

TALKABOUT® TWO-WAY RADIO T4XX SERIES



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For More Information

For further information, you may call Motorola Solutions at 1-800-448-6686 (Canada and U.S.), or visit us on the Internet at www.motorolasolutions.com/talkabout.

Safety and General Information

Caution
Before using this radio, read this booklet which contains important operating instructions. For information on product details, brochures, user manuals and approved accessories, please refer to www.motorolasolutions.com.

Compliance with RF Exposure Standards
National and international regulations require manufacturers to comply with the RF energy exposure limits for portable two-way radios before they can be marketed. Your Motorola Solutions two-way radio is designed, manufactured, and tested to comply with all applicable national and international regulations for human exposure to radio frequency electromagnetic energy.

RF Energy Exposure Awareness and Control Information and Operational Instructions for General Population and Uncontrolled Environment Use

For more information on what RF energy exposure is, see the following websites:
 • <https://www.fcc.gov/>
 • <http://www.who.int/peh-emf/project/en/>
 For additional information, see https://www.motorolasolutions.com/en_us/about/company-overview/corporate-responsibility/governance-and-policies/wirelesscommunication-and-health-faqs.html.

FCC Licensing Information

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

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/TV technician for help.

Operating Instructions
 • Transmit no more than 50% of the time. To transmit (talk), press the **Push-To-Talk (PTT)** button. To receive calls, release the PTT button.
 • Hold the radio in a vertical position in front of the face with the microphone (and other parts of the radio including the

antenna) at least 1 in. (2.5 cm) away from the nose or lips. Antenna should be kept away from the eye.
 • When worn on the body, always place the radio in a Motorola Solutions-approved clip, holder, holster, case, or body harness for this product.
 • DO NOT hold the antenna when the radio is transmitting.
 • DO NOT use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with your skin, a minor burn can result.
 • To ensure continued compliance with applicable RF exposure limits, use only Motorola Solutions-approved, supplied or replacement antennas, batteries, and accessories.
 • For a list of Motorola Solutions-approved accessories please refer to your user manual or visit www.motorolasolutions.com

Acoustic Safety
 Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing. The louder the volume of the radio, the sooner your hearing will be affected. Hearing damage from loud noise is sometimes undetectable at first, and can have a cumulative effect. To protect your hearing, follow these precautions:
 • Use the lowest volume necessary to do your job.
 • Turn up the volume only if you are in noisy surroundings.
 • Turn down the volume before putting on a headset or headphones.
 • Limit the amount of time you use a headset or headphones at high volume.
 • When using the radio without a headset or headphones, do not place the speaker of the radio directly against your ear.

Medical Devices
 If you use a personal medical device, such as a pacemaker or hearing aid, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

Operational Warnings
 The following explains the operational warnings:

For Vehicle With Air Bags

WARNING

Warning:

- Refer to vehicle manufacturer's manual prior to installation of electronic equipment to avoid interference with air bag wiring.
- DO NOT place a portable radio in the area over an air bag or in the air bag deployment area. Air bags inflate with great force. If a portable radio is placed in the air bag deployment area and the air bag inflates, the radio may be propelled with great force and cause serious injury to occupants of the vehicle.

Potentially Explosive Atmospheres

WARNING

Warning:

- Use of a radio that is not intrinsically safe in a potentially explosive atmosphere could result in a serious injury, or death. You should only use a certified Intrinsically Safe radio in potentially explosive atmospheres.
- Explosive atmospheres refer to hazard classified locations that may contain hazardous gas, vapors, dusts, such as fueling areas below decks on boats, fuel, or chemical transfer storage facilities, and areas where the air contains chemicals or particles such as grain, dust, or metal powders. Areas with potentially explosive atmospheres are often, but not always, posted.
- Turn off your radio prior to entering any area with a potentially explosive atmosphere unless it is a radio type specifically certified for use in hazardous location areas.
- DO NOT remove, install, or charge batteries in such areas, or remove or install antennas. Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death.

Blasting Caps and Blasting Areas

WARNING

Warning: To avoid possible interference with blasting operations, turn off your radio when you are near electrical blasting caps, in a blasting area, or in areas posted: "Turn off two-way radio." Obey all signs and instructions.

Batteries

- Charge your battery using the approved Motorola Solutions charger.
- Use the battery in accordance with its water and/or dust Ingress Protection (IP) rating.
- Do not discard your battery into a fire.
- Do not replace the battery in any area labeled "Hazardous Atmosphere".
- Do not disassemble, crush, puncture, shred, or otherwise attempt to change the form of your battery.
- Do not dry a wet or damp battery with an appliance or heat source, such as a hair dryer or microwave oven.
- Do not allow conductive material such as jewelry, keys, or beaded chains to touch exposed battery terminals.

Repair

Warning: Repairs to a Motorola Solutions intrinsically safe radio product certified by, for example, FM, UL, CSA, CENELEC, should only be done at a location that has been audited under the certifying body's repair and service standard. Contact Motorola Solutions for assistance regarding repairs and service of Motorola Solutions intrinsically safe equipment.

WARNING

A repair constitutes something done internally to the unit that would bring it back to its original condition. Items not considered as repairs are those in which an action is performed on a unit which does not require the outer casing of the unit to be opened in a manner that exposes the internal electrical circuits of the unit.

Do Not Substitute Options or Accessories

The Motorola Solutions communications equipment certified as intrinsically safe by the approving agency (FM, UL, CSA, CENELEC) is tested as a complete system which consists of the listed agency approved portable, approved battery, and approved accessories or options, or both. This approved portable and battery combination must be strictly observed. There must be no substitution of items, even if the substitute has been previously approved with a different Motorola Solutions communications equipment unit. Approved configurations are listed by the approving agency (FM, UL, CSA, CENELEC). The Intrinsically Safe Approval Label affixed to radio refers to the intrinsically safe classification of that radio product, and the approved batteries that can be used with that system. The manual PN referenced on the Intrinsically Safe Approval Label identifies the approved accessories and or options that can be used with that portable radio unit. Using a non-Motorola Solutions-intrinsically safe battery and/or accessory with the Motorola Solutions-approved radio unit will void the intrinsically safe approval of that radio unit.

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

The European Union's WEEE directive requires that products sold into EU countries must have the crossed out trash bin label on the product (or the package in some cases). As defined by the WEEE directive, this cross-out trash bin label means that customers and end-users in EU countries should not dispose of electronic and electrical equipment or accessories in household waste. Customers or end-users in EU countries should contact their local equipment supplier representative or service centre for information about the waste collection system in their country.

Notice to Users (FCC and Industry Canada)

This device complies with Part 15 of the FCC rules and Industry Canada's license-exempt RSS's 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.

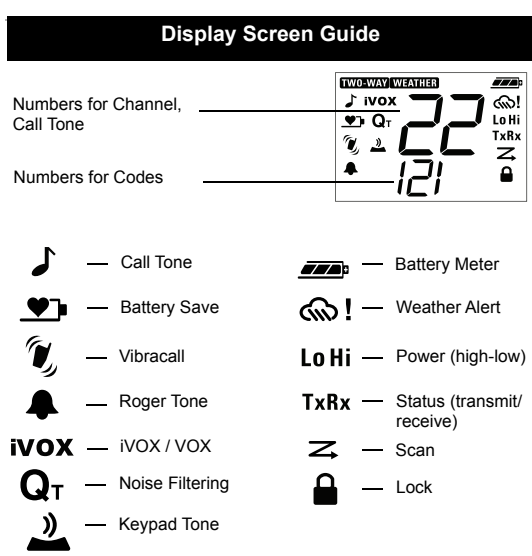
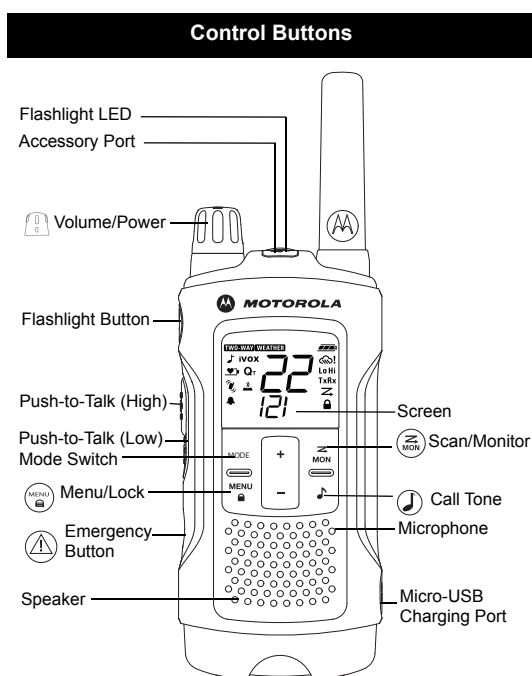
FCC Licensing Information

USA (FCC)/CANADA

According to FCC Part 95, FRS devices do not require a license. Use of Motorola radio in Canada is subject to the rules regulations in ISED RSS 210 and do not require a license.

Changes or modifications not expressly approved by Motorola Solutions may void the user authority granted by the FCC or ISED to operate this radio and should not be made. To comply with FCC or ISED requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc) not authorized by the FCC or ISED equipment authorization for this radio could violate FCC or ISED rules.

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



Getting Started

Weatherproof

This radio is weatherproof to IP-54 standards. It is dust/splashproof from any direction. The radio is resistant to water and rain splashes only when the battery cover, headset accessory port, and micro-USB ports are sealed. Open the battery compartment door or headset port cover only when the radio is dry. Use of a headset accessory should be in dry environments only. The micro-USB adaptor is not waterproof. Do not expose to rain or snow. Charge the radios only in a dry location. Do not charge wet radios. The battery door must be tightly closed with the screw to maintain the weatherproof seal of the radio.

Installing the Batteries

Each radio can use either 1 NiMH rechargeable battery pack or 3 AA alkaline batteries and beeps when the batteries are low.

Installing the NiMH Rechargeable Battery Pack (Optional Accessory)

- Turn the radio off.
- With the back of the radio facing you, loosen the retaining screw on the battery door and open the cover.
- Remove the NiMH battery pack from the clear plastic bag (do not disassemble or unwrap the battery pack).
- Insert the NiMH battery pack with the diagram facing you. (The ribbon should be underneath the battery pack and should wrap around the right side of the pack for easy removal).
- Close the battery cover and tighten the retaining screw on the battery cover.

Installing the Three AA Alkaline Batteries

- Turn the radio off.
- With the back of the radio facing you, lift the battery cover latch up and remove the cover.
- Insert the three AA Alkaline batteries with + and – polarity as shown inside. (The ribbon should be underneath the AA alkaline batteries and should wrap around the right side of the batteries).
- Close the battery cover and tighten the retaining screw on the battery cover.

Radio Battery Meter

The radio battery icon shows the battery charge level, from full [full bar] to empty [empty bar]. When the radio has one segment left, the radio chirps periodically or after releasing the PTT button (Low Battery Alert).

Removing the NiMH Battery Pack

- Turn the radio off.
- With the back of the radio facing you, loosen the retaining screw on the battery door and open the cover.
- Remove the NiMH battery pack by pulling the ribbon attached to the radio.
- Close the battery cover and tighten the retaining screw on the battery door.

Removing the Three AA Alkaline Batteries

- Turn the radio off.
- With the back of the radio facing you, loosen the retaining screw on the battery door and open the cover.
- Gently remove each alkaline battery by easing each battery out individually.
- Close the battery cover and tighten the retaining screw on the battery door.

Note:

- Exercise care when removing NiMH or AA batteries. Do not use sharp or conductive tools to remove either of these batteries.
- Remove the batteries before storing your radio for extended periods of time. Batteries corrode over time and may cause permanent damage to your radio.

Battery Capacity Maintenance

- Charge the NiMH batteries once every 3 months when not in use.
- Before placing the radio in storage, remove the battery.
- Store the NiMH batteries in temperature between -20 °C to 35 °C and in low humidity. Avoid damp conditions and corrosive materials.

Using the Micro-USB Charger

The micro-USB charger is a handy port that allows you to conveniently charge your NiMH battery pack.

- Make sure your radio is turned OFF.
- Plug the micro-USB cable into the micro-USB charging port on your radio. Connect the other end of the micro-USB charger to wall power outlet.
- An empty battery will be fully charged in 14 hours.
- The battery meter on LCD will move to indicate the battery is charging.

Note:

- When moving between hot and cold temperatures, do not charge the NiMH battery pack until the battery temperature acclimates (usually about 20 minutes).
- For optimal battery life, remove the radio from the charger within 16 hours. Do not store the radio while connected to the charger.

Attaching and Removing the Belt Clip

- Attach the belt clip to the Talkabout plate at the back of the radio until the clip clicks in place.
- Attach the belt clip to pocket or belt strap until the clip clicks in place.

To Remove

- Push the release tab on top of the belt clip to release the latch.
- Pull the belt clip away from the back of the radio.

Turning your Radio On and Off

Turn [clockwise] to turn the radio on and counterclockwise to turn the radio off.

- In the ON position, the radio chirps and briefly shows all feature icons available on the radio.
- The display screen then shows the current channel, code and all features that are enabled. The radio is now in Two-Way mode.

Setting the Volume

Press and hold [three seconds] for three seconds while rotating [clockwise] until you reach a comfortable listening level.

- Rotate [clockwise] to increase the volume.
- Rotate [counterclockwise] to decrease the volume. Do not hold the radio close to your ear. If the volume is set to an uncomfortable level, it could hurt your ear.

Talking and Listening

To communicate, all radios in your group must be set to the same channel and Interference Eliminator Code.

- To talk, press and hold the **PTT** button. When transmitting, **TWO-WAY** icon blinks and **Tx** is shown. If it is a high power transmission, **Hi** is shown. If it is a low power transmission, **Lo** is shown.
- When you are finished talking, release the **PTT** button.
- When receiving, **TWO-WAY** icon blinks and **Rx** is shown. If it is a high power channel, **Hi** is shown. If it is a low power channel, **Lo** is shown.

For maximum clarity, hold the radio two to three inches away from your mouth and speak directly into the microphone. Do not cover the microphone while talking.

Talk Range

Your radio is designed to maximize performance and improve transmission range. Do not use the radios closer than five feet apart.

Power Boost

To boost the power of your radio to high power, press the top portion of the **PTT** button when talking. If you know your party is close by, you can conserve the energy of your battery by pushing the lower part of the **PTT** button to use less power.

Note: If you are on an FRS only channel (see “Channels and Frequencies”) the radio will only use low power when either portion of the **PTT** button is pressed. Power Boost is not applicable for model T400.

Monitor Button

Pressing and holding [three seconds] for three seconds allows you to listen to the volume level of the radio when you are not receiving. This allows you to adjust the volume, if necessary. You can also press [three seconds] to check for activity on the current channel before you talk.

Push-to-Talk Timeout Timer

To prevent accidental transmissions and save battery life, the radio emits a continuous warning tone and stops transmitting if you press the **PTT** button for 60 continuous seconds.

Mode Button

By pressing “mode” button, the user will be seamlessly switching between two-way and weather mode. When radio is in two-way mode, **TWO-WAY** will be shown. When radio is in weather mode, **WEATHER** will be shown. Corresponding setting and information will be shown on the LCD.

Menu Options

Selecting the Channel

Your radio has 22 channels. The channel is the frequency the radio uses to transmit. Channels 8-14 are FRS 0.5 watt only and all other channels are GMRS. (See the “Channels and Frequencies” table on overleaf for details).

- With the radio on, press [channel number] until the channel number starts to flash. When the radio is on a 0.5 watt channel, display shows **Lo**. When the radio is on a 1.5 watts channel, display shows **Hi**. The current channel flashes.
- Press [+ or -] and select an unused or quiet channel.
- Press the **PTT** button to save the channel setting or [three seconds] to continue set up.

Selecting the Interference Eliminator Code

Interference Eliminator Codes help minimize interference by blocking transmissions from unknown sources. Your radio has 121 Interference Eliminator Codes. Codes 1 – 38 are standard analog codes that appear on other FRS/GMRS radios. Codes 39 – 121 are additional digital codes added for superior interference protection. 0 is the off position, no analog or digital codes are enabled.

To set the code for a channel:

- Press [three seconds] until the code starts to flash.
- Press [+ or -] to select the code.
- Press the **PTT** button to save the code setting or [three seconds] to continue set up.

You can set a different code for each channel using this procedure. An extended press of [+ or -] allows you to scroll through the Interference Code rapidly so you can quickly reach the code you want.

Note: On a radio that uses Interference Eliminator Codes, the code must be set to 0 to communicate with radios that do not have Interference Eliminator Codes. Select 0 for “no tone, no code” on the display of your radio.

