

When there are no resources available to process a call, Call Queue enables the call request to be placed in the system queue for the next available resources.

24.1

Receiving a Call Queue

Procedure:

Press and hold the **PTT** button.

A tone is heard and the top display shows `Call in Queue`.

If receiving a Call Setup is successful, your radio shows the following indications:

- A positive indicator tone sounds.
- The green LED blinks.
- The display shows the call type icon, ID or alias.
- You have up to 4 seconds to press and hold the **PTT** button to begin voice transmission.

If receiving a Call Queue is unsuccessful, your radio shows the following indications:

- A negative indicator tone sounds.
- The display shows the failure notice screen.
- Radio terminates the call and exit the call setup.

Chapter 25

Priority Call

Priority Call allows the system to preempt one of the ongoing non-priority calls and initiate the requested high priority call when all channels are busy.

With all channels occupied with high priority calls, the system does not preempt any calls, and places the requesting high-priority call into call queue. If the system fails to place the requesting high-priority call into call queue, it declares failure.

The default settings for Priority Call are preconfigured. When the following features are used, the call priority level reverts automatically to the preconfigured setting.

- All voice calls
- DMR III Text Message/Text Message

25.1

Switching Priority Call Level

Procedure:

Press the programmed **Toggle Call Priority Level** button.

If High Priority is enabled, your radio shows the following indications:

- The display shows `Next Call: High Priority`.
- The Call Priority High icon appears on the home screen.

If Normal Priority is enabled, your radio shows the following indications:

- The display shows `Next Call: Normal Priority`.
- The Call Priority High icon disappears on the home screen.

Chapter 26

Scan

Depending on the supported system available on your radio, your radio may have different behavior on Scan.

Channel Scan

Channel Scan is available for Other Systems.

When you start a scan, your radio scans through the programmed scan list for the current channel looking for voice activity. If you are on a digital channel, and your radio locks onto an analog channel, your radio automatically switches from digital mode to analog mode during the call and the same behavior occurs if you are on analog channel.

Table 23: Scan Methods

Method	Description
Main Channel Scan (Manual)	Your radio scans all the channels or groups in your scan list. When scanning, your radio may, depending on the settings, automatically start on the last scanned active channel or group, or on the channel where scan was initiated.
Auto Scan (Automatic)	Your radio automatically starts scanning when you select a channel or group that has Auto Scan enabled.

When you miss a call from a talkgroup or a channel that is in your scan list, you might be having the following situations:

- Scan feature is not turned on.
- Scan list member has been disabled through the menu.
- You are already participating in a call.
- For Multi-site system, no member of the scanned group is registered at your current site.



NOTE: If your radio joins a call for a Zone Scan List member from a different Zone and Call Hang Timer expires before you are able to respond, in order to respond, you must navigate to the Zone and Channel of the Scan List Member and start a new call.

26.1

Turning Scan On or Off

Procedure:

Perform one of the following actions:

- From the Radio Control Widget, tap  **Radio Quick Settings**→**Scan**.
- From the Menu Feature Launcher Widget, tap  **More**→**Scan**.
- Press the programmed **Scan** button.

26.2

Scan Talkback

The Talkback feature allows you to respond to a transmission while scanning.

Depending on how you configure the Scan Talkback feature, you will see two different scenarios if you press the PTT button when your radio scans into a call from the selectable group scan list.

Table 24: Scan Talkback Type

Type	Description
Scan Talkback Disabled	During an ongoing scanned call, if the PTT button is pressed, the scanned call is terminated and a new call is launched.
Scan Talkback Enabled	During an ongoing scanned call, if the PTT button is pressed, you can talkback to the scanned call.



NOTE:

If you face the following scenarios:

- 1 Scan into a call for a group that is not assigned to a channel position in the currently selected zone
- 2 Miss the Hang Time of the call.

Perform the following actions:

- 1 Switch to the proper zone.
- 2 Select the channel position of the group to talk back to that group.

26.3

Nuisance Channels

Nuisance Channel is a channel that generates unwanted call continually.

You can temporarily remove the unwanted channel from the scan list and restore it back later on. This capability does not apply to the channel designated as the Selected Channel.

26.3.1

Deleting Nuisance Channels

Prerequisites: Your radio is scanned into the Nuisance Channel.

Procedure:

- 1 Press the programmed **Nuisance Delete** button until you hear a tone.
- 2 Release the programmed **Nuisance Delete** button.

26.3.2

Restoring a Nuisance Channel

Procedure:

Perform one of the following actions:

- Restart your radio.

- Turn off and then turn on the scan.
- Change the channel.
- Change the zone.

26.4

Priority Monitor

Priority Monitor allows your radio to receive transmission from talkgroups with higher priority during talkgroup call. This feature is only applicable to members in Receive Group List.



NOTE: This feature can only be accessed when Talkgroup Scan feature is enabled.

Priority talkgroups are Priority 1 (**P1**) and Priority 2 (**P2**). Your radio receives transmission according to the following priority:

- 1 Emergency Call for P1 Talkgroup.
- 2 Emergency Call for P2 Talkgroup.
- 3 Emergency Call for non-priority Talkgroup in the Receive Group List.
- 4 All Call.
- 5 P1 Talkgroup Call.
- 6 P2 Talkgroup Call.
- 7 Non-priority Talkgroup in the Receive Group List.

26.5

Receive Group List

Receive Group List allows you to create and assign members on the talkgroup scan list. You can have a maximum of 16 members in a list.

For Capacity Max, when your radio is programmed to edit the scan list, you can perform the following actions:

- Add, remove, and edit priority for talkgroups.
- Add, remove, and edit affiliation talkgroups.

For Other Systems, when your radio is programmed to edit the scan list, you can perform the following actions:

- Add or remove talkgroups.
- Add, remove, and edit priority for talkgroups.
- Add, remove, and edit affiliation talkgroups.
- Replace the existing scan list with a new scan list.

If a talkgroup is programmed as Permanent Talkgroup, you are unable to edit the talkgroup from the scan list.

26.6

Scan Lists

You can create and assign individual channels or groups in Scan Lists. Your radio scans for voice activity by cycling through the channel or group sequence specified in the scan list for the current channel or group. Scan List also known as Receive Group List.

Your radio can support up to 250 scan lists, with a maximum of 16 members in a list. Each scan list supports a mixture of analog and digital entries.

The Priority icon on the left of member ID indicates whether the member is on Priority 1 or Priority 2 channel list. There is no icon if the priority is set to **None**.



NOTE: This feature is not applicable to Capacity Plus.

26.6.1

Accessing Scan List

Procedure:

1

From the Menu Feature Launcher Widget, tap **Scan List** or  **More**→**Scan List**.



NOTE: If the Scan List icon is grey out on the Menu Feature Launcher, you are unable to access the scan list.

2 Perform one of the following actions:

Option	Actions
Setting Active Scan List	a Perform one of the following actions: - When there is no active scan list, tap View/Edit Scan List→<preferred scan list>. - To change to a new active scan list, tap <current scan list>→Set Active Scan List→<preferred scan list>.
Viewing Scan List	Scroll through the list of members.
Adding priorities	a Select the required tab according to your systems. - For Capacity Max, you can select the scan list members from Scan List or Talkgroup tab. - For Other Systems, you can select the scan list members from Scan List or Channel tab. b Tap <required scan list member>→<required priority>.  NOTE: If Priority 1 is not set, Priority 2 is grey out.
Deleting Scan List member	Tap <required scan list member>→<Remove from Scan>.

Option	Actions
Searching Scan List	Tap  Search →<user input>.



NOTE: When the scan list is full, you are unable to add members into the list as it appears grey out. If the Scan List is empty, the Radio Control Widget shows *Empty Scan List*.

26.7

Flexible Receive List

The Flexible Receive List feature allows you to create and assign members on the receive talkgroup list.

Your radio can support a maximum of 16 members in the list.

26.7.1

Accessing Flexible Receive List

Procedure:

- 1 From the Menu Feature Launcher Widget, tap **Scan List** or  **More**→**Scan List**.
- 2 On the Talkgroup tab, select the required member and perform one of the following actions:

- To add member, tap  **Add**→**Add to List**
- To remove member, tap  **Scan List**→**Remove from List**

26.8

Multi-Talkgroup Affiliation

Your radio can be configured for up to seven talkgroups at a site.

Up to seven talkgroups can be assigned as affiliation talkgroups from the 16 talkgroups in the Receive Group List. The selected talkgroup and the priority talkgroups are automatically affiliated.

26.8.1

Adding Talkgroup Affiliation

Procedure:

From the Menu Feature Launcher Widget, tap **Scan List** or  **More**→**Talkgroup**→<required Talkgroup>→**Add to List**.

26.8.2

Removing Talkgroup Affiliation

Procedure:

From the Menu Feature Launcher Widget, tap **Scan List** or 
More→**Talkgroup**→<*required Talkgroup*>→**Remove from List**.

Chapter 27

Location

The Global Navigation Satellite System (GNSS) integrates information from the Global Positioning System (GPS), Global Navigation Satellite System (GLONASS), BeiDou Navigation Satellite System, and Galileo to determine the approximate geographical location of your radio.

27.1

Turning Location On or Off

Turning Location On

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Location**.
- From  **Settings**, tap **Location**→**Use Location**→**On**.

Turning Location Off

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Location**.
- From  **Settings**, tap **Location**→**Use Location**→**Off**.

27.2

Indoor Location

You can use Indoor Location to keep track of the location of radio users. When Indoor Location is activated, the radio is in a limited discoverable mode. Dedicated beacons are used to locate the radio and determine its position.

27.2.1

Turning Indoor Location On or Off

Prerequisites: Ensure to enable Indoor Location in RadioCentral.

Turning Indoor Location On

Prerequisites: Make sure that Bluetooth is turned on in your radio.

Procedure:

From  **Settings**, tap **Location**→**Beacon Indoor Location**→**On**.

A message of `Beacon Indoor Location enabled` appears in the notification panel.

Turning Indoor Location Off

Procedure:

Perform one of the following actions:

- Swipe down the notification panel, tap **Bluetooth** to turn off.
- Swipe down the notification panel, tap **Beacon Indoor Location enabled message**→**Beacon Indoor Location**→**Off**.
- From  **Settings**, tap **Location**→**Beacon Indoor Location**→**Off**.

Chapter 28

Conventional Squelch Operation

This feature filters out unwanted calls with low signal strength or channels that have a higher than normal background noise.

Analog Options

Tone Private Line, Digital Private-Line, and carrier squelch is available (preprogrammed) per channel.

Option	Result
Carrier squelch	You hear all traffic on a channel.
Tone Private Line or Digital Private-Line	The radio responds only to your messages.

Digital Options

One or more of the following options may be preprogrammed in your radio. Contact your dealer or administrator for more information.

Option	Result
Digital Carrier-Operated Squelch	You hear all digital traffic.
Normal Squelch	You hear any digital traffic having the correct network access code.
Selective Switch	You hear any digital traffic having the correct network access code and correct talkgroup.

Chapter 29

Using the PL Defeat Feature

This feature allows you to override any coded squelch that preprogrammed to a channel. The radio also unmutes to any digital activity on a digital channel. When this feature is active, the Carrier Squelch status indicator is displayed.

Procedure:

Place the preprogrammed **PL Defeat** switch in the PL Defeat position.

One of the following occurs:

- The radio plays the active transmission on the channel.
- If no activity is present, the radio is muted

Chapter 30

Monitor Feature

The feature allows you to remotely activate the microphone of a target radio. You can use this feature to monitor any audible activity surrounding the target radio.

30.1

Monitoring Channel

Procedure:

- 1 Press and hold the programmed **Monitor** button.
Your radio shows the following indications:
 - You hear the radio activity.
 - The yellow LED illuminates.
 - The display shows the **Monitor** icon.
- 2 To call, press and hold the **PTT** button.
- 3 To listen, release the **PTT** button.

30.2

Permanent Monitor

The Permanent Monitor feature is used to continuously monitor a selected channel for activity.

30.2.1

Setting Permanent Monitor

Procedure:

Press and hold the programmed **Permanent Monitor** button.

When your radio enters the mode, your radio shows the following indications:

- An alert tone sounds.
- The display shows `PERM MON ON` and the Monitor icon.

When your radio exits the mode, your radio shows the following indications:

- An alert tone sounds.
- The display shows `PERM MON OFF`.

Chapter 31

Trunking System Control

This feature allows your radio to communicate the trunking status when on a trunking channel. Your radio can communicate different types of trunking statuses.

Table 25: Types of Trunking System Status

Types	Description
Out of Range	- When your radio goes out of the range, it can no longer lock onto a control channel. - You hear a low-pitched tone, and or the display shows the currently selected zone or channel combination, and Out of range notification. Your radio remains in this out-of-range condition until it locks onto a control channel, or if it is turned off.
Site Trunking ⁵	If the Trunk Controller loses communication with any site, that site reverts to site trunking. When this occurs, you can communicate only with the radios within your trunking site.
Affiliation Failed	- Affiliation failed is when the radio is successfully locked and registered to a site, but fails to affiliate to Unified Knob Position (UKP). - Your radio displays failed message, the site alias, and the UKP alias.
Registration Denied	- Registration denied is when your radio registration is denied on a site. - Your radio displays failed message and the UKP alias.

31.1

Viewing RSSI Value

Procedure:

Press the **2-Dot Programmable Feature** button five times.

The top display shows the RSSI value.

⁵ Only applicable to Capacity Max System.

Chapter 32

Dynamic Group Number Assignment

Dynamic Group Number Assignment (DGNA) is a feature that allows the third-party console to assign and remove talkgroup dynamically to a radio from over the air.

When the console assigns DGNA to your radio, your current channel is in DGNA mode and shows the followings:

- A tone sounds.
- The top display momentarily shows `DGNA ASSGND`.
- The display momentarily shows `<DGNA Talkgroup Alias> is assigned`.
- The DGNA icon appears in the top display and Radio Control Widget.
- The top display and Radio Control Widget show DGNA talkgroup alias.

When the console removes DGNA from your radio, your radio restores the previous talkgroup and shows the followings:

- A tone sounds.
- The top display momentarily shows `DGNA REMOVED`.
- The display momentarily shows `<DGNA Talkgroup Alias> is removed`.
- The DGNA icon disappears from the top display and Radio Control Widget.
- The top display and radio control widget show the previous talkgroup alias.

Depending on how your radio is programmed, you can view, edit, and listen to the original scan lists channels and the non-DGNA talkgroups.

When your radio is in DGNA mode, press and hold the **PTT** button allows you to communicate only with the current DGNA talkgroup. To communicate with the previous non-DGNA talkgroup, program the programmed **One Touch Access** button.



NOTE: Check with your dealer or system administrator to determine how your radio has been programmed.

32.1

Making DGNA Calls

Prerequisites: Your current channel is in DGNA mode.

Procedure:

To call, press and hold the **PTT** button.

Your radio shows the following indications:

- A DGNA tone sounds.
- The DGNA icon appears in the top display and Radio Control Widget.
- The top display and Radio Control Widget show DGNA talkgroup alias.

32.2

Making Non-DGNA Calls

Procedure:

Perform one of the following actions:

- If your radio is in DGNA mode, press the programmed **One Touch Access** button.
- If your radio is not in DGNA mode, press and hold the **PTT** button.

Your radio shows the following indications:

- A positive tone sounds.
- Voice Announcement sounds.
- The top display and Radio Control Widget shows <Talkgroup Alias> and Press PTT momentarily.



NOTE:

If your radio is not in DGNA mode and you press the **One Touch Access** button, your radio sounds a negative tone, indicating error. The display remains unchanged.

When a PTT button is press before a negative tone sounds, your radio returns to the home screen. When your radio is in the home screen, a PTT press makes a call to the DGNA talkgroup.

32.3

Receiving and Responding to DGNA Calls

When you receive a DGNA call, your radio shows the following indications:

- A DGNA tone sounds.
- The DGNA icon appears in the top display and Radio Control Widget.
- Your radio unmutes and the incoming call sounds through the speaker.

Procedure:

- 1 To call, press and hold the **PTT** button.
- 2 To listen, release the **PTT** button.

Chapter 33

Auto Roaming

Depending on your radio system, this feature allows your radio to roam to a required site.
A multi-site channel has auto roaming capability when it is attached with a site search list.
Your radio can roam to different sites through site search.

Table 26: Types of Site Search

Types	Description
Passive Site Search (PassiveSS)	When Site Lock is turned off, PassiveSS scans available sites and selects the strongest signal as current home.
Active Site Search (ActiveSS)	ActiveSS sends wakeup requests to the repeater.

33.1

Turning Site Lock On or Off

Turning Site Lock On

Procedure:

- 1 From the Menu Feature Launcher Widget, tap  **More** →  **Roam**.
- 2 Toggle **Site Lock** to on.

Your radio locks the current site and stops auto roaming. The Roam icon disappears.

Turning Site Lock Off

Procedure:

- 1 From the Menu Feature Launcher Widget, tap  **More** →  **Roam**.
- 2 Toggle **Site Lock** to on.

Your radio enables auto roaming. The Roam icon appears.

33.2

Accessing Active Site Search

Procedure:

- From the Menu Feature Launcher Widget, tap  **More** →  **Roam** → **Active Search**.
Your radio searches for a site.

- If a site is found, your radio displays a message with the site alias and updates the site alias onto Radio Control Widget.
- If a site is not found, your radio displays a temporary error message.

33.3

Accessing Current Site Information

When and where to use: This feature is only available for Capacity Plus and Capacity Max systems.

Procedure:

From the Menu Feature Launcher Widget, tap  **More** →  **Roam** → **Current Site Lock**.

33.4

Accessing Neighboring Site Information

When and where to use: This feature is only available for Capacity Max system.

Procedure:

From the Menu Feature Launcher Widget, tap  **More** →  **Roam** → **Neighboring Site Info**.

Chapter 34

Radio Check

If enabled, this feature allows you to determine if another radio is active in a system without disturbing the user of that radio. No audible or visual notification is shown on the target radio.

This feature is only applicable for subscriber IDs.

34.1

Sending Radio Check

Procedure:

- 1 From the menu, tap  **M-Contacts**.
- 2 Perform one of the following actions:

Option	Actions
Sending radio check through saved contacts	a Navigate to the <i><required contact></i>. b Tap and hold the Quick Action icon. c Tap  More →  R. Check.
Sending radio check through dialer	a Tap  Floating Action Button → Dialer. b Enter the <i><required contact number></i>. c Tap  More → Radio Check.

Chapter 35

Transmit Interrupt (Supervisory Override)

Transmit Interrupt features allows your radio to interrupt an in progress clear or a privacy voice transmission.

For LMR and Converge Capacity Max, you are able to transmit and receive interrupts. For Converged WAVE and WAVE only channel, transmit interrupt is known as Supervisory Override and you are only able to receive interrupts.

Only talkgroup members with supervisor role are able to interrupt on going calls.

35.1

Initiating Transmit Interrupt

Procedure:

To interrupt an ongoing call, perform one of the following actions:

- Press the **PTT** button.
- Press the **Emergency** button.
- For non Capacity Max, perform data transmission.
- For non Capacity Max, press the programmed **TX Interrupt Remote Dekey** button.

For Converged WAVE and WAVE only channel, the receiving radio display shows the following indication:

-  Supervisory override icon
- Call alias

If there is no call alias information, your radio display shows `Listening....`

Chapter 36

Auto-Range Transponder System

The Auto-Range Transponder System (ARTS) is an analog-only feature designed to inform you when your radio is out-of-range of other ARTS-equipped radios.

ARTS-equipped radios transmit or receive signals periodically to confirm that they are within range of each other.

Your radio provides indications as follows:

Table 27: Auto-Range Transponder System Indications

Indication	Description
First-Time Alert	• A tone sounds.
ARTS-in-Range Alert	• A tone sounds, if programmed.
ARTS-Out-of-Range Alert	• A tone sounds. • The Red LED rapidly blinks. • The front display shows <code>ARTS Out of Range</code>. • The top displays show <code>ARTS OUT RNGE</code>.

Chapter 37

Applications

This section contains information on applications available on your radio. You can access these applications through the Home Screen or swiping up from the bottom of the Home Screen to open Applications Menu window.



NOTE: Do not use PMKN4230_ and PMKN4265_ for data transfer or programming in a hazardous environment.

Table 28: Applications

Icon	Name	Description
	Calculator	Allows you to perform basic and scientific arithmetic functions.
	Calendar	Allows you to manage events and appointments.
	Camera	Allows you to take photos and videos.
	Google Chrome	Fast, easy, and secure browsing with Google Chrome.
	Clock	Allows you to set an alarm, stopwatch, or timer.
	Contacts	Allows you to manage contact information.
	Google Drive	All files within reach from any smartphone, tablet, or computer. Anytime.
	Google Duo	Be together in the moment. Never miss a moment.
	Files	Allows you to view and manage files.
	Gallery	Allows you to view photos or videos.
	Gmail	Email by Google: secure, smart, and easy to use.
	Google	Stay in the know with the Google app.
	Keep Notes	Allows you to create, store, and categorize notes, lists, reminders, images, audio, and many more.
	Google Maps	Explore and navigate your world with Google Maps. Find places you'll love, connect with businesses you're interested in, and get around with real-time traffic information.
	Messages	Allows you to send and receive messages.
	Google Photos	The home for all your memories.

Icon	Name	Description
	Google Play Movies and TV	The newest releases plus all your favourites, on any screen.
	Google Play	Google Play is your entertainment unbound.
	Settings	Provides settings to configure the device.
	Sound Recorder	Allows you to record sounds.
	WAVE	Provides secure Push-to-Talk (PTT) service on the go.
	YouTube	See what the world is watching on YouTube.
	YouTube Music	Discover all the music on YouTube that you cannot find anywhere else, organized in one new app and web.

37.1

Camera

You can use the Camera application to take photos or record videos.

37.1.1

Taking Photos

Procedure:

- 1 From the menu, tap  **Camera**.
- 2 Perform one of the following actions:
 - To take photo using rear camera, tap  **Camera**.
 - To take photo using front camera, tap  **Switch Camera** →  **Camera**.
- 3 To zoom in or out, press two fingers on the display and pinch or expand fingers.
The zoom controls appear on the screen.

37.1.2

Recording Videos



NOTE: You are unable to transmit LTE call during video recording.

Procedure:

- 1 From the menu, tap  **Camera** →  **Video**.
Your video has start recording.
- 2 To pause the video, tap  **Pause**.
- 3 Tap stop the recording, tap  **Stop Record**.
- 4 To zoom in or out, press two fingers on the display and pinch or expand fingers.

The zoom controls appear on the screen.

37.2

Gallery

You can manage your albums, photos, or videos using the Gallery application.



NOTE: The device supports the following image formats: JPEG, GIF, PNG, HEIC and BMP.

You can use Photos to perform the following actions:

- View albums, photos, and videos
- Play videos
- Perform basic editing on albums, photos, and videos
- Set photos as a wallpaper
- Set photos as a contact photo
- Share photos and videos

The Gallery application contains all albums, photos, and videos stored on the microSD card and in the internal memory.

37.2.1

Viewing Gallery

Procedure:

- 1 From the menu, tap  **Gallery**.
- 2 Perform one of the following actions:
 - Tap an album of your choice.
 - Tap a photo.
 - To view the next or previous photo in the album, swipe left or right.
 - To view controls, tap a photo.
 - To zoom in or zoom out, double tap or press two fingers on the display and pinch or expand fingers on a photo.
 - To view parts that are not in view, drag the photo.

37.2.2

Sharing Items from Photos

Procedure:

- 1 From the menu, tap  **Gallery**.
- 2 To share items, tap *<required item>*  **Share** *→ <required application>*.

37.2.3

Deleting Items from Gallery

Procedure:

- 1 From the menu, tap  **Gallery**.
- 2 To delete items, tap *<required item>* →  **Delete** → **OK**.

37.2.4

Cropping Photos

Procedure:

- 1 From the menu, tap  **Gallery**.
- 2 To crop photos, tap *<required photo>* →  **Edit** →  **Crop**.
The cropping grid appears.
- 3 Perform one of the following actions:

Option	Actions
Cropping the photo manually	a To select the portion of the photo to crop, adjust the endpoints.
Choosing automatic cropping dimensions	a Tap 1:1 . b If you want to view the original photo, tap Original .

- 4 To confirm, tap  **Yes**.
- 5 To save, tap **SAVE**.

37.2.5

Rotating Photos

Procedure:

- 1 From the menu, tap  **Gallery**.
- 2 To rotate photos, tap *<required photo>* →  **Edit** →  **Crop** →  **Rotate**.
The photo rotates to 90° clockwise. Each tap rotates the photo to another 90°.
- 3 Tap **SAVE** to confirm.

37.2.6

Watching Videos

Procedure:

- 1 From the menu, tap  **Gallery**.

- 2 To watch videos, tap **Videos**→<required video>→  **Play**→<required application>.
- 3 To see the video playback or continue where you left off last time, drag the video progress bar.
- 4 To return to the previous screen, tap  **Back**.

37.3

Adding Contacts on Android



NOTE: Cellular call is not supported in your radio. You can only use your contact for data usage such as messaging, email or any other applications.

Procedure:

- 1 Tap  **Contacts**→  **Add**.
- 2 Fill in the related information and tap **Save**.

37.4

Scanning Barcode or QR Code

You can perform Barcode and QR Code scanning on your respective application that stores the decoded barcode (barcode database application) with Scandit™ Keyboard Wedge application.

Prerequisites: Perform the following on first time activation:

- 1 Request for Activation QR Code from dealer or Scandit.
- 2 Inform dealer to assigned **Keyboard Wedge - Barcode Scan** to one of the programmable button.
- 3 Download Scandit Keyboard Wedge from Google Play.
- 4 Activate the app with Activation QR Code.
- 5 Select Scandit Keyboard Wedge as your keyboard.

Procedure:

- 1 Launch your barcode database application.
- 2 To change your current keyboard, tap  **Keyboard**→**Scandit Keyboard Wedge**.
- 3 Press the programmed **Keyboard Wedge - Barcode Scan** button.
- 4 Aim your camera to the barcode or QR code.



NOTE: Make sure the barcode or QR code is captured in the rectangular box.

The barcode or QR code is captured and decoded. The decoded output is shown in the text field.

37.5

Turning On the Flash Light

Procedure:

Swipe down the notification panel, tap  **Flashlight** .

37.6

Exploring Files

Procedure:

- 1 From the menu, tap  **Files**.
- 2 To choose the types of files, tap  **Menu**.
- 3 Select one of the following options:
 - Recent
 - Images
 - Videos
 - Audio
 - Downloads
- 4 Perform one of the following actions:

Option	Actions
Viewing the file	Tap on the <i><required item></i> .
Sharing the file	a Tap and hold the <i><required item></i> . b To share the downloaded item, tap  Share → Share via → <i><required application></i> .
Searching for a file	a Tap  Search . b Type in your <i><required input></i> .
Deleting a file	a Tap and hold the <i><required item></i> . b To delete, tap  Delete → OK
Searching with Google Lens	a Tap on the <i><required item></i> →  Google Lens .
For more options	Tap  More .

Chapter 38

Broadband PTT Application

The application provides instant communications at the push of a button.

When you are in Broadband PTT mode, the LMR operation is disabled. The **Emergency** button, **PTT** button, **Volume** knob, and **Channel Selector** knob are now functioning according to the Broadband PTT configuration.

All the features described in the sections are supported by the following requirements:

- Application version 10.0.1.51, 11.2.0.13, or above
- Latest software version as stated in [Software Version on page 17](#).

For more information, see <https://waveoncloud.com/Home/Help>.

38.1

Checking Broadband PTT Application Version

Procedure:

From the Broadband PTT application, navigate to  **Menu**→**About**.

38.2

Turning Broadband PTT Mode On or Off

Prerequisites: Download the Broadband PTT application from Google Play Store.

Procedure:

From the Radio Control Widget, tap  **Radio Quick Settings**→**Broadband PTT**.

If Broadband PTT mode is turned on, your radio shows the following indications:

- The display shows **Broadband PTT banner**.
- A pop-up message appears **LMR Mode Disabled. Please sign into the Broadband PTT app**.



NOTE: If you try to launch LMR features while Broadband PTT mode is on, your radio displays **Features not allowed**.

If Broadband PTT mode is turned off, your radio shows the following indications: receives following reminders:

- The **Broadband PTT banner** disappears.
- A pop-up message appears **LMR Mode Enabled. Please sign out of the Broadband PTT app**.



NOTE: If you do not want to receive the reminder when turning Broadband PTT mode on or off, select **DON'T REMIND**. You will receive the reminder again if you power cycle your radio.

After cycle power your radio, you are required to enter Broadband PTT mode manually.

38.3

Logging in Broadband PTT Application

Procedure:

- 1 Tap on the  **WAVE** icon.
- 2 Tap **Yes** to Login.



NOTE: If activation code is requested during first time login, contact your dealer or administrator for more information.

38.4

Logging Out from Broadband PTT Application

Procedure:

From the Broadband PTT application, navigate to  **Menu**→**Settings**→**Logout**→**Yes**.

38.5

Broadband PTT Application Overview

Figure 4: Broadband PTT Application Overview

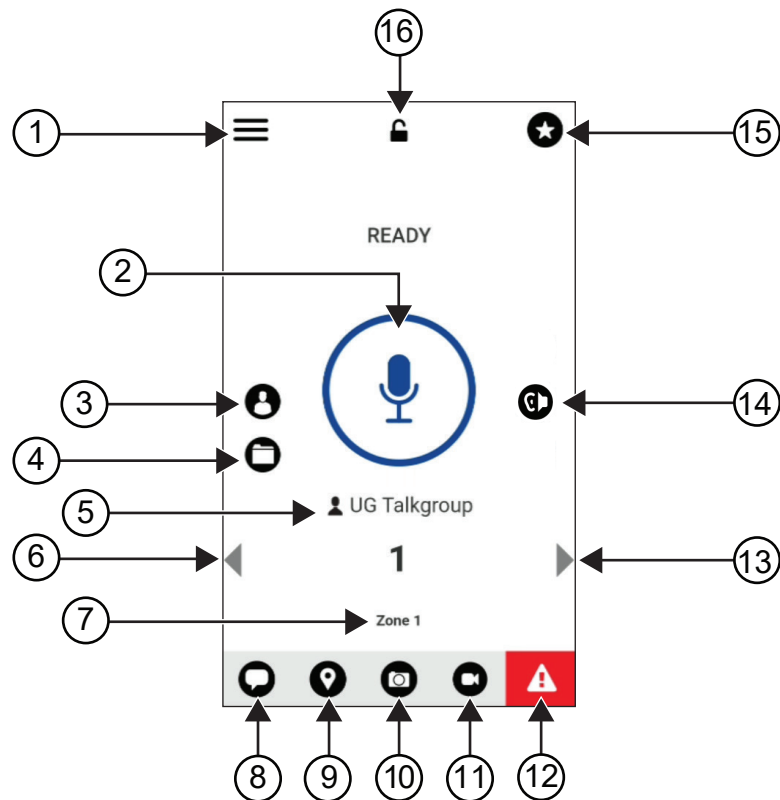


Table 29: Broadband PTT Application Overview

Label	Name	Description
1	Menu	The Menu Options include the following: • Status • History • Contacts • Map • Favorites • Channels/Zones • Talkgroup Scan • Tones • Use Wi-Fi • Ambient Listening (if configured) • Settings • Tutorial • About
2	PTT	Allows you to make calls.
3	Contacts	Displays your PTT contacts and allows you to search for contacts, start a PTT call, or send an alert.
4	Channels and Zones	Display available channels and zones, allows you to select the required channel and zone.
5	Talkgroup Name	Display the current talkgroup name.
6	Left Arrow	Navigates to the previous talkgroup.
7	Zone	Display the current zone.
8	Message	View the current talkgroup conversation.
9	Location	View your current location.
10	Camera	Allows you to choose from taking photo or select a file in gallery.
11	Video	Allows you to stream videos.  NOTE: This feature is only available if the feature is enabled in the WAVE portal. Contact your dealer or administrator for more information.
12	Emergency	Allows you to initiate an emergency.
13	Right Arrow	Navigates to the next talkgroup.

Label	Name	Description
14	Speaker On	Allows you to toggle audio route from Bluetooth accessory to radio microphone, speaker, or wired accessory and vice versa.  NOTE: This feature is only available when Bluetooth accessory is connected to your radio. Use programmable button Audio switch to toggle audio route if there is no Bluetooth accessory connected to your radio.
15	Favorites	• Displays your favorite PTT contacts and talkgroups. • You can quickly start a PTT call to your favorites.
16	App Lock	When the Broadband PTT app is lock, you cannot use the app until you tap the App Lock to unlock.

38.6

Making Talkgroup Calls

Prerequisites: Perform the following actions on the Broadband PTT application settings:

- To enable call when the screen is locked, toggle **Call from Lock Screen** to on.
- To enable call when the application is running in background, toggle **Background Mode** to on.

Procedure:

- 1 To select a channel with an active ID or alias, perform one of the following actions:
 - Toggle the **Channel Selector** knob.
 - Select the **Left** or **Right** arrow on the application.

The display shows *Changing talkgroups* banner.

- 2 To call, press and hold the **PTT** or On-Screen **PTT** button.
- 3 Wait for the Talk Permit Tone to end, and speak into the microphone.
- 4 To listen, release the **PTT** button.

38.7

Emergency Operation

You can declare an emergency to contact or talkgroup through emergency calling and alert.



NOTE: If your radio does not support Emergency operation, your radio display a notification on the non-activated Emergency feature.

38.7.1

Declaring Emergency

Prerequisites:

- 1 In RadioCentral, set the *<required programmable button>* as Emergency.
- 2 In the Broadband PTT configuration, perform the following actions:
 - Allow the emergency initiation.
 - Configure the emergency destination.

- Enable special notification with option, **For both**, if user prefers to receive audio/video notifications based on emergency transmit and receive events.

Procedure:

- 1 Press the **Emergency** button.

The display shows `Emergency Alert` pop-up message with 3 seconds countdown.



NOTE: If the **Emergency** button is pressed during the 3 seconds countdown, the countdown will reset to 3 seconds.

When Emergency is declared successfully, your radio shows the following indications:

- The Emergency tone sounds.
- The display shows `Emergency Declared` banner.

- 2 To call, press and hold the **PTT** button.
- 3 To listen, release the **PTT** button.

38.7.2

Canceling Emergency

Procedure:

- 1 Press the **Emergency** button.

The display shows `Cancel Emergency`.

- 2 Perform one of the following actions:
 - Select **Real Emergency**→**Send**
 - Select **False Alarm**→**Send**

When Emergency is canceled successfully, your radio shows the following indications:

- The Emergency tone dissolves.
- The display shows `Emergency Canceled` banner.

Chapter 39

Authorized Accessories List

Motorola Solutions provides approved accessories to improve the productivity of your radio.

For more information about the accessories, UL accessories, and batteries supported for your radio, see <https://learning.motorolasolutions.com/ion> with the following Manual Part Numbers:

- MN006920A01, *MOTOTRBO™ Ion Smart Radio Accessories Leaflet*
- MN006806A01, *MOTOTRBO Ion UL Manual*

Déclarations juridiques et de conformité

Déclaration de conformité du fournisseur

Déclaration de conformité du fournisseur

Règlement CFR 47, partie 2, section 2.1077(a) de la FCC



Partie responsable

Nom : Motorola Solutions, Inc.

Adresse : 2000 Progress Pkwy, Schaumburg, IL. 60196

Numéro de téléphone : 1 800 927-2744

Déclare par les présentes que le produit :

Nom du modèle : **MSLB-MKZ900, MSLB-MKZ920**

est conforme aux réglementations suivantes :

Partie 15, sous-partie B, section 15.107(a), 15.107(d) et section 15.109(a) des règlements de la FCC

Appareil numérique de classe B

En tant que périphérique d'ordinateur personnel, cet appareil est conforme aux dispositions de la partie 15 des règlements de la FCC. Son utilisation est assujettie aux deux conditions suivantes :

- 1 Cet appareil ne doit pas causer d'interférence nuisible; et
- 2 Cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant entraîner un fonctionnement indésirable.



REMARQUE :

Cet équipement a fait l'objet de tests et a été déclaré conforme aux limites établies pour un appareil numérique de classe B, conformément à la section 15 des règlements de la FCC. Ces limites sont fixées afin d'offrir une protection suffisante contre des interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l'énergie de radiofréquence et, s'il n'est pas installé ou utilisé conformément aux instructions, il peut provoquer un brouillage nuisible aux communications radio. Cependant, il est impossible de garantir qu'il n'y aura aucune interférence dans une installation particulière.

Si cet appareil cause une interférence nuisible à la réception de la radio ou de la télévision, ce qui peut être déterminé en éteignant et en allumant l'appareil, vous êtes encouragé à remédier à la situation en prenant une ou plusieurs des mesures suivantes :

- Réorienter ou déplacer l'antenne réceptrice.
- Augmenter la distance entre l'équipement et le récepteur.
- Brancher l'appareil dans une autre prise sur un circuit différent de celui du récepteur.
- Consulter le distributeur ou un technicien de radio ou de télévision chevronné pour obtenir de l'aide.

Pour un usage en fonction de la sélection du code de pays (appareils WLAN)



REMARQUE :

La sélection du code de pays est pour les modèles non É.-U. seulement et n'est pas disponible sur tous les modèles américains. Conformément à la réglementation de la FCC, tous les produits Wi-Fi commercialisés aux États-Unis doivent être fixés sur des canaux fonctionnant aux États-Unis uniquement.

Déclaration relative au WLAN (Industrie Canada)



MISE EN GARDE :

- 1 L'appareil fonctionnant dans la bande 5 150 à 5 250 MHz est uniquement destiné à une utilisation à l'intérieur afin de limiter les risques d'interférences avec les systèmes mobiles satellites dans un canal commun.
- 2 Pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5 250 à 5 350 MHz et de 5 470 à 5 725 MHz doit être conforme à la limite de puissance isotrope rayonnée équivalente (p.i.r.e).
- 3 Pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant la bande de 5 752 à 5 850 MHz doit être conforme à la limite de p.i.r.e spécifiée pour l'exploitation point à point et l'exploitation non point à point, selon le cas.
- 4 Les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de p.i.r.e applicable au masque d'élévation, et énoncée à la section 6.2.2 (3), doivent être clairement indiqués.
- 5 Les utilisateurs devraient aussi être avisés, d'une part, que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) des bandes de 5 250 à 5 350 MHz et de 5 650 à 5 850 MHz et, d'autre part, que ces radars pourraient causer du brouillage ou des dommages aux dispositifs de RL-EL.

Consignes de sécurité importantes

Radios bidirectionnelles portatives : exposition aux radiofréquences et sécurité du produit



MISE EN GARDE :

Cette radio doit être utilisée à des fins professionnelles uniquement. Avant d'utiliser la radio, lisez le guide Exposition aux radiofréquences et sécurité du produit inclus avec la radio. Ce guide contient d'importantes instructions de fonctionnement pour une utilisation sécuritaire et des informations sur l'exposition aux radiofréquences, dans le but d'assurer votre conformité aux normes et règlements en vigueur.

Toute modification apportée à cet appareil sans l'autorisation explicite de Motorola Solutions peut annuler l'autorisation d'utiliser l'appareil.

Selon la réglementation d'Industrie Canada, cet émetteur radio ne peut être utilisé qu'avec une antenne dont le type et le gain maximal (ou minimal) sont approuvés par Industrie Canada pour cet émetteur. Afin de limiter les interférences radio pour les autres utilisateurs, le type et le gain de l'antenne doivent être choisis de façon à ce que la puissance isotrope rayonnée équivalente (p.i.r.e) ne soit pas plus forte qu'il ne le faut pour établir la communication.

Avis aux utilisateurs (FCC)

Cet appareil est conforme à la partie 15 des règlements de la FCC d'après les conditions suivantes :

- Cet appareil ne doit pas causer d'interférence nuisible.
- Cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant entraîner un fonctionnement indésirable.
- Toute modification apportée à cet appareil sans l'autorisation explicite de Motorola Solutions peut annuler l'autorisation d'utiliser cet appareil.

Avis aux utilisateurs (Industrie Canada)

Le fonctionnement de votre radio Motorola Solutions est assujéti à la Loi sur la radiocommunication et doit se conformer aux règles et règlements du ministère Innovation, Sciences et Développement économique Canada du gouvernement fédéral. Industrie Canada exige que les utilisateurs de fréquences mobiles terrestres privées obtiennent une licence avant d'utiliser leur équipement.

Renseignements sur la conformité réglementaire



Japon

Cet appareil est conforme aux exigences de la norme LTE privé sXGP dans un canal de bande passante de 5 MHz et seulement lorsque la station principale effectue le sens de l'onde porteuse de la radio.

Canada

Cet appareil ne prend pas en charge la fonction LTE B48.