



MOTOROLA



Two-Way Radio
User's Guide



6881043B35-A

Model T4500

Congratulations on your purchase of a Motorola product!

Product registration is an important step. Registering helps us facilitate warranty service and permits us to contact you should your Motorola product require an update or other service.

To register your product online, visit:

www.motorola.com/warranty/radios.

Please retain your original dated sales receipt for your records. For warranty service of your Motorola product, you will need to provide a copy of your dated sales receipt to confirm warranty status. Registration is not required for warranty coverage.

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

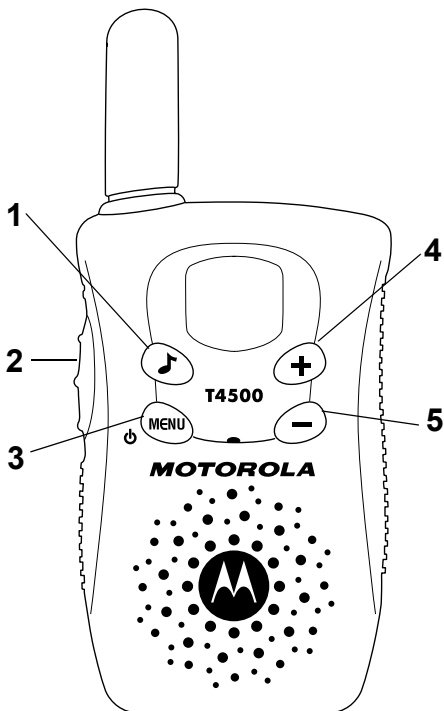
1-800-353-2729 in the USA





1-888-390-6456 TTY (Text Telephone)

On the Web:

www.motorola.com/talkabout

Finding the Controls




1	 - Short press sends call tone.
2	Push to Talk (PTT) <ul style="list-style-type: none"> • Push to transmit, release to listen. • In menu mode, push to confirm selection.
3	 <ul style="list-style-type: none"> • Long press turns radio on or off. • Short press enters menu mode, where: first press changes channel, second press turns scan on or off, third press monitors channel for activity.
4	 <ul style="list-style-type: none"> • Increases volume (volume level flashes and v displays). • In menu mode, increments channel (channel number flashes). • In menu mode, toggles scan selection (z is visible, along with flashing Y or -).
5	 <ul style="list-style-type: none"> • Decreases volume (volume level flashes and v displays). • In menu mode, decreases channel (channel number flashes). • In menu mode, toggles scan selection (z is visible, along with flashing Y or -).


Installing the Batteries

Your radio uses 3 AAA Alkaline batteries, and beeps when the batteries are low.



1. Turn the radio off.
2. Use a coin to wedge the battery cover open.
3. Insert batteries as shown on inside of battery compartment.
4. Replace the battery cover.

Turning Your Radio On and Off

To turn on, press and hold  until a channel number appears and the radio beeps.




To turn off, press and hold  until the display goes blank.

Adjusting the Volume

Press  to increase or  to decrease the volume. The volume level flashes and **v** displays.

Setting the Channel

The channel is the frequency your radio uses to transmit. Your radio has 22 channels.

1. Briefly press and release . The channel number flashes.
2. Press  or  to select a channel.
3. Press PTT to confirm.

Channel	Frequency	Description
1	462.5625 MHz	GMRS/FRS
2	462.5875 MHz	GMRS/FRS
3	462.6125 MHz	GMRS/FRS
4	462.6375 MHz	GMRS/FRS
5	462.6625 MHz	GMRS/FRS
6	462.6875 MHz	GMRS/FRS
7	462.7125 MHz	GMRS/FRS
8	467.5625 MHz	FRS
9	467.5875 MHz	FRS
10	467.6125 MHz	FRS
11	467.6375 MHz	FRS
12	467.6625 MHz	FRS
13	467.6875 MHz	FRS
14	467.7125 MHz	FRS
15	462.5500 MHz	GMRS
16	462.5750 MHz	GMRS
17	462.6000 MHz	GMRS


Channel	Frequency	Description
18	462.6250 MHz	GMRS
19	462.6500 MHz	GMRS
20	462.6750 MHz	GMRS
21	462.7000 MHz	GMRS
22	462.7250 MHz	GMRS

Talking and Listening

To talk, press and hold the PTT button. When you are finished talking, release PTT.




For maximum clarity, hold the radio 2 to 3 inches away from your mouth and speak directly into the microphone. Do not cover the microphone while talking.

Sending a Call Tone

A call tone alerts others you want to talk. To send a call tone to other radios in your group, press .

Scanning Channels

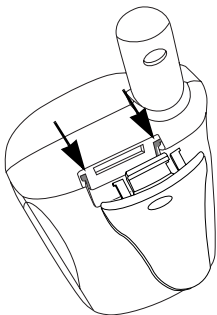
Use scanning to monitor channels and codes for transmissions, or to find someone in your group who has accidentally changed channels.

1. Press  twice until \rightleftharpoons and flashing Y or – display.
2. Press either:
 -  until Y displays to turn scanning on.
 -  until – displays to turn scanning off.
3. Press PTT to confirm.

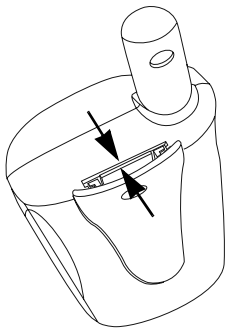
When the radio detects channel activity, it stops scanning and you can hear the transmission. To respond, press PTT within 5 seconds.

Attaching the Belt Clip (Included)

Hook the belt clip into the notch at the top of the radio and slide down until it clicks into place.



To remove, squeeze the release latch together and slide the clip up and away from the radio.



FCC Licensing Information

Your Motorola radio operates on General Mobile Radio Service (GMRS) frequencies and is subject to the Rules and Regulations of the Federal Communications Commission (FCC). The FCC requires that all operators using GMRS frequencies obtain a radio license before operating their equipment. To obtain the FCC forms, please request Forms **605** and **159**, which includes all forms and instructions. If you wish to have the document faxed or mailed, or have questions, please use the following contact information.

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

Changes or modifications not expressly approved by Motorola may void the user's authority granted by the FCC to operate this radio and should not be made. To comply with FCC requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter

maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the FCC equipment authorization for this radio could violate FCC rules.

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

Safety and General Information **Important Information on Safe and Efficient** **Operation. Read This Information Before** **Using Your Radio**

The information provided in this document supersedes the general safety information contained in user guides published prior to July 2000.

Transmit and Receive Procedure

Your two-way radio contains a transmitter and a receiver. To control your exposure and ensure compliance with the general population/uncontrolled environment exposure limits, always adhere to the following procedure:

- 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.

Transmitting 50% of the time, or less, is important because the radio generates measurable RF energy exposure only when transmitting (in terms of measuring standards compliance).

Exposure to Radio Frequency Energy

Your Motorola radio is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy:

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR part 2 sub-part J
- American National Standards Institute (ANSI)/ Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Radio Frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard 2001 (applicable to wireless phones only)

- ANATEL, Brasil Regulatory Authority, Resolution 256 (April 11, 2002) “additional requirements for SMR, cellular, and PCS product certification.”

To assure optimal radio performance and make sure human exposure to radio frequency electromagnetic energy is within the guidelines set forth in the above standards, always adhere to the following procedures.

Portable Radio Operation and EME Exposure ***Antenna Care***

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the radio and may violate FCC regulations.

DO NOT hold the antenna when the radio is “IN USE.” Holding the antenna affects the effective range.



Two-Way Radio Operation

When using your radio as a traditional two-way radio, **hold the radio in a vertical position with the microphone one to two inches (2.5 to 5 cm) away from the lips.**

Body-Worn Operation

To maintain compliance with FCC/Health Canada RF exposure guidelines, if you wear a radio on your body when transmitting, always place the radio in a Motorola-supplied or approved clip,

holder, holster, case, or body harness for this product. Use of non-Motorola-approved accessories may exceed FCC/Health Canada RF exposure guidelines. If you do not use one of the Motorola-supplied or approved body-worn accessories, and are not using the radio held in the normal use position, **ensure the radio and its antenna are at least one inch (2.5 cm) from your body when transmitting.**

Data Operation

If applicable, when using any data feature of the radio with or without an accessory cable, **position the radio and its antenna at least one inch (2.5 cm) from the body.**

Approved Accessories

For a list of approved Motorola accessories visit our website at www.mot.com.

Electromagnetic Interference/Compatibility

Note: Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

Facilities

To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any facility where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.

Aircraft

When instructed to do so, turn off your radio when on board an aircraft. Any use of a radio must be in accordance with applicable regulations per airline crew instructions.

Medical Devices - Pacemakers

The Advanced Medical Technology Association recommends that a minimum separation of six inches (15 cm) be maintained between a handheld wireless radio and a pacemaker. These recommendations are consistent with the independent research by, and recommendations of the U.S. Food and Drug Administration.

Persons with pacemakers should:

- ALWAYS keep the radio more than six inches (15 cm) from their pacemaker when the radio is turned ON.
- Not carry the radio in the breast pocket.
- Use the ear opposite the pacemaker to minimize the potential for interference.
- Turn the radio OFF immediately if you have any reason to suspect that interference is taking place.

Medical Devices - Hearing Aids

Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical device, 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.

Safety and General Use While Driving

Check the laws and regulations on the use of radios in the area where you drive. Always obey them. When using your radio while driving, please:

- Give full attention to driving and to the road.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call if driving conditions so require.

Operational Warnings

For Vehicles with an Air Bag

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

Turn off your radio prior to entering any area with a potentially explosive atmosphere, unless it is a radio type especially qualified for use in such

areas as “Intrinsically Safe.” Do not remove, install, or charge batteries in such areas. Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death.

Note: The areas with potentially explosive atmospheres referred to above include fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmospheres are often but not always posted.

Blasting Caps and Areas

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.

Operational Cautions

Antennas

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.

Batteries

All batteries can cause property damage and/or bodily injury such as burns if a conductive material such as jewelry, keys, or beaded chains touch exposed terminals. The conductive material may complete an electrical circuit (short circuit) and become quite hot. Exercise care in handling any charged battery, particularly when placing it inside a pocket, purse, or other container with metal objects.

Battery Charger Safety Instructions **Save these Instructions**

1. Do not expose the charger to rain or snow.
2. Do not operate or disassemble the charger if it has received a sharp blow, or has been dropped or damaged in any way.
3. Never alter the AC cord or plug provided with the unit. If the plug will not fit the outlet, have the proper outlet installed by a qualified electrician. An improper condition can result in a risk of electric shock.
4. To reduce the risk of damage to the cord or plug, pull the plug rather than the cord when disconnecting the charger from the AC receptacle.
5. To reduce the risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.

6. Use of an attachment not recommended or sold by Motorola may result in a risk of fire, electric shock, or personal injury.
7. Make sure the cord is located so it will not be stepped on, tripped over, or subjected to damage or stress.
8. An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and/or electric shock. If an extension cord must be used, make sure that:
 - The pins on the plug of the extension cord are the same number, size, and shape as those on the plug of the charger.
 - The extension cord is properly wired and in good electrical condition.
 - The cord size is 18 AWG for lengths up to 100 feet, and 16 AWG for lengths up to 150 feet.
9. The supply cord of this charger cannot be replaced. If the cord is damaged, call Motorola Product Services at 1-800-353-2729 in the USA or 1-888-390-6456 TTY (Text Telephone).

- **22 Channels (8 GMRS + 14 FRS)**
8 GMRS channels and 14 FRS channels to ensure backward compatibility with FRS two-way radios.
- **Scan**
Easily find your group's channel by searching all channels for activity.
- **Motorola Quality**
Shock, drop, and temperature tested to meet Motorola's high quality standards.
- **Talk Confirmation Tone**
Signals others you are finished talking.
- **Low Battery Alert**
Audible tone tells you when your radio's battery is running low.
- **Weather Resistant**
Helps protect radios against the elements.
- **1 Year Limited Warranty**
For warranty details, call 1-800-353-2729.
- **User's Guide Included**

FCC GMRS LICENSE REQUIRED



WARNING CHOKING HAZARD SMALL PARTS

Not for children under 3 years.
This product is not intended to be used
as a toy or plaything.

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