



WAVE™ TWO-WAY RADIO

TLK 100

USER GUIDE

EN-US

FEBRUARY 2020

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MN005173A01-AC

Declaration of Conformity

Declaration of Conformity

Per FCC CFR 47 Part 2 Section 2.1077(a)



Responsible Party

Name: Motorola Solutions, Inc.

Address: 1303 East Algonquin Road, Schaumburg, IL 60196-1078, U.S.A.

Phone Number: 1-800-927-2744

Hereby declares that the product:

Model Name: **TLK 100**

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.

**NOTICE:**

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)

**NOTICE:**

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.

Wireless Device Country Approvals Regulatory markings, subject to certification, are applied to the device signifying that the radio(s) is/are approved for use in the US. Operation of the device without regulatory approval is illegal.

Contents

Declaration of Conformity.....	2	Battery Capacity.....	22
Important Safety Information.....	7	LED Indicators.....	22
Notice to Users.....	8	Chapter 4: Fast Scroll Talkgroup List.....	24
Radio Care.....	9	Chapter 5: Contact List.....	25
Software Version.....	10	Accessing Contact List.....	25
Copyrights and Trademarks.....	11	Chapter 6: Radio Calls	26
Disclaimer.....	12	Group Calls.....	26
Read Me First.....	13	Making Group Calls.....	26
Chapter 1: Radio Controls.....	14	Responding to Group Calls.....	26
Programmable Buttons.....	15	Private Calls.....	27
Assignable Radio Functions.....	15	Making Private Calls.....	27
Chapter 2: Getting Started.....	17	Responding to Private Calls.....	27
Attaching the Battery.....	17	Broadcast Calls.....	28
Charging the Battery.....	17	Making Broadcast Calls.....	28
Attaching and Removing the Antenna.....	18	Receiving Broadcast Calls.....	29
Turning the Radio On or Off.....	18	Chapter 7: Supervisory Override.....	30
Adjusting the Volume.....	19	Chapter 8: Checking Radio Information.....	31
Chapter 3: Status Indicators.....	20	Chapter 9: Checking Battery Strength.....	32
Icons.....	20	Chapter 10: Cellular and Wi-Fi Values.....	33
		Checking Cellular or Wi-Fi Signal Strength.....	33
		Chapter 11: Menu.....	34

Do Not Disturb.....	35	Chapter 13: Emergency Operations.....	44
Turning DND On or Off.....	35	Declaring Emergency.....	44
Turning Voice Announcement On or Off.....	35	Cancelling Emergency.....	44
Turning Radio Alert Tones On or Off.....	36	Receiving Emergency Alerts.....	45
Adjusting the Display Brightness.....	37	Responding to Emergency Alerts.....	45
Turning Location On or Off.....	37	Receiving Emergency Calls.....	45
Turning Wi-Fi On or Off.....	38	Clearing Emergency Alert List.....	46
Turning Radio Cellular On or Off.....	38	Chapter 14: Area Talkgroup.....	47
Bluetooth.....	39	Chapter 15: Radio Stun.....	48
Turning Bluetooth On or Off.....	39	Chapter 16: User Disabled or Suspended.....	49
Searching for Bluetooth Devices.....	40	Chapter 17: Radio Kill.....	50
Connecting to Bluetooth Devices.....	40	Chapter 18: Ambient Listening.....	51
Disconnecting from Bluetooth Devices...	40	Chapter 19: Authorized Accessories List.....	52
Clearing Bluetooth Pairing.....	40	Batteries and Chargers Warranty.....	54
Scan.....	41	The Workmanship Warranty.....	54
Turning Scan On or Off.....	41	The Capacity Warranty.....	54
Chapter 12: Instant Personal Alert.....	42	Limited Warranty.....	55
Sending IPA.....	42	MOTOROLA SOLUTIONS	
Receiving IPAs.....	42	COMMUNICATION PRODUCTS.....	55
Viewing IPA List.....	42	I. WHAT THIS WARRANTY COVERS AND	
Clearing IPA Status List.....	43	FOR HOW LONG:.....	55
		II. GENERAL PROVISIONS.....	56

III. STATE LAW RIGHTS:.....56

IV. HOW TO GET WARRANTY SERVICE.....56

V. WHAT THIS WARRANTY DOES NOT
COVER.....56

VI. PATENT AND SOFTWARE PROVISIONS..57

VII. GOVERNING LAW..... 58

Important Safety Information

ATTENTION!

This radio is designed to meet General Population usage. Before using the radio, read the RF Energy Exposure and Product Safety Guide for Portable Two-Way Radios which contains important operating instructions for safe usage and RF energy awareness and control for Compliance with applicable standards and Regulations.

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

<http://www.motorolasolutions.com>

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

Notice to Users

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.



CAUTION:

Changes or modifications made to this device, not expressly approved by Motorola Solutions, could void the authority of the user to operate this equipment.

Radio Care

This section describes the basic handling precaution of the radio.

Table 1: IP Specification

IP Specification	Description
IP54	Allows your radio to withstand adverse field conditions such as being exposed to water or dust.



CAUTION:

The effects of certain chemicals and their vapors can have harmful results on certain plastics. Avoid using aerosol sprays, tuner cleaners, and other chemicals.

- Keep your radio clean and exposure to water should be avoided to help ensure proper functionality and performance.
- To clean the exterior surfaces of the radio, use a diluted solution of mild dishwashing detergent and fresh water (for example, one teaspoon of detergent to one gallon of water).
- These surfaces should be cleaned whenever a periodic visual inspection reveals the presence of smudges, grease, and/or grime.

Software Version

All the features described in the following sections are supported by the software version **R03.00.00** or later.

Contact your dealer for more information.

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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 subscriber unit or configuration of certain parameters. Please refer to your Motorola Solutions contact for further information.

Read Me First

The user guide covers the basic operation of the two-way radio.

**NOTICE:**

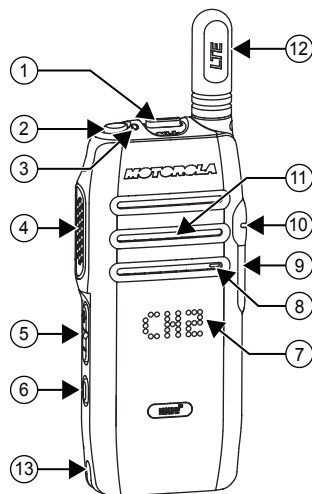
Not all features in the manual are available in your radio. Contact your dealer for more information.

You can consult your dealer 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?

Radio Controls

This chapter explains the buttons and default functions of your radio.



No	Buttons	Descriptions
1	Talkgroup/ Contact List Scroll Rocker	Press: Scroll to next channel/ talkgroup in the list. Press and hold: If there are more than 16 talkgroups, fast scroll is enabled.
2	Power/Info button	Press: Access Information mode. Press and hold: Turn the radio on and off.
3	LED Status Indicator	Red, green, and amber light- emitting diodes indicate operat- ing status.
4	Push-to-Talk (PTT) button	Press or press and hold to exe- cute voice operations.
5	Volume Up and Volume Down buttons	Increase and decrease the vol- ume level.
6	Menu/ Programma- ble button	Press: Access Menu mode.

No	Buttons	Descriptions
.		Press and hold: Access Programmable Function. The default programmable function is Contact List.
7	LED Display	Provides visual information.
8	Microphone	Allow voice to be sent during voice operations.
9	USB Port	For charging purposes.
10	Audio Accessory Port	A port to attached accessory devices.
11	High-Output Speaker	Outputs all tone and audio generated by the radio.
12	LTE Antenna	Provide the needed Radio Frequency (RF) amplification when transmitting and receiving.
13	Charging Contacts	For charging purposes.

Programmable Buttons

You can program the programmable buttons as shortcuts to specific radio functions through Wave OnCloud (WoC) portal.

Depending on the duration of a button press, the programmable buttons function differently.

Assignable Radio Functions

The following radio functions can be assigned to the programmable buttons by your dealer. Press or press and hold on the **Menu/Programmable** button to launch the following features.

Alert Tones

Allows you to toggle the Alert Tones on and off.

Bluetooth

Allows you to toggle the Bluetooth on and off.

Cellular

Allows you to toggle the Cellular on and off.

Contact List

Allows you to directly access the Contact List.

Do Not Disturb (DND)

Allows you to toggle between on and off.

Emergency

Allows you to initiate or cancel an emergency.

Location

Allows you to toggle the Location on and off.

Menu

Allows you to access the menu features.

Scan

Allows you to toggle the Scan on and off.

Voice Announcement

Allows you to toggle Voice Announcement on and off.

Wi-Fi

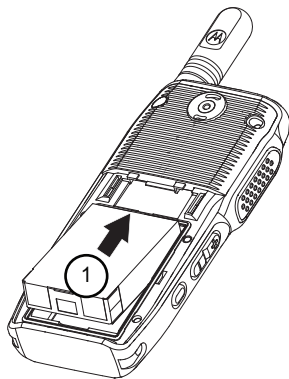
Allows you to toggle the Wi-Fi on and off.

Getting Started

This chapter provides instructions to prepare your radio for use.

Attaching the Battery

- 1 Align the battery contacts with the contacts inside the battery compartment.
 - a Insert the contact side of the battery first.
 - b Gently push the battery into place.



- 2 Attach the battery cover by aligning it in place and slide the battery latch until it snaps into place.
-

- 3 Slide the battery latch into lock position.
-

Charging the Battery

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

- To comply with warranty terms and avoid damages, charge the battery using a Motorola Solutions charger exactly as described in the charger user guide.



NOTICE:

All Motorola Solutions chargers can charge only Motorola Solutions authorized batteries. Other batteries may not charge. Motorola Solutions recommends that your radio remains powered off while charging.

- For best performance, charge a new battery 4 to 5 hours before initial use.

Batteries charge best at room temperature.

The display shows the battery charging icon momentarily. When charging is in progress, the red LED lights up. When charging is complete, the green LED illuminates until you detach the charger.

Attaching and Removing the Antenna

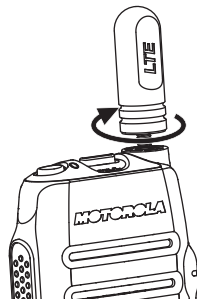


CAUTION:

If you must replace the antenna, ensure that you use TLK 100 antennas only. Neglecting this action damages your radio. See [Authorized Accessories List on page 52](#) for recommended antennas.

Turn off your radio.

- To attach the antenna, set the antenna in the receptacle and turn clockwise.



- To remove the antenna, turn the antenna counterclockwise.

Turning the Radio On or Off

- To turn on your radio, press and hold the **Power/Info** button.



NOTICE:

To turn on your radio when your radio is charging, press and hold the **Power/Info** button.

The green LED illuminates and the display shows a power-on animation.

- To turn off your radio, press and hold the **Power/Info** button.

Adjusting the Volume

- To increase the volume level, press the **Volume Up** button.
- To decrease the volume level, press the **Volume Down** button.

Status Indicators

This chapter explains the Icons, battery capacity information, LED indicators, and tones used in the radio.

Icons

The following table shows icons which appear on your radio display, and their description.

Table 2: Display Icons

Icon	Description
	Battery Level
	Battery Charging
	Battery Charging Error
	Volume Level
	Mute Mode

Icon	Description
	Brightness Level
	Do Not Disturb On
	Do Not Disturb Off
	Voice Announcement On
	Voice Announcement Off
	Alert Tones On
	Alert Tones Off
	Cellular Signal Level
	Cellular Connection Failed/No SIM/Invalid SIM
	Wi-Fi Signal Level
	Wi-Fi Connection Failed

Icon	Description
	Location On
	Location Off
	Downloading Software/Software Available ¹
	Log Created/Uploading Log ²
	Bluetooth On
	Bluetooth Off
	Bluetooth Status for Searching
	Bluetooth Status for Connected
	Bluetooth Paired

Icon	Description
	Scan On
	Scan Off
	Instant Personal Alert (IPA)
	Emergency Mode
	Emergency Countdown
	Emergency Declared
	Emergency Cancelled
	Emergency Call
	Area Talkgroup

¹ When software is available, the display shows a static down arrow. When software is downloading, the display shows an animated down arrow.

² When log is created, the display shows a static down arrow. When log is uploading, the display shows an animated up arrow.

Icon	Description
	Radio Stun
	Ambient Listening
	Contact List Landing Page
	User Disabled/Suspended

Battery Capacity

The following table provides the battery capacity information of your radio. Icons and LED Indication appear when you press Power/Info button.

Table 3: Battery Capacity

Icon	LED In- dication	Voice An- nouncement	Descrip- tion
	● Solid green	Battery high	80%–100% capacity

Icon	LED In- dication	Voice An- nouncement	Descrip- tion
	● Solid amber	Battery medi- um	60%–80% capacity
	● Solid amber	Battery medi- um	25%–60% capacity
	● Blinking red	Battery low	5%–25% capacity
	● Blinking red	Battery very low	Less than 5% capacity

LED Indicators

LED indicators show the operational status and battery charging status of your radio.

Table 4: Operational Status and Charging Status

LED Indica- tion	Operational Mode	Charge Only Mode
Solid green	Radio is power- ing on	Fully charged

LED Indication	Operational Mode	Charge Only Mode
	- Radio is transmitting - Ambient listening	
Blinking green	- Incoming call - During call hang-time - Enter Area Based Talkgroup	Not applicable
Solid red	Not applicable	Rapid charge
Blinking red	- Out-of-service - Charging failure - Faulty battery	- Charging failure - Faulty battery
Blinking red slowly	Radio out of range	Not applicable

LED Indication	Operational Mode	Charge Only Mode
	User Disabled/Suspended	
Blinking green and amber	In Do Not Disturb (DND) mode	Not applicable
Solid amber	Enter into Emergency mode	Not applicable
Blinking amber	- In Scan mode - Receive Emergency Alert - Receive Instant Personal Alert	Not applicable
No indication	- Radio powered off - Radio kill³ - Radio is idle	Not applicable

³ Check with your dealer or system administrator for more information.

Fast Scroll Talkgroup List

A talkgroup list has a maximum of 96 channels.

The order of the channels are in numerical order. You can press and hold on the **Talkgroup/Contact List Scroll Rocker** to perform the fast scroll. After the second channel, you can fast scroll the channels with an increment of 10.

For example, if your radio has 93 channels, the increment channel change is **CH 80** → **CH 90** → **CH 93** → **CH 1** → **CH 10** → **Ch 20**.

Contact List

By default, the contact list is accessible through press and hold on the programmable button. Contact your dealer for more information on the configuration.

The contact list only supports user that are available and set to Do Not Disturb (DND). If the contact is offline, it will be hidden from the list.

A contact name is no more than 30 alphanumeric characters and the contact list is displayed in an alphabetical order.

This feature supports fast scrolling by pressing and holding the **Talkgroup/Contact List Scroll Rocker** or **Volume Up and Volume Down** buttons when in contact list.

Accessing Contact List



NOTICE:

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

- 1 Press the **Menu/Programmable** button.
-

- 2 Locate the Contact List icon.
-

- 3 To view the contact list, press the **Volume Up and Volume Down** button.
-

Radio Calls

This chapter explains the operations to receive, respond to, make, and stop calls. Calls supported are Group, Private, and Broadcast calls.

Group Calls

Your radio must be configured as part of a group to receive a call from or make a call to the group of users.

Making Group Calls

- 1 Select a channel with the active talkgroup.

- 2 Press and hold the **PTT** button to make the call.
The green LED lights up. The display shows the talkgroup alias.

- 3 Wait for the Talk Permit Tone to end and speak clearly into the microphone.

- 4 Release the **PTT** button to listen.

The green LED blinks when the target radio responds. The display shows the talkgroup alias.



NOTICE:

The call ends when there is no voice activity for a predetermined period. The radio returns to the screen you were on before initiating the call.

Responding to Group Calls

When you receive a Group Call:

- The green LED blinks.
 - Your radio generates a momentary incoming call alert tone before unmuting to the caller's audio.
- 1 To respond to the call, press **PTT** button.
The green LED lights up.

 - 2 Wait for the Talk Permit Tone to end and speak clearly into the microphone.

- 3 Release the **PTT** button to listen.

**NOTICE:**

The call ends when there is no voice activity for a predetermined period.

**NOTICE:**

If "X" precedes the contact, the contact is in Do Not Disturb (DND) mode and a reject tone sounds when **PTT** button is pressed.

Private Calls

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

Making Private Calls

**NOTICE:**

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

- 1 Press the **Menu/Programmable** button.
- 2 To select contact, scroll contact list using **Talkgroup/Contact List Scroll Rocker** or **Volume Up and Volume Down** buttons until the right contact is displayed.

- 3 Press and hold the **PTT** button to make the call.

The green LED lights up. The display shows the caller alias.

- 4 Wait for the Talk Permit Tone to end and speak clearly into the microphone.

- 5 Release the **PTT** button to listen.

Responding to Private Calls

When you receive a Private Call:

- The green LED blinks.
- Your radio generates an inbound call alert tone before the inbound audio call.

- You hear a short alert tone the moment the transmitting radio releases the **PTT** button, indicating the channel is free for you to respond.

- 1 To respond to the call, press **PTT** button.
The green LED lights up.

-
- 2 Wait for the Talk Permit Tone to end and speak clearly into the microphone.

-
- 3 Release the **PTT** button to listen.

**NOTICE:**

The call ends when there is no voice activity for a predetermined period.

Broadcast Calls

A Broadcast Call is a call from an individual radio to every radio on the channel.

Broadcast Calls are used to make important announcements, that require your full attention. You cannot respond to Broadcast Calls.

If you switch to a different channel while receiving the call, your radio stops receiving the Broadcast Call. You cannot use any side button functions until the call ends.

To receive calls from or make calls to the group of users using broadcast call, your radio must be configured to the broadcast call talkgroup by your dealer.

Making Broadcast Calls

- 1 Press the programmed **Talkgroup/Contact List Scroll Rocker**.

-
- 2 Press and hold the **PTT** button to make the call.
The display shows a countdown from 3, 2, and 1.

-
- 3 Wait for the Talk Permit Tone or PTT Side Tone to end and speak clearly into the microphone if enabled.

The green LED lights up. The display shows the call alias.

**NOTICE:**

The call ends when there is no voice activity for a predetermined period. The radio returns to the screen you were on before initiating the call.

Receiving Broadcast Calls

When you receive a Broadcast Call:

- The green LED blinks.
- Your radio generates a receive broadcast alert tone before the broadcast audio.

**NOTICE:**

The Broadcast call has a higher priority compare to Group Call and Private Call, but a lower priority compare to Emergency Call.

Your radio is able to receive Broadcast Calls even when "Do not Disturb" (DND) mode is enabled.

Supervisory Override

Supervisory Override allows a supervisor to interrupt during an ongoing Group or Private Call and immediately start a supervisory call.

If the user is receiving or transmitting a Group Call or Private Call and the server is interrupted by a supervisory call, your radio unmutes to the supervisory call and display the alias of the supervisor.



NOTICE:

Contact your dealer for more information on the configuration.

Checking Radio Information

Press the **Power/Info** button repeatedly.

The radio displays one of the following depending on the mode/state.

- 1 Emergency Alert List⁴
 - 2 Instant Personal Alert (IPA) List⁴
 - 3 Radio Stun/Maintenance Mode⁴
 - 4 Battery/Charging Status
 - 5 Cell Status
 - 6 Wi-Fi Status
 - 7 Location Status
 - 8 Bluetooth Status
 - 9 Diagnostic Upload Status
 - 10 FOTA Status
 - 11 Radio Name
-

⁴ If this feature is disabled, you will not see it on your radio.

Checking Battery Strength

Follow the procedure to check the battery level of your radio.

Press the **Power/Info** button.

One of the following occurs:

- The LED lights up solid green indicating high battery capacity.
- The LED lights up solid yellow indicating medium battery capacity.
- The LED blinks red indicating low battery capacity.

Cellular and Wi-Fi Values

You are allowed to check your cellular and Wi-Fi signal strength in your radio.

Your radio provides the following types of signal strength indication beside the icon:

- 0 = No signal
- 1 = Poor signal
- 2 = Fair signal
- 3–4 = Good signal
- 5 = Excellent signal
- X = Connection fails

Checking Cellular or Wi-Fi Signal Strength

- Press the **Power/Info** button until you see the Cellular Strength or Wi-Fi Strength icon.

The radio displays the Cellular Strength icon and Wi-Fi Strength icon and shows the current values.

Menu

You are able to access the menu through the **Menu/Programmable** button.

The following are the available features in the Menu.

Table 5: List of Features

Feature	Description
All Alert Tone	Allows you to enable and disable All Alert Tone.
Display Brightness	Allows you to adjust the display brightness on your radio.
Voice Announcement	Allows you to enable and disable the Voice Announcement.
Do Not Disturb (DND)	Allows you to change the mode of your radio from available to "do not disturb".

Feature	Description
	 NOTICE: When DND is enabled, you will not be able to receive any private call.
Scan	Allows you to enable and disable the Scan feature.
Location	Allows you to enable and disable the Global Positioning System (GPS) feature.
Wi-Fi	Allows you to enable and disable the Wi-Fi modems.
Cellular	Allows you to enable and disable the Cellular modems.
Bluetooth	Allows you to enable and disable the Bluetooth.

Do Not Disturb

Do Not Disturb (DND) allows you to change the status of the radio from available to unavailable.

When DND is enabled, an LED blinks and you will not be able to receive any private call. A negative tone sounds when a call is initiated to indicate that the call cannot be connected.

Turning DND On or Off



NOTICE:

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

- 1 Press the **Menu/Programmable** button.

- 2 Locate the Do Not Disturb (DND) icon.

- 3 To turn on DND, press the **Volume Up** button. To turn off, press the **Volume Down** button.

If DND is on, the following occurs:

- Voice Announcement sounds Do Not Disturb On.

- The display shows a check mark beside the DND icon.
- The LED displays a blinking green light and amber light periodically.

If DND is off, the following occurs:

- Voice Announcement sounds Do Not Disturb Off.
- The display shows an "X" mark beside the DND icon.

Turning Voice Announcement On or Off



NOTICE:

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

- 1 Press the **Menu/Programmable** button.

- 2 Locate the Voice Announcement icon.

- 3 To turn on Voice Announcement, press the **Volume Up** button. To turn off, press the **Volume Down** button.
-

If Voice Announcement is on, the following occurs:

- Voice Announcement sounds Voice Announcement On.
- The display shows a check mark beside the Voice Announcement icon.
- All Voice Announcement tones are turned on.

If Voice Announcement is off, the following occurs:

- Voice Announcement sounds Voice Announcement Off.
- The display shows an "X" mark beside the Voice Announcement icon.
- All Voice Announcement tones are turned off.

Turning Radio Alert Tones On or Off



NOTICE:

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

- 1 Press the **Menu/Programmable** button.
-

- 2 Locate the Alert Tones icon.
-

- 3 To turn on Alert Tones, press the **Volume Up** button. To turn off, press the **Volume Down** button.
-

If Alert Tones is on, the following occurs:

- Voice announcement sounds All Alert Tones On.
- The display shows a check mark beside the Alert Tones icon.
- All tones and alerts are turned on.

If Alert Tones is off, the following occurs:

- Voice announcement sounds All Alert Tones Off.
- The display shows an "X" mark beside the Alert Tones icon.

- All tones and alerts are turned off.

Adjusting the Display Brightness

1 Press the **Menu/Programmable** button.

2 Locate the Display Brightness icon.

3 To select the brightness level, toggle the **Volume** buttons.

The lowest brightness level is 1 and the highest is 4.

- Voice Announcement sounds the selected brightness level.
- The screen shows the selected display brightness.

Turning Location On or Off



NOTICE:

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

Location can only be accessed when enabled. Check with your dealer or system administrator for more information.

1 Press the **Menu/Programmable** button.

2 Locate the Location icon.

3 To turn on Location, press the **Volume Up** button. To turn off, press the **Volume Down** button.

If Location is on, the following occurs:

- Voice Announcement sounds Location Service On.
- The display shows a check mark beside the Location icon.

If Location is off, the following occurs:

- Voice Announcement sounds Location Service Off.

- The display shows an "X" mark beside the Location icon.

Turning Wi-Fi On or Off



NOTICE:

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

- 1 Press the **Menu/Programmable** button.
- 2 Locate the Wi-Fi icon.
- 3 To turn on Wi-Fi, press the **Volume Up** button. To turn off, press the **Volume Down** button.

If Wi-Fi is on, the following occurs:

- Voice Announcement sounds Wi-Fi On.
- The display shows a check mark beside the Wi-Fi icon.

If Wi-Fi is off, the following occurs:

- Voice Announcement sounds Wi-Fi Off.
- The display shows an "X" mark beside the Wi-Fi icon.

Turning Radio Cellular On or Off



NOTICE:

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

- 1 Press the **Menu/Programmable** button.
- 2 Locate the Cellular icon.
- 3 To turn on Cellular, press the **Volume Up** button. To turn off, press the **Volume Down** button.

If Cellular is on, the following occurs:

- Voice Announcement sounds Cellular On.
- The display shows a check mark beside the Cellular icon.

If Cellular is off, the following occurs:

- Voice Announcement sounds Cellular Off.
- The display shows an "X" mark beside the Cellular icon.

Bluetooth

This feature allows you to use your radio with a Bluetooth-enabled device (accessory) through a Bluetooth connection. Your radio supports both Motorola Solutions and Commercially available Off-The-Shelf (COTS) Bluetooth-enabled devices.

Bluetooth operates within a range of 10 m (32 ft) line of sight. 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 accessory.

At the fringe areas of reception, both voice and tone quality start to sound "garbled" or "broken". To correct this problem, position your radio and Bluetooth-enabled device closer to each other (within the 10 m defined range) to re-establish clear audio reception. The Bluetooth function of your radio has maximum power of 2.5 mW (4 dBm) at the 10 m range.

Your radio can support up to three simultaneous Bluetooth connections with Bluetooth-enabled devices of unique types. For example, a headset, a scanner, and a PTT-Only Device (POD). Multiple connections with Bluetooth-enabled devices of the same type are not supported.

Refer to the user manual of your respective Bluetooth-enabled device for more details on the full capabilities of your Bluetooth-enabled device.

Turning Bluetooth On or Off



NOTICE:

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

- 1 Press the **Menu/Programmable** button.
- 2 Locate the Bluetooth icon.
- 3 To turn on Bluetooth, press the **Volume Up** button. To turn off, press the **Volume Down** button.

If Bluetooth is on, the following occurs:

- Voice Announcement sounds Bluetooth On.
- The display shows a check mark beside the Bluetooth icon.

If Bluetooth is off, the following occurs:

- Voice Announcement sounds Bluetooth Off.

- The display shows an "X" mark beside the Bluetooth icon.

Searching for Bluetooth Devices

To search for other Bluetooth devices, press the **Power/Info** button until you see the Bluetooth icon.

The radio displays Bluetooth Searching icon and Voice Announcement sounds Bluetooth Searching.

Connecting to Bluetooth Devices

- 1 While searching, the radio search for the last connected Bluetooth accessory.

Once connected, an indication tone sounds from the connected Bluetooth accessory.

- 2 To view Bluetooth's status information, press the **Power/Info** button.

The radio displays Bluetooth Connected icon and Voice Announcement sounds Bluetooth Connected.

Disconnecting from Bluetooth Devices

- 1 When the Bluetooth accessory goes out of range or turn off, it will be disconnected from the radio automatically.

The radio sounds an indication tone after disconnected from the Bluetooth accessory.

- 2 The radio attempts to reconnect to the same Bluetooth accessory within a reconnect timer.
-

Clearing Bluetooth Pairing

- 1 Press the **Power/Info** button until you see the Bluetooth icon.
-

- 2 Scroll through the bluetooth list using **Talkgroup/Contact List Scroll Rocker** or **Volume Up and Volume Down** buttons until the right bluetooth is displayed.
-

- 3 On the device "friendly" name, press and hold the **Menu/Programmable** button to clear the pairing.

If clearing the bluetooth pairing successfully, a positive tone sounds.

If clearing an unpaired device, a negative tone sounds.

Scan

This feature allows your radio to cycle through the programmed scan list for the current channel looking for voice activity.

When in the scan mode, the system preempts an ongoing low-priority talkgroup call. Your radio unmutes to the high-priority talkgroup call. You respond to the active talkgroup when you press the PTT button during the programmed period (hang time) of an ongoing call from your scan list.

Pressing the PTT button when the radio is not in a call, causes the radio to start a call on the last selected talkgroup.



NOTICE:

If the DND mode is enabled during the scan mode, your radio prioritizes the DND mode.

Turning Scan On or Off



NOTICE:

Depending on the configuration of your radio, press or press and hold the **Menu/Programmable** button to directly access the feature. Else, manually enter the feature with the following procedure.

- 1 Press the **Menu/Programmable** button.
- 2 Locate the Scan icon.
- 3 To turn on Scan, press the **Volume Up** button. To turn off, press the **Volume Down** button.

If Scan is on, the following occurs:

- Voice Announcement sounds Scan On.
- The display shows a check mark beside the Scan icon.
- The amber LED blinks.

If Scan is off, the following occurs:

- Voice Announcement sounds Scan Off.
- The display shows an "X" mark beside the Scan icon.

Instant Personal Alert

Instant Personal Alert (IPA) is a callback request notification that you can only be sent or receive in your contact list.

The IPA are stored in the IPA Status List to allow you to view and to reply in a later time. When multiple IPAs are received, the latest IPA will appear at the top of the list. The IPA Status List can store up to nine alerts.

Sending IPA

- 1 Press the **Menu/Programmable** button.

- 2 Locate the Contact icon.

- 3 Select the *<required alias>* that you would like to send the IPA to.

- 4 Press and hold the **Menu/Programmable** button to send IPA.

Your display blink twice after your IPA is sent and a positive tone sounds.

Receiving IPAs

When you receive IPA during idle mode, your radio shows the following indications:

- The IPA is added to the IPA Status List.
- A tone sounds.
- The amber LED blinks until IPA is cleared.
- The display shows the IPA icon and alias.

When you receive IPA while in a call, your radio shows the following indications:

- The IPA is added to the IPA Status List.
- The display does not show the IPA alias.
- The amber LED blinks after the call is ended.
- The display shows the IPA icon after the call is ended.

Viewing IPA List

- 1 Press the **Power/Info** button until you see the IPA List icon.
-

- 2 Scroll through the IPA list using **Talkgroup/Contact List Scroll Rocker** or **Volume Up and Volume Down** buttons to view the list.
-

The list shows nine IPA entries. When the list is reaching the end or the beginning, a tone sounds.

Clearing IPA Status List

- Perform one of the following actions:
 - From the contact list or IPA list, press and hold the **PTT** button on the contact that you want to clear.
 - In the IPA Status List, press and hold the **Menu/Programmable** button on the contact that you want to clear.
 - Power cycle your radio to clear all the IPAs.

Emergency Operations

There are two ways in declaring or canceling an Emergency.

You can declare or cancel an Emergency locally by pressing the programmable button (Emergency button) or the Emergency button on your Bluetooth accessory.

You can also declare or cancel an Emergency remotely by an authorized user through WAVE APP or a dispatcher.

When Emergency is declared and radio enters into Emergency mode successfully, the display flashes with the Emergency icon. When the display flashes the Emergency icon, you are only allowed to view the battery status, volume control, make an emergency call and exit the emergency mode.

During the Emergency mode, any call launched is declared as Emergency Call.

Declaring Emergency

Configure the **Menu/Programmable** button to Emergency. Contact your dealer for more information.

- Press and hold the **Menu/Programmable** button.

The display shows a countdown from !! 3 !!, !! 2 !!, and !! 1 !! with increasing tone.

If Emergency is declared by mistake, during the countdown, release the **Menu/Programmable** button to cancel declaring Emergency.

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

- The Emergency tone sounds.
- The amber LED lights up.
- The display shows Emergency icon.

If Emergency is failed to declare, your radio returns to the previously selected channel.

Cancelling Emergency

Configure the **Menu/Programmable** button to Emergency. Contact your dealer for more information.

- Press and hold the **Menu/Programmable** button.

The display shows a countdown from !! 3 !!, !! 2 !!, and !! 1 !! with increasing tone.

If Emergency is declared by mistake, during the countdown, release the **Menu/Programmable** button to cancel declaring Emergency.

If Emergency is cancelled successfully, the display returns to previously selected channel.

Receiving Emergency Alerts

When you receive a Declared-Emergency Alert, your radio shows the following indications:

- The Emergency tone sounds.
- The amber LED blinks for 2 seconds.
- The display shows the Declared-Emergency Alert icon and the initiator's alias.
- The alert has a higher priority compare to making or receiving call.

When you receive a Cancelled-Emergency Alert, your radio shows the following indications:

- The Emergency tone sounds.
- The amber LED blinks until all Emergency Alerts are cleared from the Emergency Alert List.
- The display shows the Cancelled-Emergency Alert icon and the initiator's alias.

- The alert has a higher priority compare to making or receiving call.

Responding to Emergency Alerts

- 1 Press the **Power/Info** button.
- 2 Locate Emergency Alert List icon.
- 3 To select the required Emergency Alert alias, press the **Volume Up and Volume Down** button.
- 4 Press **PTT** button to initiate a call.

Receiving Emergency Calls

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

- The Emergency tone sounds.
- The green LED lights up.
- For Group Call, the display shows the Emergency Group Call icon, Talkgroup Channel alias for 2 seconds, and then scroll to Caller Alias.

- For Private Call, the display shows the Emergency Private Call icon and the initiator's alias.

Clearing Emergency Alert List

An Emergency Alert in the Emergency Alert List is cleared when a corresponding Cancelled-Emergency Alert is received. Else, manually clear the list with the following actions.

- Perform one of the following actions:
 - In the Emergency Alert List, press and hold the **Menu/Programmable** button on the Emergency Alert Alias that you want to clear.
 - Power cycle your radio to clear all the Emergency Alerts.

When all Emergency Alerts are cleared, the Emergency Alert List icon disappears from the **Power/Info** button option and the amber LED dissolves.

Area Talkgroup

When you enter a geographic area, you are able to view and hear the notifications for the talkgroup area in that geofence.

The Area Talkgroup is added to the Area Talkgroup List in alphabetical order. Once you are added to the Area Talkgroup list, you can receive group call even if your talkgroup scanning is off.

When you are in the Area Talkgroup, your radio sounds the Voice Announcement, the green LED blinks, and the display shows the talkgroup alias.

When you exit the Area Talkgroup, your radio sounds the Voice Announcement and the display shows the talkgroup alias as well. If you are in a call when you exit the Area Talkgroup, your call will not drop automatically.

If the Area Talkgroup is removed, you will go back to your previous channel.

Radio Stun

Radio Stun indicates that the radio is disabled.

When your radio is in Radio Stun mode, all the buttons except for **Power/Info** and **Volume Up and Volume Down** buttons are disabled. All voice activity and LED indications are disabled as well.

In powered on state, pressing the **Power/Info** button displays the Radio Stun screen.

User Disabled or Suspended

User Disabled or Suspended indicates that your account is disabled or suspended. When your account is disabled or suspended, you are not able to login to the PTT server.

Your radio sounds a tone, red LED blinks, and flashes the User Disable/suspended icon.

The **Power/Info**, **Menu/Programmable**, **Volume Up** and **Down** buttons still works normally.

When you presses the **PTT** button, your radio tries to login to the PTT server. If your radio able to connect to the PTT server, it will bring you to the normal login screen, else the User Disable/suspended icon flashes.

Radio Kill

Radio Kill indicates that your radio is permanently disabled.

In a normal Operation mode, when your radio receive a kill command, your radio will turn off.

While in Kill mode, there are no User Interface (UI) on your radio and you are not able to turn on your radio. Your radio can only be re-activated by Motorola Solutions.

Contact your dealer for more information.

Ambient Listening

This feature allows the authorized user to listen to the ambient audio of a specific radio during idle mode.

When an authorized user starts ambient listening on a specific radio, the radio plays a tone, displays the ambient listening icon and the alias of the authorized user. Ambient listening stops when a different type of call is initiated or received.

Authorized Accessories List

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

Antenna

- Gray Antenna ID Band (pack of 10) (32012144001)
- Yellow Antenna ID Band (pack of 10) (32012144002)
- Green Antenna ID Band (pack of 10) (32012144003)
- Blue Antenna ID Band (pack of 10) (32012144004)
- Purple Antenna ID Band (pack of 10) (32012144005)
- LTE Antenna (HKAN4002_)

Battery

- Li-Ion 2300 mAh Battery (PMNN4468_)

Carry Devices

- Nylon Wrist Strap (PMLN6074_)
- Heavy-Duty Swivel Belt Clip (PMLN7128_)
- Swivel Carry Holster (PMLN7932_)

Chargers

- Multi-Unit Charger Kit, US/NA Plug (PMLN7101_)
- Standard Multi-Unit Charger (PMLN7093_)
- Cable, USA (3004209T03)
- Single Unit Charger Kit (PMLN7987_)
- Standard Single Unit Charger (PMLN7094_)
- 1.5 A Power Supply, Micro USB, US Plug (PS000150A11)

Earbuds and Earpieces

- Replacement Foam Plug-Ins (5080384F72)
- Earbud with In-line Mic/Push-To-Talk (PTT), MagOne (PMLN7156_)
- 2-Wire with Transparent Tube, Black (PMLN7157_)
- 1-Wire Surveillance Earpiece, In-Line Mic and PTT (PMLN7158_)
- Adjustable D-Style with In-Line Mic and PTT (PMLN7159_)
- Swivel Earpiece, In-line Mic and PTT (PMLN7189_)
- Quick Disconnect Acoustic Tube (RLN6242_)

- Replacement Ear Tips (Pack of 50) (RLN6282)

Miscellaneous Accessories

- Battery Door (HKLN4678_)

Remote Speaker Microphone

- RM250 Remote Speaker Microphone (PMMN4125_)

Batteries and Chargers Warranty

The Workmanship Warranty

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

TLK 100 Batteries	12 Months
Chargers (Single-Unit and Multi-Unit, Non-Display)	12 Months

The Capacity Warranty

The capacity warranty guarantees 80% of the rated capacity for the warranty duration.

Lithium-Ion (Li-Ion) Batteries	12 Months
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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 Radio	12 Months
Product Accessories	12 Months

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.

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