



Models T6300, T6310 and T6320

# Contents

Safety information	, 16310 Features
Getting Started1	Turning On the FM Radio
Installing Batteries2	Finding an FM Station2
CommPort™ Charging Dock 5	Preset FM Stations
Basic Operation of Your Radio 7	
Turning On Your Radio9	T6320 Features24
Talking	Compass
Before You Can Talk11	Thermometer2
To Talk	Barometer
Call Tone and Call Display 13	Altimeter2
A Alerts	Advanced Two-Way2
VibraCall ®14	Lock
	LockPlus
Keeping Time15	Channel Scanning
Setting the Time15	Talk Confirmation Tone 3
Setting the Alarm16	Button Beeps
Stopwatch	Automatic Power Off
	Monitor
Hands-Free Use (VOX)18	Reset
	Setting the Battery Type 3
Privacy19	Use and Care
Eavesdrop Reducer19	Contact Information
QuieT6000™	
Weather20	Frequency and Code Charts3
Turning On the Weather 20	Interference Eliminator Codes .3
Setting the Weather Channel 21	Troubleshooting
Setting the Weather Alert21	Motorola Limited Warranty 3

# **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. For information regarding radio use in a hazardous atmosphere please refer to the Factory Mutual (FM) Approval Manual Supplement or Instruction Card, which is included with radio models that offer this capability.

# **RF Operational Characteristics**

Your radio contains a transmitter and a receiver. When it is ON, it receives and transmits radio frequency (RF) energy. The radio operates in the frequency range of 450 MHz to 470 MHz.

#### 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
- National Council on Radiation Protection and Measurements (NCRP) of the United States, Report 86, 1986
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- National Radiological Protection Board of the United Kingdom 1995
- 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



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 two to three inches (5.0 to 7.5 cm) away from the lips.

# **Body-Worn Operation**

To maintain compliance with FCC 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. Use of non-Motorola-approved accessories may exceed FCC RF exposure guidelines. If you do not use a body-worn accessory, ensure the antenna is at least one inch (2.5 cm) from your body when transmitting.

# **Approved Accessories**

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



The Health Industry Manufacturers Association recommends that a minimum separation of 6 inches (15 centimeters) be maintained between a handheld wireless radio and a pacemaker. These recommendations are consistent with the independent research by, and recommendations of, Wireless Technology Research.

Persons with pacemakers should:

- ALWAYS keep the radio more than six inches (15 centimeters) 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.

### **Hearing Aids**

Some 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" (for example, Factory Mutual, CSA, or UL Approved). 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.

# A Charging Safety Instructions

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

- battery
- 2. battery charger, and
- 3. radio using the battery.

#### Caution

To reduce the risk of injury, charge only the rechargeable batteries listed. Other types of batteries may burst, causing personal injury and damage.

# Single-Unit Charger

Kit Number Description

NTN9393 110V - NiMH Charging Adapter

#### **Batteries**

Capacity in

Kit Number milliampere-hour mAH Description Composition

NTN9395 550 mAH T6000-Series NiMH

#### Save these Instructions

- 1. Do not expose the charger to rain or snow.
- Do not operate the charger if it has received a sharp blow, or has been dropped or damaged in any way.
- 3. Do not disassemble the charger if it has received a sharp blow, or has been dropped or damaged in any way.
- Never alter the AC cord or plug provided with the unit. If plug will not fit the outlet, have proper outlet installed by a qualified electrician. An improper condition can result in a risk of electric shock.
- To reduce risk of damage to cord or plug, pull the plug rather than the cord when disconnecting charger from AC receptacle.
- 6. To reduce the risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.
- 7. Use of an attachment not recommended or sold by Motorola may result in a risk of fire, electric shock, or personal injury.
- Make sure that the cord is located so that it will not be stepped on, tripped over, or subjected to damage or stress.
- 9. 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.
  - -That the extension cord is properly wired and in good electrical condition, and
  - -That the cord size is18 AWG for lengths up to 100 feet, and 16 AWG for lengths up to 150 feet.
- 10. The supply cord of this charger cannot be replaced. If the cord is damaged, the charger should be discarded or returned to the point of purchase if within 90 days of purchase.



# **Getting Started**

Hi, I'm QuickStart and I'm going to help you get started!

The Motorola® Talkabout® T6300, T6310, and T6320 radios are durable two-way radios that allow you to stay connected to family, friends, and companions. They operate on Family Radio Service (FRS) frequencies, require no service fee or license, and can be used anywhere in the United States and other areas as listed by the FCC.

But these radios offer more than just a way of keeping in touch. They also help you and your group stay on schedule because a clock, alarm, and stopwatch are built into each model. And they will even alert you with emergency weather broadcasts. The

weather won't ever surprise you again!

The T6310 is a stylish two-way radio that receives FM stereo. It's fun and cool, great for the beach. And it includes all the features found on the Motorola Talkabout T6300.

The T6320 is rugged and sporty. It includes a digital compass, thermometer, barometer, and altimeter, so you won't get lost in the woods or on the mountain. These tools, along with all the other great stuff found on the T6300 radio, make the T6320 essential gear when going outdoors.

The T6300, T6310, and T6320 radios are also easy to use. Just take a few minutes to read this user's guide and you're ready to share your adventure.

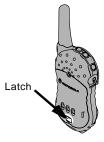
A detachable Quick Reference Card is on the back cover.



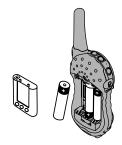
# Installing Batteries

Your radio uses three AA batteries or a rechargeable Nickel-Metal Hydride (NiMH) battery.

Some radios include a NiMH battery with charger adapter cover, CommPort™ charging dock, and charger. If you don't have these items, they're also available in the NiMH battery upgrade kit (56319).



- Turn off the radio (see page 9).
- Push latch up until it clicks.
- Lift back cover off.



 Remove and replace batteries so the + and markings match the ones in the compartment or the NiMH charge contacts are facing out.



- Hook back cover on the hinges.
- Align tabs.
- Close battery door, pressing lightly until latch clicks.

**Note:** The radio keeps the clock settings if battery changes are made in less than 20 seconds. Try replacing one battery at a time.



The battery meter on the top-left corner of the display shows how much battery power you have. It shows \( \bigcup\_{\text{(full)}} \), \( \bigcup\_{\text{(two-thirds full)}} \), \( \bigcup\_{\text{(one-third full)}} \) (almost empty). When it's \( \bigcup\_{\text{(wo-thirds full)}} \), the radio beeps every ten minutes. So, change or charge those batteries!

#### **Battery Life**

The following chart lists the approximate battery life for each type of radio use.

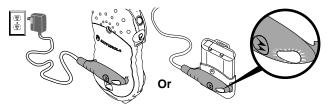
ū	• •	
Battery Type	Two-Way Use*	FM Stereo with Earbuds or Headset
AA alkaline	35 hours	30 hours
NiMH	12 hours	9 hours

<sup>\*</sup>Two-way use is defined as 90% standby time, 5% talk time, and 5% receive time.

**Note:** Use earbuds or a headset to minimize battery drain while using the FM stereo feature (T6310 only).

# Charging the NiMH battery

Charge the NiMH overnight (12 to 16 hours) before using it for the first time, it will only need up to four hours of charging thereafter.



 Turn off the radio (see page 9) or place the NiMH battery in the charger adapter cover.

• Plug in the charger.

At the contacts on the back of the radio, or if charging just the battery, at the battery contacts:

- Position the charger with the hook on the LED end of the charger placed over the larger slot.
- Snap the hook on the cord end into the smaller slot.

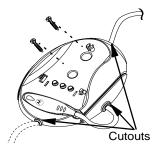
Note: If you notice the LED flashing red for more than a minute while clamping the charger onto the charger adapter cover, the battery is faulty and should be replaced.

 When the LED turns solid green, the battery is fully charged.

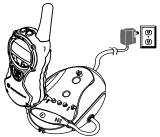
Note: When charging the battery by itself, remove the charger from the charger adapter cover before installing or removing the battery.

# **CommPort™ Charging Dock**

The CommPort<sup>™</sup> charging dock provides drop-in charging convenience. The charging dock can be mounted or placed on any flat surface (such as a wall or workbench) and turns your radio into a stationary intercom while keeping it charged and ready for any adventure.







To mount the charging dock:

- Wrap the power cord under the charging dock.
   Use the cutouts to hold the cord in place.
- Attach using two #6 x 3/4" screws appropriate for the mounting surface.
- Position the charger with the hook on the LED end over the left slot.
- Snap the hook on the cord end into the right slot, clamping the charger onto the charging dock contacts
- Plug in the charger.

- Place the radio, or the NiMH battery in the charger adapter cover, into the CommPort charging dock.
- When the LED turns solid green, the battery is fully charged.

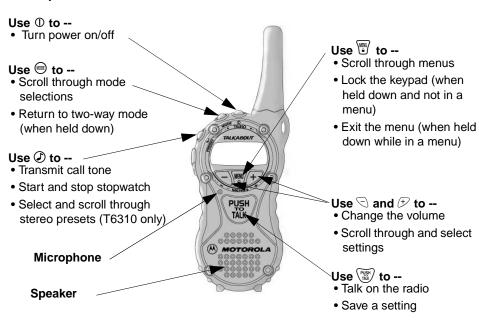
# **Charging Status**

The LED charger indicates charging status when the charger is connected to the radio, the NiMH battery, or the CommPort™ charging dock.

Color	Charging Status and Description	Charging Level Complete
Solid Red	Rapid charging	Up to 90%
Flashing Green	Top-off charging	90% to 100%
Solid Green	Charging complete	100%
Flashing Red	Battery faulty	-
	If flashing red persists for more than one minute, the battery is faulty and should be replaced.	
Flashing Yellow	Standby	-
	Battery waiting to charge.	
	Temperature out of range for charging; must be between 5° to 40° C or 41° to 104° F	

#### **Basic Operation of Your Radio**







# **Belt Clip**

 Squeeze the top and bottom of the clip to attach or detach the clip from the radio.

Note: The belt clip holds the radio while being worn on your belt. It was designed for your convenience and is not meant to secure your radio under all circumstances.

> NiMH Battery Charging Contacts

# Accessory Connector (and FM Connector on T6310)

- For audio accessories, such as speaker/ microphone and flexible ear receiver.
- FM stereo earbuds (T6310 only) or any standard stereo headset.

Note: Connector(s) shown with the cover plug in place. Both connectors cannot be used at the same time.

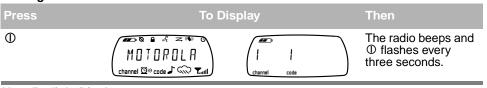
Check out the Accessory Brochure for other cool stuff available from Motorola.

When using audio accessories with your radio, Motorola recommends that the volume level be kept at a comfortable listening level.

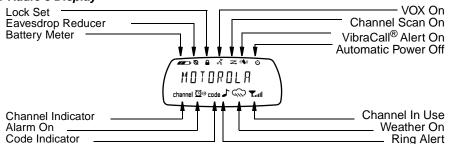
Using your radio is easier than catching a wave!



# Turning On Your Radio



#### Your Radio's Display



# Turning Off Your Radio

To turn off your radio, press and hold  ${\tt 0}$  until the radio beeps and the display goes blank.

#### Modes

Your radio can transmit and receive in all modes except the weather mode. The T6300, T6310, and T6320 standard modes are: THO WAY, TIME, STPWATEH, WEATHER, and SETTINGS. The T6310 also has an FMSTERED mode. The T6320 has EDMPRSS, TEMPERAT, DARDMETER, and RLTIMETR modes in addition to the standard modes.

# **Key Sequence**

Almost everything you can do with your radio is done using the same basic key sequence! Use your radio's mode and menu screens to select options and set features the way you want them. All the features that work using this key sequence are described on the following pages.

Press	To Display	Then Press
MODE	the mode you want	to display the associated menus
MENU	the menu you want	$\bigcirc$ or ${\mathcal D}$ to select the menu
☐ or ⊕	the setting you want	or wait ten seconds to save the setting or press and hold



#### Backlight

Being in the dark is never a problem. Your radio has a backlight that turns on automatically any time you press a button, except and . The backlight turns out when you're talking on the radio and turns itself off automatically after five seconds.

# **Talking**

#### **Before You Can Talk**



Have you ever tried to talk to someone who's on a "different wavelength?" It's not easy, is it? Well, you can't talk with someone else on your two-way radio unless you ARE BOTH on the same channel and using the same interference eliminator code.

The channel is the radio frequency wave your radio uses to transmit. The interference eliminator code filters out static, noise, and unwanted messages. Refer to the Frequency and Code Charts beginning on page 35 for channel and code choices.

#### Setting the Channel

Remember that basic key sequence? Use it now!

To set the channel, select the TWD WAY mode and the SET CHAN menu.

#### Setting the Code

To set the code, select the TWD WAY mode and the SET CODE menu.

Your radio displays **T** whenever the channel frequency is in use. Keep scrolling until you get a clear one.

# **Channel Frequency in Use**



Your radio can save a specific code for each channel. Set the channel and code and while operating, press and then scroll between selected channel and code settings.



#### Radio Volume

Can we talk yet?



Sure, but you should adjust the volume first. Press  $\subseteq$  or  $\mathscr{D}$  until it's just right. If you want to, sound your call tone by pressing  $\mathfrak{D}$ 

#### To Talk

Press and hold and talk two-to-three inches away from the microphone. When you're finished, just let go. While transmitting, glows red.

# Talking Range



#### **Optimal Range**

 Flat, open areas from five feet up to two miles



Medium Range

Buildings or trees



Minimal Range

Dense foliage or mountains

# Using Accessories

Make sure the radio is turned off before plugging audio accessories into the accessory port. Before you place an accessory on your head or in your ear, turn the volume down. After placing the accessory on your head or in your ear, adjust the volume by pressing  $\bigcirc$  to  $\mathcal F$ .

### Signal Strength Indicator

The signal strength indicator can help you determine when a radio is moving out of range. It is a number displayed when you're receiving on the same channel and code as another transmitting radio and it indicates the relative signal strength of the transmitting radio: l is weakest (usually farthest away) and l is strongest (usually closest).

**Note:** Obstacles that block the signal path may affect the signal strength indicator function.

#### **Call Tone and Call Display**

Don't you hate it when you miss a call?

I mean it could be someone really impo

I mean it could be someone really important. A call you need to take right away. Or worse, someone you're trying to reach may not know that you've called because their surroundings are too noisy.

Your radio can transmit ten different call tones. To set your call tone, select the TWD WAY mode and the SET CALL menu. The radio plays a sample of each tone as you scroll through them. To use your call tone, just press ② to transmit it to others.

You can always tell if someone using a T6000-Series radio is trying to reach you when your radio displays the call received screen...



### **Alerts**

You can determine how your radio will alert you when you're receiving: vibrate, ring, or both. Your radio will notify you with your selected alert if 30 seconds have passed since your last transmission or incoming call.

# VibraCall ®

Your radio features VibraCall<sup>®</sup>, a vibrating alert to notify you of two-way radio reception in noisy environments.

UFF -- your radio doesn't sound an alert except for the audio reception when receiving.



VII ON -- your radio vibrates to alert you.



PING-- your radio RINGS your call tone when receiving.

VIII+RINБ--your radio vibrates and rings your call tone when receiving.

To set VibraCall<sup>®</sup>, select the £111N65 mode and the £1111 menu.

# **Keeping Time**

Your radio has several features to help you keep track of time: stopwatch, alarm, and the clock display can be set as your standby screen.

### **Setting the Time**

Setting the time is easy! Use the basic key sequence to select the TIME mode and the SET TIME menu, then .....

Press	To Display	Then Press
$\  \   $ and $\  \   $ to set hours and minutes	3:00 PM	to move between hours and minutes

#### Setting the Clock Display

To display the clock, select the TIME mode and the SET ITSP menu.

If you choose to display the clock, the time screen becomes your two-way radio's standby screen. It appears whenever the radio is on and nothing else is happening.

# **Setting the Alarm**

To set the time the alarm will sound, select the TIME mode and the FLARMIME menu, and set the alarm time the same way you set the clock time.

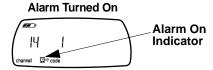


The alarm volume is the same as the radio volume, so make sure it's loud enough.

To set the alarm, select the TIME mode and the SET ALARM menu. Press  $\bigcirc$  and  $\mathcal B$  to select ALARM ON (or ALARM OFF).



"I'm all shook up."
Your alarm will now sound your call tone at the set time every day.



# Turning Off the Alarm

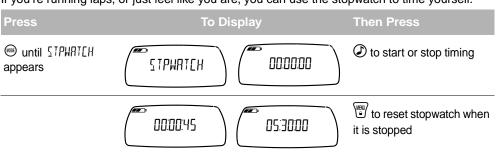
When the alarm rings and  $\mathfrak{D}$  flashes, turn it off by pressing any button. If you don't turn off the alarm, it rings and  $\mathfrak{D}$  flashes every ten seconds for up to one minute.

If your radio is turned off, it turns on automatically at the same time every day when the alarm sounds. And, the radio stays on if you don't turn off the alarm. So turn it off and save your batteries!

On T6310 radios, if the FM stereo is on when the radio is turned off, the FM stereo plays when the alarm sounds and the radio turns on.

#### Stopwatch

If you're running laps, or just feel like you are, you can use the stopwatch to time yourself.



Your stopwatch has a lap timer function too. While the stopwatch is running, press to obtain the lap time. Press again to switch back to stopwatch.

**Note:** If you turn off the radio or take it out of stopwatch mode, the stopwatch time resets.





# Hands-Free Use (VOX)



#### LOOK. NO HANDS!!

Your radio has built-in Voice Operated Transmission (VOX), which allows you to transmit "hands-free" just by talking or using VOX accessories. After VOX has been set and turned on, you can use it anytime you want your hands free for other things.

To turn on VOX, quickly press and release and release will begin to flash. Your radio will now transmit every time you talk. Press to turn off VOX and return to the regular way of transmitting. The off will stop flashing. To reset VOX use, select #### IFF.

The VOX sensitivity level allows you to compensate for background noise. This minimizes the chance of unintended noises triggering a transmission.

To set the VOX sensitivity level, select the  $\SEIIINGS$  mode and the  $\SEII$   $\SENS$  menu, then select high (HI) for quiet environments, medium (HEII), or low (LII) for noisy environments.

VDX MEII is recommended for most situations, although you may need to experiment until you get the right setting.

When you connect a VOX accessory, the radio will automatically set to VDX and of will begin to flash, indicating that the radio is ready to transmit each time you talk.

When you transmit using a VOX headset, you'll hear yourself talking through the accessory speaker. This feature lets you know VOX is working.

### **Privacy**

#### **Eavesdrop Reducer**



Just between you and me, there are many things we need to keep under wraps ... Your radio has the Eavesdrop Reducer feature, a scramble code that makes your transmissions sound garbled to anyone listening. It doesn't guarantee secrecy, but it adds an extra layer of privacy. Don't forget -- all the radios have to be set to the same scramble code for the transmissions to be clear.

To set the scramble code, select the TWD WAY mode and the SETSERAM menu, then select code SERM 1, SERM 2 or SERM 3. Your display will now show  $\mathfrak{D}$ . To turn scramble code off, select SERM DFF.

#### QuieT6000™

The QuieT6000™ function helps ensure uninterrupted communication between Motorola Talkabout T6300-series radios - it helps to prevent you from hearing transmissions from anything other than these radios. If you and your companions use only the MotorolaTalkabout T6300-series radios with QuieT6000 on, you'll minimize the chance of being interrupted by others (but they can hear you).

To turn the QuieT6000 function on or off, select the  $\SETTINGS$  mode and the  $\SETGUIET$  menu. All the radios have to be set to  $\SUIET$   $\S{ON}$  to avoid interruptions. You need to transmit a call tone before talking, other radios on your channel and code can then receive and transmit until 30 seconds of inactivity occurs which resets the QuieT6000 function. # is displayed in the signal strength area of the two-way mode display to indicate that the QuieT6000 function is on, and it flashes while on a call with another MotorolaTalkabout T6300-series radio.



#### Weather



You can't change the weather, but you can be prepared for it whenever you take your Motorola Talkabout T6300, T6310, or T6320 radio with you. That's because it tunes in National Oceanic and Atmospheric Administration (NOAA) Weather Radio broadcasts. You can listen to a weather channel or you can even set your radio to alert you to emergency weather broadcasts.

And because NOAA Weather Radio now broadcasts warning information for all types of hazards, routine broadcasts are interrupted during emergencies for natural and technological warnings, watches, and other critical information.

NOAA has transmitters located throughout the United States that broadcast National Weather Service warnings, watches, forecasts and other hazard information 24 hours a day.

Whenever you are listening to the weather channel, you cannot use your radio for two-way communications. However, a weather alert will notify you while the radio is in other modes and it will override FM Stereo broadcasts (T6310 only).

# **Turning On the Weather**

To turn on weather channel reception, select the WERTHER mode and the SET WER menu.

To turn off weather channel reception, select WER OFF or take the radio out of weather mode.

### **Setting the Weather Channel**

Your radio receives six NOAA frequencies. (See the Frequency and Code Charts beginning on page 35 for a complete list.)

After turning on the weather broadcast, select the WERTHER mode and the SET EHRN menu to select the strongest channel.

**Note:** As with two-way radio reception, weather channel reception depends upon how close you are to a transmitter. If you're out of range you'll hear static--try another weather channel.



#### ...We interrupt this broadcast to bring you a special bulletin...

Well, almost. You can program your two-way radio to cut in and switch to the weather channel whenever it receives an emergency weather advisory.

#### **Setting the Weather Alert**

If you set the weather alert, whenever NOAA transmits an emergency weather broadcast, your radio switches to the selected weather channel when it detects the transmission.

To set weather alerts, select the WERTHER mode and the SET RLERT menu. When weather alerts are set,  $\iff$  is displayed.

Note: The TalkAbout T6000-series two-way radios are designed to be two-way radios primarily, with the added utility of features such as Weather Alert. The radio uses the same circuitry for both two-way radio and weather alert receptions. Therefore, it is possible to miss a weather alert while you are engaged in two-way communication (either transmitting or receiving). To ensure that you do not miss a weather alert, leave the radio in the Weather Mode.

#### T6310 Features



Are you cool? Well you will be if you take your Motorola Talkabout T6310 radio with you. It has an FM radio mode, to let you tune in, tune out, and stay cool.

Your radio allows you to search for (seek) FM stations in the local area. It even has a tune feature so you can search for and receive weak or distant stations. You can also program your radio to receive your favorite radio stations by using the preset feature.

The FM stereo reception is only available on the T6310. It comes with stereo earbuds but can use any standard connection stereo headset.

**Note:** FM reception and battery life are best when using stereo earbuds instead of the radio speaker.

#### **Turning On the FM Radio**

Turning on the FM radio is easy. And, don't worry, you can still receive calls. The two-way radio will cut right through the FM reception whenever it receives a call. To use the FM Stereo, select the FM STERED mode and the SET FM menu.

If you just want to listen to the radio and you don't want to be interrupted by calls, the SETZHAY setting allows you to do just that. This setting is reset when the mode is changed or the power is turned off.

#### Finding an FM Station

Finding a cool station when you are in a new area is easy with your radio's SEEK FM feature. It scans the airwaves for active radio stations, stopping at each one.



To use the seek feature, select the FM  $\$  TERED mode and the SEEK FM menu, then  $\$  and  $\$  until you find a station you like

Note: Your radio plays each station it finds as it scans.



### **Tuning Your FM**

This feature allows you to change the FM radio station by increments of 0.1 kHz. Unlike SEEK FM which scans for strong signals, TUNE FM allows you to tune in weak stations.

To use the tune feature, select the FM STERED mode and the TUNE FM menu, then  $\bigcirc$  and  $\mathscr D$  until you have a clear signal.

#### Preset FM Stations

You have eight preset stations. To preset a station, select the FM STERED mode and the PRESET menu, then scroll through the presets to the one you want to change. Press ② and scroll through the FM stations. When you find the station you want to preset, press ②.



Later, when you want to play them, press 2 to scroll through your settings until you reach one you like. Then let go and enjoy!

# T6320 Features

CAUTION: The T6320 contains sophisticated electronic measuring components (compass, barometer, and altimeter). These components require calibration and care to function properly. Improper calibration or care will result in inaccurate readings.

# Compass

The compass feature is an accurate and instantaneous directional aid. When held horizontally, the direction the radio antenna is pointing is displayed. The compass displays eight cardinal points (N, NE, E, SE, S, SW, W, and NW) and the corresponding numeric compass degrees from north; for example 17°, 26°. Calibrate the compass for first use, after changing batteries, during and after use in a motor vehicle, or after major changes in global position.

**Note:** The effect of electric accessories and high current devices present in motor vehicles can cause incorrect compass readings. The compass should be recalibrated during and after use in a motor vehicle.

#### Calibrating the Compass

To calibrate the compass, select the <code>EDMPRSS</code> mode and the <code>ERLIBRIT</code> menu. Keep the radio level during the calibration procedure. After turning calibration on, hold the radio horizontally and rotate it at least a full circle (360°). Press or turn calibration off to set the calibration.

Note: Each time you select [ALII IN, you must perform the calibration procedure. Selecting [ALII IN clears previous calibration settings.

#### **Compass Declination**

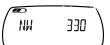


Compass declination, also called 'variation' in mariners' and aviators' jargon, is the angle between where a compass needle points, referred to as 'magnetic north', and the true north pole. To set the compass declination, select the <code>EDMPRSS</code> mode and the <code>BELLINAT</code> menu. You can set the compass declination from magnetic north by pressing the  $\cite{Compass}$  or  $\cite{Compass}$  until the desired setting appears, then pressing  $\cite{Compass}$  to set.

Note: If you notice an incorrect compass reading and your compass has been calibrated, you may need to set the compass declination for your area. Visit www.motorola.com or call Motorola for details on setting compass declination for your area.

#### **Using the Compass**

Press until LOMPRS appears. Let go and the compass screen displays -- showing the direction and degrees. If --- is displayed instead of degrees from north, recalibrate the compass.



#### Thermometer

The thermometer feature measures the ambient temperature in the selected unit of measurement (Fahrenheit or Celsius). When moving from environments with moderate temperature differences, wait 20 minutes for the thermometer feature to acclimate. Otherwise, the temperature readings may not display accurately.

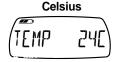
#### Using the Thermometer Feature

Press until TEMPERAT appears.

The temperature screen displays --

showing the temperature in the selected unit of measurement.





#### Setting the Units of Measurement

To set the units of measurement for the thermometer, select the <code>TEMPERAT</code> mode and the <code>SETUNITS</code> menu. Press  $\bigcirc$  or  $\mathscr F$  until your choice of <code>FRHRENHT</code> or <code>EELSIUS</code> appears, then press to set.

#### Barometer

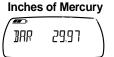
The barometer feature measures changes in atmospheric air pressure. Increases in pressure generally indicate stable or improving weather, while decreases in pressure indicate changing or stormy weather.

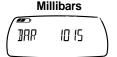
**Note:** The barometer feature displays the actual barometric pressure at the current altitude. The display has not been corrected to the barometric pressure at sea level.

#### Using the Barometer

Press until IRRIMETR appears.

The barometer screen displays
-- showing the atmospheric
pressure in the selected unit of
measurement.





#### Setting the Units of Measurement

To set the units of measurement for the barometer, select the IRPOMETP mode and the SETUNITS menu. Press  $\bigcirc$  or  $\mathscr D$  until your choice of INH5, or MIRP appears, then press w to set.

#### **Altimeter**



The altimeter feature estimates your altitude based upon atmospheric pressure. You can also use the altimeter to display a relative change in height from one point to another.

#### Using the Altimeter

Press until #LTIMETR appears.

The altimeter screen displays -showing the altitude in the selected unit of measurement.



Altitudes measured in feet, display in 20-foot increments; while altitudes measured in meters, display in 5-meter increments

#### Setting the Units of Measurement

To set the units of measurement for the altimeter, select the ALTIMETR mode and the SETUNITS menu. Press  $\bigcirc$  or  $\mathscr D$  until your choice of FEET, K FEET (thousands of feet), METERS, or K METERS (kilometers) appears then press to set.

#### Setting the Altimeter Level

Because the altimeter display is based upon atmospheric pressure, it is only an approximation of altitude above sea level. Therefore, it's important to set the altimeter level to the correct altitude (if you know it) each time you head outdoors. Or, you can set your starting level to  $\square$  so that the next altimeter display is the change in altitude relative to your starting point.

To set the altimeter level, select the ALTIMETP mode and the SETLEVEL menu. Press  $\bigcirc$  or  $\mathscr D$  to set the altimeter level to the correct height or press the ② button to set the level to  $\square$ .

### **Advanced Two-Way**

#### Lock



You can make sure your menu settings won't be changed accidentally.

Just turn on the menu lock by pressing 🗑 for three seconds. Now you'll see a 🖨 on the display like this--

#### **Locked Screen**



Lock only locks settings. You can turn off the menu lock by pressing for three seconds again. disappears from your display when it's turned off.

#### LockPlus

The LockPlus feature locks all the buttons except  $\mathbb{O}$ ,  $\mathbb{O}$  and  $\mathbb{O}$ . Meaning that you can only turn the two-way radio on and off and transmit.

Turn on the LockPlus feature by pressing for six seconds, the display will show a flashing

■ You can turn off the LockPlus feature by pressing for six seconds again.



#### **Channel Scanning**



By using SERN, you can monitor channels and codes for transmissions and lock in on the one that interests you. You don't have to set a new channel or code, the radio just resets itself temporarily to that channel and code and you can start talking. However, if no transmissions take place for five seconds, scanning resumes.

After you turn on SERN, your radio scans channels and codes until it finds an active one and locks on to it. If you do not begin talking or no one else transmits within a short time, it will resume scanning.

If you want to scan channel frequencies without interference eliminator codes, change your code to  $\mathbb{I}$ .

#### **Turning on Channel Scanning**

To set channel scanning, select the  $\frac{1}{1}$  Why mode and the  $\frac{1}{1}$   $\frac{1}{1}$   $\frac{1}{1}$  menu. Your channel/code screen displays  $\stackrel{2}{\Longrightarrow}$  and scrolls through channels when scanning is turned on.

#### Scan List

#### **Talk Confirmation Tone**



Whenever you turn on the talk confirmation tone feature, your two-way radio transmits a unique tone when you finish transmitting. It's like saying "Roger" or "Over" and lets others know when to begin talking.

To set this feature, select the <code>SETTINGS</code> mode and the <code>SETROSER</code> menu.

#### **Button Beeps**

The button beeps feature allows you to control whether the radio beeps every time you press a button. Turn it off if you want quiet radio operation. To set the button beeps feature, select the  $\Sigma EFSDFF$ ; mode and the  $\Sigma EFSDFF$  menu. To turn off the button beeps feature, select EEPSDFF; to turn on the button beeps feature, select EEPSDFF in turn on the button beeps feature, press and hold  $\subseteq$  when turning on the radio.

Call Tones are not heard on the transmitting radio when button beeps are off.

#### **Automatic Power Off**

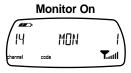
You can program your radio to turn itself off after a certain period of inactivity. This helps save battery life.

To set the automatic power off feature, select the <code>SETTINGS</code> mode and the <code>SETPWPIWN</code> menu. Choose the number of hours <code>HOUPS I -- B</code>, after which, power shuts off. Choose <code>HOUPS ---</code> to turn off the automatic power off feature. ② displays on the screen when the automatic power off feature is set.

# Monitor

Using the monitor feature helps to improve the reception of your radio if you're frequently almost out of range. It also allows you to listen to a channel frequency without codes (carrier squelch) to tell whether or not it's currently in use. To use the monitor, select the THO WAY mode and the SET MON menu.

Your channel and code screen will look like this. You'll hear static if the channel frequency is unused. Changing from two-way mode will turn monitor off.



#### Reset

You can reset your menu settings to the default settings by turning your radio off and then pressing 0, 0, and 1 at the same time.

#### **Setting the Battery Type**

The SET INTT feature allows the battery meter to recognize and properly display the power usage for either alkaline or aftermarket rechargeable single-cell nickel cadmium (NiCd) batteries. To set the battery type feature, select the SETTINGS mode and then SET INTT. Press or \$\mathcal{B}\$ or \$\mathcal{B}\$ until your choice of \$\mathcal{B}\$ LKBLINE or \$\mathcal{B}\$ETTLE appears, then press \$\mathcal{B}\$ to set.

#### **Use and Care**







Use a soft cloth moistened with Do not immerse in water. soap and water to clean the exterior.

Do not use alcohol or cleaning solutions.

If the radio gets wet...



Turn it off and remove batteries.



Dry with soft cloth.



Do not use until completely dry.



### **Contact Information**







Repairs

Warranty

Questions

1-800-353-2729 (U.S.) 1-800-461-4575 (Canada) 1-800-739-7834 (TTY)

On the web, please visit www.motorola.com

#### **Frequency and Code Charts**

The charts on these pages provide frequency and code compatibility information. These charts are useful when using Motorola Talkabout two-way radios with other two-way radios.

Channel Frequency Chart							
Channel	MHz	Channel	MHz				
1	462.5625	8	467.5625				
2	462.5875	9	467.5875				
3	462.6125	10	467.6125				
4	462.6375	11	467.6375				
5	462.6625	12	467.6625				
6	462.6875	13	467.6875				
7	462.7125	14	467.7125				
Weather Frequency Chart							
WX1	162.550	WX5	162.450				
WX2	162.400	WX6	162.500				
WX3	162.475						
WX4	162.425						

Carrier squelch (0) disables interference eliminator codes. This allows you to monitor all activity on the channel you are using.

Interference Eliminator Codes								
Talkabout Code	Hz Freq	Motorola 7/7x Code	Talkabout Code	Hz Freq	Motorola 7/7x Code	Talkabout Code	Hz Freq	Motorola 7/7x Code
1	67.0		14	107.2	D	27	167.9	
2	71.9		15	110.9		28	173.8	
3	74.4		16	114.8		29	179.9	
4	77.0	Α	17	118.8	E	30	186.2	
5	79.7		18	123.0		31	192.8	
6	82.5		19	127.3	F	32	203.5	
7	85.4		20	131.8		33	210.7	
8	88.5	В	21	136.5	G	34	218.1	
9	91.5		22	141.3		35	225.7	
10	94.8		23	146.2		36	233.6	
11	97.4	С	24	151.4		37	241.8	
12	100.0		25	156.7		38	250.3	
13	103.5		26	162.2				

### **Troubleshooting**

No Power	Reposition or replace alkaline batteries.			
	Recharge or replace NiMH battery.			
Message not transmitted	Make sure ( is completely pressed as you transmit.			
	Reposition, replace, or recharge batteries.			
Message not received	Confirm radios have the same channel and interference eliminator code settings.			
	Make sure is not being pressed.			
	Reposition, replace, or recharge batteries.			
	QuieT6000 feature is on, transmit call tone before talking.			
	Obstructions and operating indoors, or in vehicles, may interfere change location.			
Hearing other noises or	Confirm interference eliminator code is set.			
conversation on a channel	Shared channel or interference eliminator code may be in use, try another.			
Message scrambled	Eavesdrop Reducer scramble code is on or setting doesn't match other radios; all radios must use the same scramble code.			

Limited talk range	Steel and/or concrete structures, heavy foliage, use in buildings or vehicles decrease range. Check for clear line of sight to improve transmission.		
	Wearing radio close to body such as in a pocket or on a belt decreases range. Change location of radio.		
Heavy static or interference	Radios are too close, they must be at least five feet apart.		
	Radios are too far apart or obstacles interfering with		
	transmission. Talk range is up to two miles in clear, unobstructed conditions.		
Channel and/or code locked	Make sure radio is unlocked. See page 29.		
Low batteries	Replace alkaline batteries. Recharge or replace NiMH battery. Extreme operating temperatures affect battery life.		
Charger LED double flashing	Charger not properly positioned. Reposition charger and ensure it is firmly clamped to the radio, battery, or charging dock.		
	Battery power is very low; battery is charging up slowly before it starts to quick charge.		
Cannot activate VOX	Feature not set and on. See page 18.		
Poor FM reception	FM stereo use is optimal with use of stereo earbuds.		

#### **Motorola Limited Warranty**

#### For Two-Way Family Radios

#### I. What this Warranty Covers and for How Long

The Motorola company listed below ("Motorola") warrants its Two-Way Family Radios (the "Products") against defects in materials and workmanship under normal use for a period of one year from the date of purchase. This warranty extends to the first end-user purchaser only, and is not transferable.

Motorola, at its option, will at no charge either repair, replace or refund the purchase price of any Products that do not conform with this warranty. Repair may include the replacement of parts with functionally equivalent reconditioned or new parts. Replacement may include providing a functionally equivalent "Motorola Certified Reconditioned" or a new Product. Products that have been repaired or replaced are warranted for the balance of the original warranty period or for 90 days from the date that the repaired or replaced Product is received by you, whichever is longer. All Products for which replacements have been provided will become Motorola's property.

#### II. Other Warranty Conditions

This warranty is valid only in the United States and Canada, and is Motorola's complete warranty for the Products. Motorola assumes no obligation or liability for changes to this warranty unless made in writing and signed by an officer of Motorola.

Motorola does not warrant any installation, maintenance, or service that it did not perform. SERVICE WORK PERFORMED BY SERVICE CENTERS NOT AUTHORIZED BY MOTOROLA TO PERFORM SUCH WORK WILL VOID THIS WARRANTY.

#### III. What This Warranty Does Not Cover

- Defects or damage resulting from: use of the Products in any manner not normal or customary; misuse, accident or neglect such as dropping the Products onto hard surfaces, contact with water, rain or extreme humidity, contact with sand, dirt or the like, contact with extreme heat, spills of food or liquid; improper testing, operation, maintenance, installation, adjustment; or any alteration or modification of any kind.
- Scratches or other damage to plastic surfaces, cracked displays, or other externally exposed parts caused by use of the Products.
- Products disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection and testing to verify any warranty claim.
- Products on which serial numbers or date tags have been removed, altered or obliterated.

## IV. How to Get Warranty Service 1-800-353-2729 USA

To get warranty service, please call:

1-800-461-4575 Canada

You will receive directions on how to mail the Products to Motorola.

All Products shipped to Motorola Service Centers must be shipped with freight and insurance prepaid. Along with the Products you must include a receipt, bill of sale, or some other comparable proof of purchase, a written description of the problem and, most importantly, your address, and telephone number. Products that are repaired or replaced under this warranty will be shipped you at Motorola's expense for the freight and insurance. If additional information is needed, please contact Motorola at the address at the bottom of this document.

#### V. General Provisions:

THIS IS THE COMPLETE WARRANTY FOR THIS PRODUCT BY MOTOROLA AND SETS FORTH YOUR EXCLUSIVE REMEDIES. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE GIVEN ONLY IF SPECIFICALLY REQUIRED BY APPLICABLE LAW. OTHERWISE, THEY ARE SPECIFICALLY EXCLUDED. IN NO EVENT SHALL MOTOROLA BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE ACCESSORY, OR FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT, TO THE FULL EXTENT THESE DAMAGES MAY BE DISCLAIMED BY LAW.

#### VI. Patent and Software Provisions

Motorola will defend at its own expense, any suit brought against you to the extent that it is based on a claim that the Products infringe a United States patent. Motorola will pay those costs and damages finally awarded against you in any such suit which is attributable to any such claim. The defense and payments by Motorola are conditioned on the following: (a) that you will notify Motorola promptly in writing any notice of the claim; and (b) that Motorola will have sole control of the defense of the suit and all negotiations for its settlement or compromise; and (c) should the Products become, or in Motorola's opinion be likely to become, the subject of a claim of infringement of a United States patent, that you will permit Motorola, at its option and expense, either: to procure for you the right to continue using the Products or parts; to replace or modify them so that they become non-infringing; or to grant you a credit for such Products or parts as depreciated and accept their return. The depreciation will be an equal amount per year over the lifetime of the Products, accessories,

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Some states and jurisdictions do not allow the limitation or exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or from one jurisdiction to another.

Motorola:

In the USA:

Motorola, Inc.

600 North U.S. Highway 45

Libertyville, IL 60048

In Canada:

Motorola Canada Limited

5875 Whittle Road

Mississauga, ON L4Z 2H4

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#### FCC License Not Required

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.

#### Patent Notice

This product is covered by one or more of the following United States patents.

5896277 5894292 5864752 5699006 5742484 D408396 D399821 D387758 D389158 5894592 5893027 5789098 5734975 5861850 D395882 D383745 D389827 D389139

5929825 5926514 5953640 6071640 D413022 D416252 D416893

#### Export Law Assurances

This product is controlled under the export regulations of the United States of America and Canada. The governments of the United States and Canada may restrict exportation and re-exportation of this product to certain destinations. For further information, contact the U.S. Department of Commerce or the Canadian Department of Foreign Affairs and International Trade.



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Consumer Products Division 1125 Satellite Road, Suite 101 Suwanee, GA 30024-2880

www.motorola.com



#### Motorola Talkabout ™T6300-Series Radio Quick Reference Card

#### Icons your radio displays:

Battery meter

Ø Eavesdrop Reducer on

Lock set

چگ» VOX on

Z Channel scan on

((�)) VibraCall® on

channel. One of 14 channels

**(**((())) Alarm on

One of 38 codes rnde

1 Ring alert

Weather on Channel in use Taut

Ċ Automatic power off

¥ QuieT6000™

#### Buttons on your radio

Turn power on/off

 Scroll through mode (NODE) selections

> Return to two-way mode (when held down while in a menu)

Transmit call tone

· Start and stop stopwatch

· Select and scroll through stereo presets (T6310)



 $\omega$ 

· Talk on the radio

· Save a setting

 Scroll through menus

 Lock the keypad (when held down and not in a menu)

Change the volume

· Scroll through and

or select settings

# **Standard Features**All T6300-Series Radios

Modes	TWO WRY	TIME	STPWATER	WERTHER	SETTINGS
Menus	SET CHAN SET CODE SETSCRAM SET CALL SET MON SET SCAN SCANLIST	SET TIME SETALARM ALARMTME SET DISP		SET WER SET EHAN SETALERT	SETOUIET SET VID SETROGER SETURDN SETDEEPS SET VOX SET SENS SET DRIT

### **Optional Features**

T6310 only		T6320 only			
Modes	FMSTERED	COMPRSS	TEMPERAT	BAROME TR	RLTIMETR
Menus	SET FM	CRLI3RRT	SETUNITS	SETUNITS	SETUNITS
	PRESET	DECLINAT			SETLEVEL
	ZEEK FM				
	TUNE FM				
<b>\rightarrow</b>	YAMS 132				