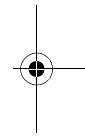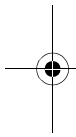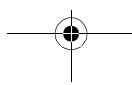Cat. No. 14-1122

OWNER'S MANUAL

Please read before using this equipment.

CTR-116

Voice-Activated
Cassette Tape Recorder

OPTIMUS®

FEATURES

Your Optimus CTR-116 Voice-Activated Cassette Tape Recorder uses the latest in recording technology to make recording easy and convenient. Recording begins when the CTR-116 detects sound and ends when sound subsides, for hands-free operation. The CTR-116's microphone is sensitive enough for the boardroom, a seminar, or a lecture hall.

The CTR-116's features include:

Voice-Activated (VOX) Recording — records only when there is sound so that you can save power and prevent blank sections of tape.

Upright Style — lets you view the cassette deck as it plays and records.

Digital Tape Counter — helps you quickly find a specific section on the cassette.

Built-In Speaker — lets you listen to your recordings.

Semi-Automatic Shut-Off — automatically stops the tape at the end of play or recording.

Cue/Review — lets you listen to recordings at high speed to help you find a particular section.

2

External Microphone Jack — lets you record using either the built-in microphone or an external microphone.

Supplied Earphone — lets you listen to recordings in private.

Record Indicator — lights when you are recording.

Three Power Sources — you can power the recorder from internal batteries, or from a vehicle's cigarette-lighter socket or standard AC power (using the appropriate optional adapter).

We recommend you record the CTR-116's serial number here. The number is in the recorder's battery compartment.

Serial Number: _____

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CONTENTS

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PREPARATION

POWERING THE CTR-116

You can operate your CTR-116 from any of these power sources:

- four AA batteries (not supplied)

- standard AC power (using an optional AC adapter)

- vehicle battery power (using an optional DC adapter)

Note: Using an adapter automatically disconnects the internal batteries.

Installing Batteries

You can power the CTR-116 with four AA batteries. For the longest life, we recommend alkaline batteries. Or, you can use rechargeable nickel-cadmium batteries (RadioShack Cat. No. 23-325) and charge them with a battery charger, such as Cat. No. 23-242.
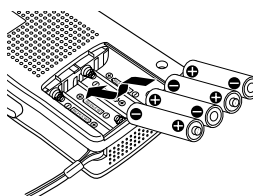
Cautions:

- Use only fresh batteries of the required size and recommended type.

- Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

5

1. Press down on the battery com-
    partment cover and slide it off in
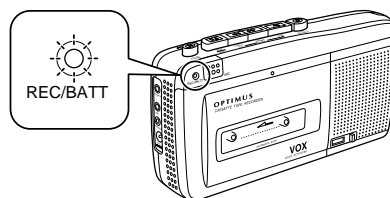   the direction of the arrow.
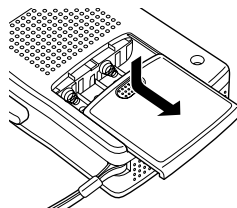
2. Put the batteries into the com-
    partment as indicated by the
    polarity symbols (+ and −)
    marked inside.

3. Replace the cover.

The **REC/BATT** indicator at the upper left corner of the front pan-
el lights when you record. If the indicator lights dimly or not at
all, replace the batteries.

Cautions:

• Always remove old or weak batteries. Batteries can leak
  chemicals that can destroy electronic parts.

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- Dispose of old batteries promptly and properly. Do not burn or bury them.

Note: At the end of a Ni-Cd rechargeable battery's useful life, it must be recycled or disposed of properly. Contact your local, county, or state hazardous waste management authorities for information on recycling or disposal programs in your area. Some options that might be available are: municipal curb-side collection, drop-off boxes at retailers such as your local RadioShack store, recycling collection centers, and mail-back programs.
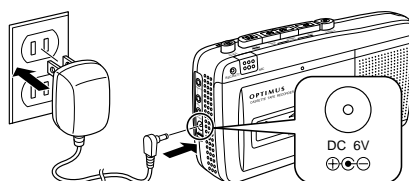
Using AC Power

To power the CTR-116 from an AC outlet, you need an AC adapter, such as Cat. No. 273-1454.

Cautions:

- The recommended adapter supplies 6 volts DC power and delivers at least 150 milliamps. The adapter's center tip must be set to negative, and its plug must properly fit the CTR-116's **DC 6V** jack. Using an adapter that does not meet these specifications could damage the CTR-116 or the adapter.

- Be sure you connect the adapter to the CTR-116 before you plug it into the AC outlet, and unplug the adapter from the AC outlet before you unplug it from the CTR-116.

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Follow these steps to power the CTR-116 with an AC adapter.

1. Insert the adapter's 5.5 mm outer diameter/2.1 mm inner diameter barrel plug into the adapter's cord, with the tip set to negative.

2. Insert the barrel plug into the CTR-116's **DC 6V** jack.

3. Plug the adapter into a standard AC outlet.

Using Vehicle Battery Power

You can operate the CTR-116 from your vehicle's battery with a DC adapter (not supplied), such as Cat. No. 273-1802.

Cautions:

• The recommended adapter supplies 6 volts DC power and delivers at least 150 milliamps. The adapter's center tip must be set to negative, and its plug must properly fit the CTR-116's **DC 6V** jack. Using an adapter that does not meet these specifications could damage the CTR-116 or the adapter.

• Be sure you plug the adapter into the CTR-116 before you plug it into the cigarette-lighter socket, and unplug the

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adapter from the cigarette-lighter socket before you unplug it from the CTR-116.

Follow these steps to power the CTR-116 from your vehicle's cigarette-lighter socket.
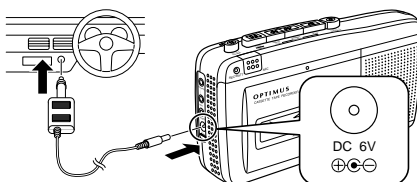
1. Set the adapter's voltage switch to 6 volts.

2. Insert the adapter's 5.5 mm outer diameter/2.1 mm inner diameter barrel plug into CTR-116's **DC 6V** jack.

3. Plug the other end of the adapter into the vehicle's cigarette-lighter socket.

Note: If the CTR-116 does not operate properly when connected to a cigarette-lighter socket, unplug the adapter and clean any ashes and other debris from the socket.

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CONNECTING THE EARPHONE

You can use the supplied earphone to listen privately to the CTR-116. You can also connect an external or pillow-type speaker (not supplied) to this jack.

Note: Your local RadioShack store sells a wide variety of speakers.

Insert the earphone's or speaker's $^1/_8$-inch (3.5-mm) plug into the **EARPHONE** jack. This automatically disconnects the internal speaker.
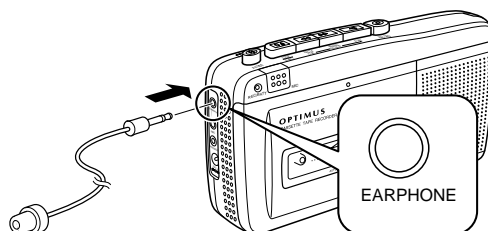
EARPHONE

Listening Safely

To protect your hearing, follow these guidelines when you use the earphone.

- Do not listen at extremely high volume levels. Extended high-volume listening can lead to permanent hearing loss.

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- Set the volume to its lowest level before you begin listening. After you put on the earphone, adjust the volume to a comfortable listening level.

- Do not increase the volume once you have established a comfortable listening level. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.

Traffic Safety

Do not wear the earphone while operating a motor vehicle or riding a bicycle. This can create a traffic hazard and could be illegal in some areas.
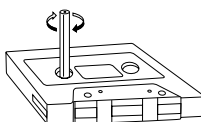
Even though some earphones let you hear some outside sounds when listening at normal volume levels, they still can present a traffic hazard.

11

PLAYING A CASSETTE TAPE

1. Press **STOP/EJECT** □⏏ to open the cassette compart-
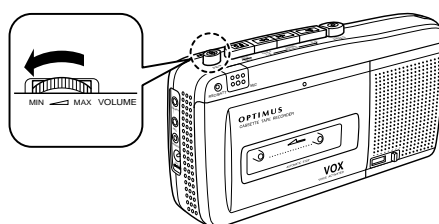   ment door.
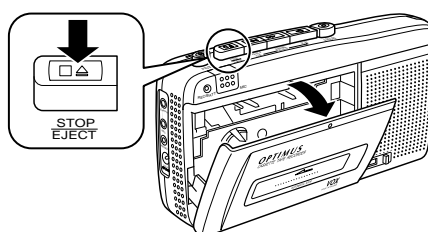
2. Use your finger or a pencil to turn the cassette's hub and
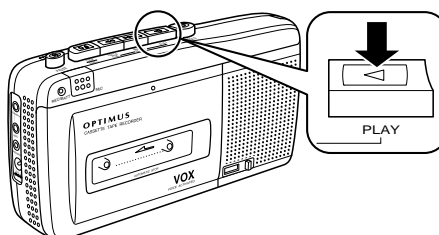   take up any slack in the tape. Do not touch the tape.

3. Load a cassette into the door's guides with the full reel to
   the right, the cassette's open edge facing out, and the side
   you want to play facing the compartment's window. Then
   close the door.

12
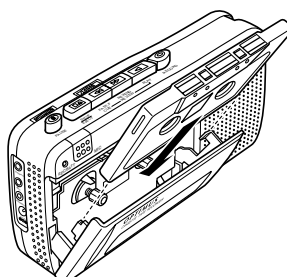
4. Rotate **VOLUME** to its lowest setting (**MIN**).

5. Press **PLAY** ◁. The tape begins to play.

6. Adjust **VOLUME** to the desired listening level.

7. The CTR-116 automatically stops at the end of the tape. Or, press **STOP/EJECT** ☐⏏ to stop play sooner.

Notes:

• To momentarily stop play, press **PAUSE** ⅠⅠ. Release **PAUSE** ⅠⅠ to resume playing. To conserve battery power,

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however, we recommend that you do not pause the tape for longer than about 5 minutes at a time.

PAUSE
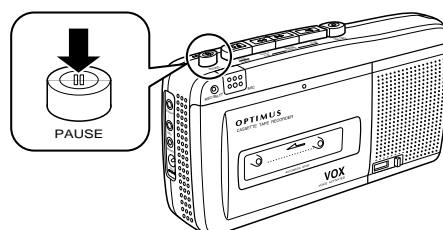
• To rapidly advance or rewind the tape, press **FAST-F/ CUE** ◁◁ or **REWIND/REVIEW** ▷▷. The button locks down and the tape continues moving until you press **STOP/ EJECT** □ ⏏ .

FAST-F   REWIND
CUE —— REVIEW
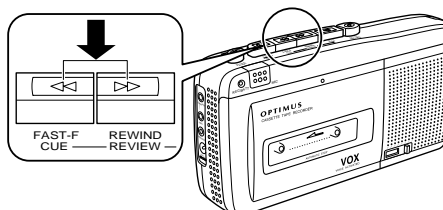
• The CTR-116 does not automatically stop when it reaches the end of the tape during fast-forward or rewind. To pre-vent damage to the tape after it has fully wound to either end, press **STOP/EJECT** □ ⏏ to release fast-forward or rewind.

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• If you press **FAST-F/CUE** ◁◁ or **REWIND/REVIEW** ▷▷ while the tape plays, you hear the sound at high speed. This can help you locate a specific portion of the tape.

USING THE TAPE COUNTER

You can use the tape counter to give you an indication of the tape's position. Before playing a tape, press the tape counter reset button to set the counter to 000.
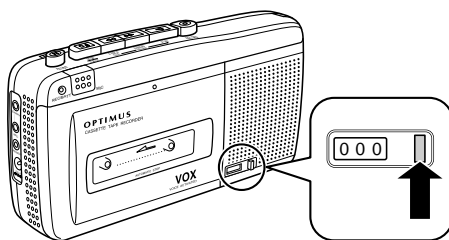
When the recorder plays, the numbers advance to show the amount of tape that has moved past the tape heads since the tape began moving. When the tape rewinds, the numbers decrease.

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RECORDING

Note: For the best performance, use only regular length (60- or 90-minute) cassette tapes. We do not recommend long-playing cassette tapes, such as C-120s, because they are extremely thin and can tangle easily.

VOX RECORDING

When you select **VOX** recording, the CTR-116 automatically begins recording when it senses a voice or other sound, and automatically stops when the sound stops.

For the best recording quality, place the recorder about 1 foot from the sound source. Because the microphone is so sensitive, it will also pick up a voice or group of voices (such as an audience) from several feet away.

1. Load a cassette into the tape compartment.

2. Set **VOX** to **HIGH** or **LOW**.

16
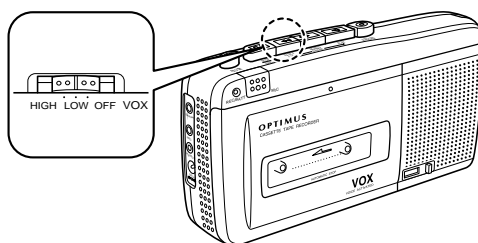
At **HIGH**, a soft sound turns on the recorder. At **LOW**, it takes a louder sound to start recording. Experiment to find the best setting for **VOX** in your recording environment.

3. Press **RECORD** ○. **RECORD** ○ and **PLAY** ◁ lock down. Recording starts and the **REC/BATT** indicator lights when the microphone receives a loud enough signal (voice or other sound). Recording stops and the **REC/BATT** indicator fades when the signal ceases. This continues throughout recording.
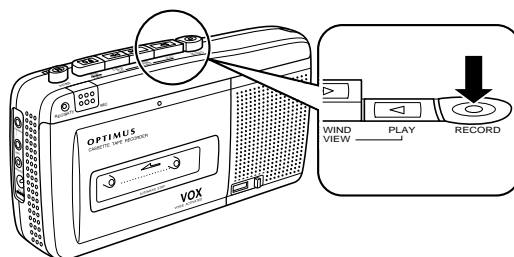
Caution: Never try to force down **RECORD** ○ if you have removed the erase protection tab (see "Preventing Accidental Erasure" on Page 21). This can damage the record/play mechanism.

Note: If the audio input is too strong, the indicator lights steadily. Either move the microphone away from the sound source or lower the volume of the sound source.

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4. To momentarily stop recording, press **PAUSE** ⓘ. Release **PAUSE** ⓘ to resume recording.
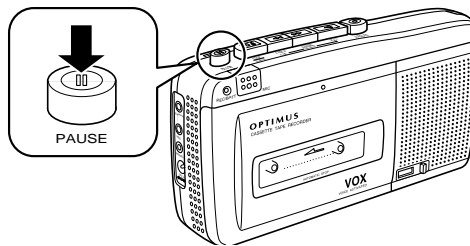
5. To stop recording press **STOP/EJECT** ☐⏏ .

Notes:

• If you hold down **REWIND/REVIEW** ▷▷ or **FAST-F/CUE** ◁◁ while recording, the **RECORD** ○ button releases and the tape rewinds or advances. You hear the sound at high speed so you can locate the desired segment.

• When you release **REWIND/REVIEW** ▷▷ or **FAST-F/CUE** ◁◁, the recorder begins playing the cassette. To continue recording, press **STOP/EJECT** ☐⏏ then **RECORD** ○.

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MANUAL RECORDING

Manual recording is like VOX recording, except you control when recording begins and ends. Set **VOX** to **OFF**, then press **RECORD** ○ to begin recording. Press **STOP/EJECT** □⏏ to stop recording, or press **PAUSE** ❚❚ in to temporarily stop recording.

USING AN EXTERNAL MICROPHONE

The CTR-116's built-in microphone works well in most situations, but you can connect an external microphone (not supplied) with a $^1/_8$-inch (3.5-mm) plug to the recorder's **MIC** jack. This automatically disconnects the built-in microphone.

Note: Your local RadioShack store sells a variety of microphones.

Set **VOX** to **HIGH** or **LOW** for VOX recording, or to **OFF** for manual recording.

If the microphone has an ON/OFF switch for remote control, connect the microphone to the CTR-116's **REMOTE** and **MIC** jacks. Then you can start and stop recording with the switch on the microphone.

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RECORDING FROM EXTERNAL SOURCES

You can record directly from a tuner, a radio, or a TV that has a $^1/_8$-inch (3.5-mm) jack. Use a dubbing patch cord (such as Cat. No. 42-2152) to connect the CTR-116's **MIC** jack to the head-phone output jack of an external component. Set **VOX** to **OFF**, then proceed with manual recording.

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TAPE TIPS

ERASING A RECORDING

If you want to erase an entire cassette or a portion of a recording, insert the supplied erase plug into the **MIC** jack. Then set **VOX** to **OFF** and record silence over the previous recording.
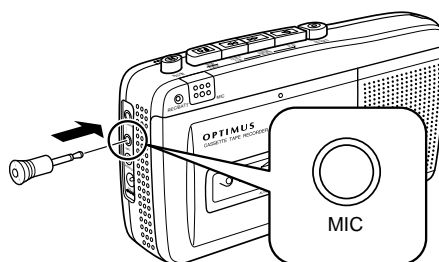
Or, you can quickly erase both sides of a cassette tape using a bulk tape eraser, available at your local RadioShack store.

PREVENTING ACCIDENTAL ERASURE

Cassettes have two erase-protection tabs — one for each side. When a side's tab is in place, you can record on that side.

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To prevent accidental erasure of a tape recording, use a screw-driver to remove one or both of the cassette tape's erase-protection tabs. This prevents **RECORD**○ from being pressed.
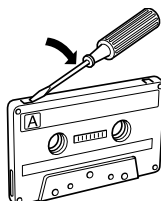
If you later decide to record on a tape side after you have re-moved its erase-protection tab, place a piece of strong plastic tape over that side's erase-protection hole. Be sure you cover only the hole originally covered by the erase-protection tab.
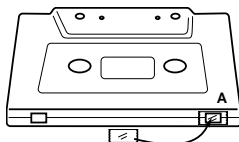
Caution: Removing the erase-protection tabs does not prevent a bulk tape eraser from erasing a cassette tape.

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RESTORING TAPE TENSION AND SOUND QUALITY

After you play a cassette tape several times, the tape might become tightly wound on the reels. This can cause playback sound quality to deteriorate.

To restore the sound quality, fast-forward the tape from the beginning to the end of one side, then completely rewind it. Then loosen the tape reels by gently tapping each side of the cassette's outer shell on a flat surface.

Caution: Be careful not to damage the cassette when tapping it. Do not touch the exposed tape or allow any sharp objects near the cassette.

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CARE AND MAINTENANCE

To enjoy your CTR-116 for a long time:

- Keep the CTR-116 dry. If it gets wet, wipe it dry immediately.

- Use and store the CTR-116 only in normal temperature environments.

- Handle the CTR-116 gently and carefully. Don't drop it.

- Keep the CTR-116 away from dust and dirt.

- Wipe the CTR-116 with a damp cloth occasionally to keep it looking new.

Modifying or tampering with the CTR-116's internal components can cause a malfunction and invalidate its warranty. If your CTR-116 is not performing as it should, take it to your local RadioShack store for assistance.

CLEANING THE TAPE-HANDLING PARTS

Dirt, dust, or particles of the tape's coating can accumulate on the tape heads and other parts the tape touches. This can greatly reduce the performance of the cassette recorder. After every 20 hours of tape player operation, use a cassette deck cleaning kit (Cat. No. 44-1202) or follow these steps to clean the tape-handling parts.

1. Remove the batteries and disconnect any other power source.

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2. Press **STOP/EJECT** □ ≙ to open the cassette compartment door.

3. Press the protection tab sensor, then press **RECORD** ○. The tape head assembly moves out.

4. Use a cotton swab dipped in tape head cleaner or denatured alcohol to clean the record/playback head, pinch roller, tape guides, erase head, and capstan.
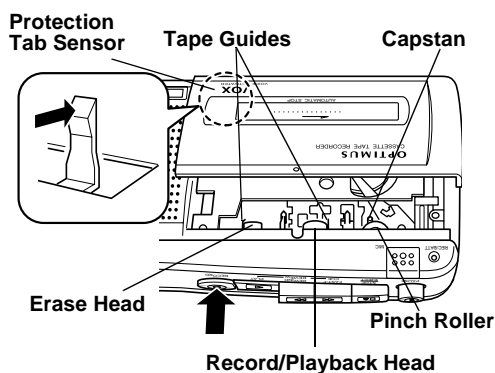
Cautions:

• Never touch the front surface of the record/playback head with any metallic object.

• Do not use a tape demagnetizer on this product because such demagnetizers can impair operation of the permanent magnet erasing device.

5. Press **STOP/EJECT** □ ≙ to move the tape head assembly back and close the door.

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SPECIFICATIONS

Tape System .... 2-track, Monophonic Cassette

Tape Speed .... $1^7/8$ ips. (4.75 cm/sec.)

Wow and Flutter .... 0.25% (WRMS)

Signal-to-Noise Ratio (Rec/Play) .... 44 dB

Erase System .... Magnet

Record System .... AC Bias

Tape Type Recommended .... Normal Bias Type I

Power Requirement:

    DC .... Four AA Batteries (6 volts DC)
    or Vehicle's Cigarette-Lighter Socket
    with Cat. No. 273-1802 DC Adapter
    AC .... 120 volts with Cat. No. 273-1454 AC Adapter

Battery Life .... 23 Hours (Playback)/25 Hours (Record)

Dimensions (HWD) .... $4^1/16 \times 7^1/8 \times 1^{13}/16$ Inches
    ($102.6 \times 181 \times 45.5$ mm)

Weight (without batteries) .... 12 oz
    (340 g)

Included Accessories .... Earphone, Erase Plug, Carry Strap

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

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NOTES
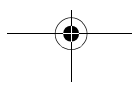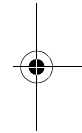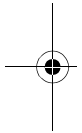
Limited Ninety-Day Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, Dept. W,
100 Throckmorton St., Suite 600, Fort Worth, TX 76102

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Fort Worth, Texas 76102

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