Cat. No. 14-1121

**OWNER'S MANUAL**

Please read before using this equipment.

# CTR-115

## Voice-Activated
## Cassette Tape Recorder
### with Pop-Up Microphone

# OPTIMUS®

# FEATURES

Your Optimus CTR-115 Voice-Activated Cassette Tape Recorder uses the latest in recording technology to make recording easy and convenient. Recording begins when the CTR-115 detects sound and ends when sound subsides, for hands-free operation. The CTR-115's microphone is sensitive enough for the board room, a seminar, or a lecture hall. And it's small enough to fit in your briefcase or purse, so it can go wherever you go.

The CTR-115's features include:

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

**Tape Speed Selector** — lets you select normal, slow, or fast playback speeds.

**Cue Marker** — lets you insert a tone to mark the beginning or end of a recording.

**Pop-Up Mic and External Microphone Jack** — let you record using either the built-in microphone or an external microphone.

**Semi-Automatic Shut-Off** — automatically shuts off the recorder at the end of the tape during play or recording.

**Mic Sensitivity Switch** — lets you select low, medium, or high microphone sensitivity for recording.

**Record/Battery Indicator** — lights when you are recording. When you are not, it indicates the battery's condition.

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

**Automatic Level Control** — automatically sets the right recording level; no need to adjust the volume while recording.

**Three Power Sources** — let you power your 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-115's serial number here. The number is inside the cassette compartment.
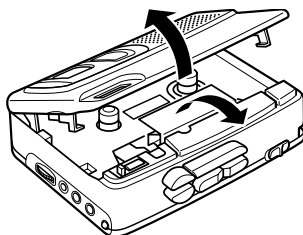
Serial Number: _____

# CONTENTS

# PREPARATION

## BEFORE YOU BEGIN

To protect the record/playback head during shipment, a protective sleeve is positioned around the head. Gently pull open the cassette compartment door and remove the sleeve before you use the cassette recorder.



## POWERING THE CTR-115

You can operate your CTR-115 from any of these power sources:

- two AA batteries (not supplied)

- standard household AC power (using an optional AC adapter)

- a 12-volt vehicle battery (using an optional DC adapter)

**Note:** Using an adapter automatically disconnects the internal batteries.

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## Installing Batteries

You can power the CTR-115 with two AA batteries. We recommend alkaline batteries, such as RadioShack Cat. No. 23-552.
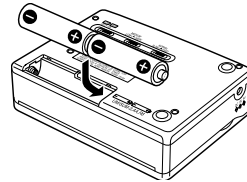
**Cautions:**

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

- Do not mix old and new batteries or different types of batteries.

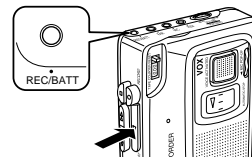1. Press down on the battery compartment cover and slide it off in the direction of the arrow.
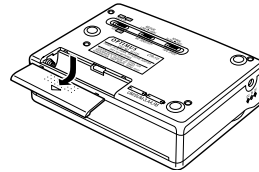
2. Put the batteries into the compartment as indicated by the polarity symbols (+ and −) marked beside it.

3. Replace the cover.

If the REC/BATT indicator does not light (or lights dimly) when you press **PLAY** ◁, **FAST-F/CUE** ◁◁ or **REWIND/REV** ▷▷, replace the batteries.

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**Cautions:**

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

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

## Using AC Power

To power the CTR-115 from an AC outlet, you need an AC adapter, such as RadioShack Cat. No. 273-1654.

**Cautions:**

- The recommended adapter supplies 3 volts DC power and delivers at least 300 milliamps. The adapter's center tip must be set to positive, and its plug must properly fit the CTR-115's **DC IN 3V** jack. Using an adapter that does not meet these specifications could damage the CTR-115 or the adapter.

- Be sure you connect the adapter to the CTR-115 before you plug it into the AC outlet, and that you unplug the adapter from the AC outlet before you unplug it from the CTR-115.

Follow these steps to power the CTR-115 with an AC adapter.
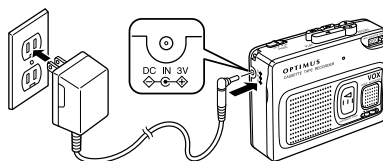


1. Set the adapter's voltage switch to 3V.

2. Insert the adapter's 2.35 mm outer diameter/0.7 mm inner diameter barrel plug into the adapter's cord, with the tip set to positive.

3. Insert the barrel plug into the CTR-115's **DC IN 3V** jack.

4. Plug the adapter into a standard AC outlet.

## Using Vehicle Battery Power

You can operate the CTR-115 from your vehicle's battery with a DC adapter (not supplied), such as Cat. No. 273-1810.

**Cautions:**

- The recommended adapters supply 3 volts DC power and deliver at least 300 milliamps. The adapter's center tip must be set to positive, and its plug must properly fit the CTR-115's **DC IN 3V** jack. Using an adapter that does not meet these specifications could damage the CTR-115 or the adapter.

• Be sure you plug the adapter into the CTR-115 before you plug it into the cigarette-lighter socket, and that you unplug the adapter from the cigarette-lighter socket before you unplug it from the CTR-115.

Follow these steps to power the CTR-115 from your vehicle's cigarette-lighter socket.
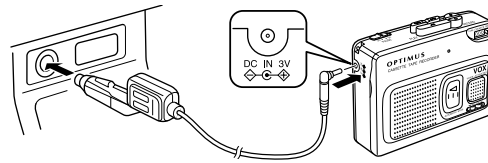


1. Set the adapter's voltage switch to 3 volts.

2. Insert the adapter's 2.35 mm outer diameter/0.7 mm inner diameter barrel plug into the adapter's cord, with the tip set to positive.

3. Insert the barrel plug into the CTR-115's **DC IN 3V** jack.

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

**Note:** If the CTR-115 does not operate properly when connected to a cigarette-lighter socket, unplug the adapter and clean any ashes and other debris from the socket.

# CONNECTING THE EARPHONE

You can use the supplied earphone to listen privately to recorded sound or to monitor recording. 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 or speaker's $^1/8$-inch (3.5-mm) plug into the **EAR** jack. This automatically disconnects the internal speaker.
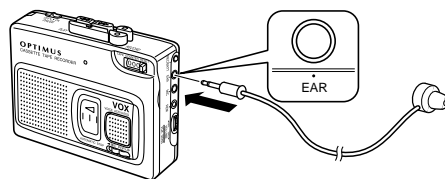


## Listening Safely

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.

- 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.

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• 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.
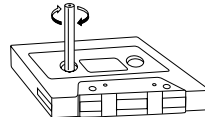
Even though some earphones let you hear some outside sounds when listening at normal volume levels, they still can present a traffic hazard.

# PLAYING A CASSETTE TAPE

1. Gently pull open the cassette compartment door.
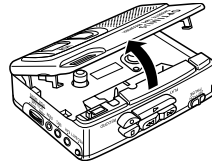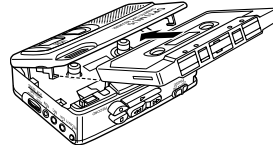
2. Use your finger or a pencil to turn the cassette's hub and take up any slack in the tape. Do not touch the tape.

3. Load a cassette into the door's guides so the cassette's open edge is out and the side you want to play faces the compartment's window, then close the door.

4. Set **TAPE SPEED** to **SLOW**, **NORMAL**, or **FAST** to suit your listening preference.

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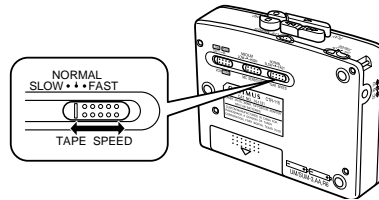
**Note:** This switch's setting has no effect when recording (see "Recording" on Page 17).

5. Rotate **VOLUME/VOX SENS** counterclockwise to its lowest setting.
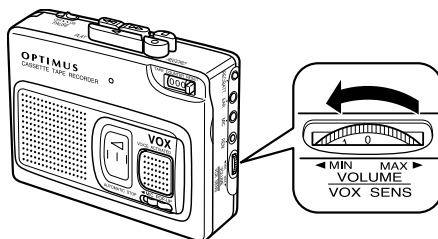


6. Press **PLAY** ◁. The tape begins to play.
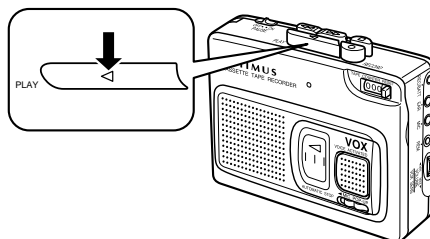


7. Adjust **VOLUME/VOX SENS** to a comfortable listening level.

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8. Set **VOX/TONE** to **HIGH** to emphasize treble sounds, or to **LOW** to reduce them. With metal/High-Bias tape, use **LOW** for a more natural sound.
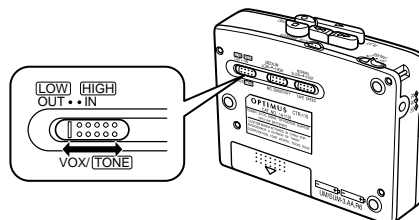


9. The CTR-115 automatically stops at the end of the tape. Or, press **STOP**☐ to stop the tape.
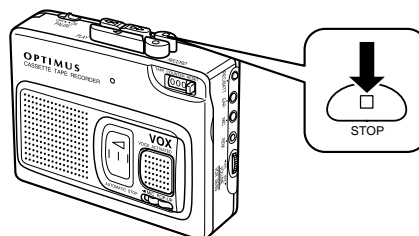


**Notes:**

• To momentarily stop play, slide **PAUSE** to **ON**. Slide **PAUSE** to **OFF** to resume playing.

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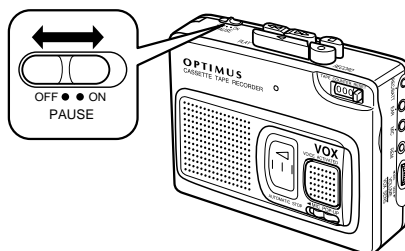
- To rapidly advance or rewind the tape, press **FAST-F/ CUE**◁◁ or **REWIND/REV**▷▷. The button locks down and the tape continues moving until you press **STOP**. The **TAPE SPEED** setting affects the fast-forward or rewind speed.
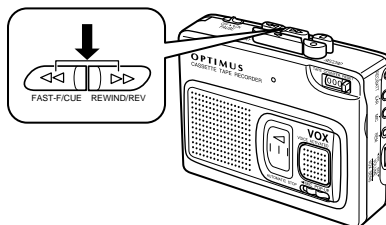


- The CTR-115 does not automatically stop when it reaches the end of the tape during fast-forward or rewind. To prevent damage to the tape after it has fully wound to either end, press **STOP** to release fast-forward or rewind.

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

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# 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.
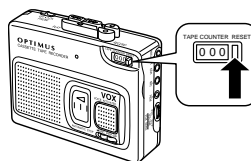
When the recorder plays, the numbers advance to show the
amount of tape that has moved past the tape heads since the
tape began moving. When the tape rewinds, the numbers de-
crease.

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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.

## USING THE BUILT-IN MICROPHONE

You can pop up the built-in microphone to direct it to the sound source, or you can connect an external microphone (see "Using an External Microphone" on Page 21).

Follow these steps to use the built-in microphone.

1. Slide **MIC POP-UP** in the direction of the arrow marked under the microphone.

2. Slide **MIC SENSITIVITY** to **LOW**, **MEDIUM** or **HIGH**, depending on the sound source you want to record.
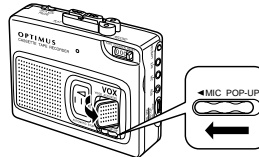
   For normal recording conditions, set the switch to **MEDIUM**. If the sound source is weak, slide it to **HIGH**. For a strong sound source, slide it to **LOW**.

3. To return the microphone to its original position, gently press it down until it locks into place.

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# VOX RECORDING

When you select VOX recording, the CTR-115 automatically begins recording when it receives a sound signal from 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. Gently pull open the cassette compartment door.
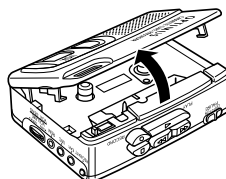
2. Use your finger or a pencil to turn the cassette's hub and take up any tape slack, and advance the cassette past the leader at the beginning of the tape.
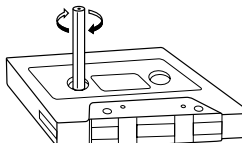
3. Load a cassette into the door's guides with the cassette's open edge out and the side you want to record on facing the compartment's window. Then close the door.

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4. Set **VOX/TONE** to **IN**.
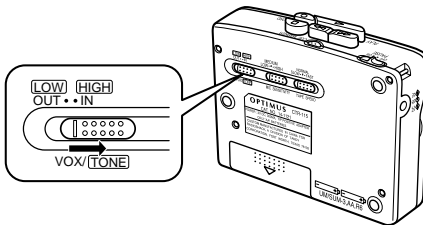
5. Set **VOLUME/VOX SENS** to the desired setting (**0**–**10**) to control how loud a sound is required to turn on the recording function.

   At **10**, a soft sound turns on the recorder. At settings closer to **0**, it takes a louder sound to start recording. Experiment to find the best setting for **VOLUME/VOX SENS** in your recording environment.

   **Note:** Use the supplied earphone when you want to monitor a recording in progress (see "Connecting the Earphone" on Page 10).

6. Press **RECORD**. **RECORD** and **PLAY**◁ lock down. Recording starts when the microphone receives a loud enough signal (voice or other sound). It temporarily stops when the signal ceases.

   The ALC (automatic level control) circuit automatically sets the recording level and the REC/BATT indicator flashes to show that recording is in progress.
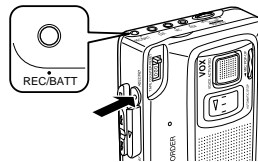
**Note:** If the audio input is too strong, the indicator lights steadily.

7. To momentarily stop recording even while the sound continues, slide **PAUSE** to **ON**. Slide **PAUSE** to **OFF** to resume recording.
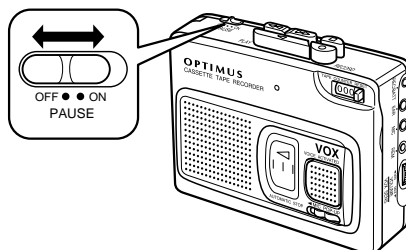


**Caution:** Never try to force down **RECORD** if you have removed the erase protection tab (see "Preventing Accidental Erasure" on Page 23). This can damage the record/play mechanism.

8. Recording stops when the sound stops. Or, press **STOP** to stop recording while the sound continues.

## MANUAL RECORDING

Manual recording is like VOX recording, except you control when recording begins and ends. Set **VOX/TONE** to **OUT**, then press **RECORD** to begin recording. Press **STOP** to stop recording, or slide **PAUSE** to **ON** to temporarily stop recording.

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## CUE MARKER

To mark the beginning of a recording, press **CUE MARKER** for about 3 seconds during the recording. This records a brief tone on the tape. When you press **FAST-F/CUE**◁◁ or **REWIND/REV**▷▷ while the tape plays, you hear the tone when the tape reaches the point you marked.

## USING AN EXTERNAL MICROPHONE

The CTR-115'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/TONE** to **IN** for VOX recording, or to **OUT** for manual recording.

If the microphone has an ON/OFF switch for remote control, connect the microphone to the **REM** 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 RadioShack Cat. No. 42-2152 to connect the CTR-115's **MIC** jack to the headphone output jack of an external component. Set **VOX/TONE** to **OUT**, then proceed with manual recording.

# TAPE TIPS

## ERASING A RECORDING

If you want to erase an entire cas-
sette or a portion of a recording, in-
sert the supplied erase plug into the
**MIC** jack. Then set **VOX/TONE** to
**OUT** and record silence over the
previous recording.
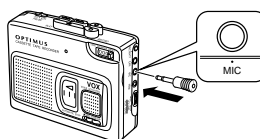


Or, you can quickly erase both sides of a cassette tape using a
bulk tape eraser, available at your local RadioShack store.

## PREVENTING ACCIDENTAL ERASURE

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

To prevent accidental erasure of a tape recording, use a screw-
driver to remove one or both of the cassette tape's erase-pro-
tection tabs. This prevents **RECORD** from being pressed.



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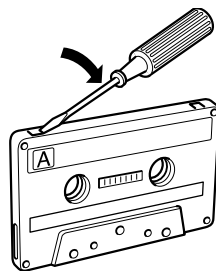
If you later decide to record on a tape side after you have re-
moved its erase-protection tab, place a piece of strong plastic
tape over that side's erase-protection hole. Be sure you cover
only the hole originally covered by the erase-protection tab.
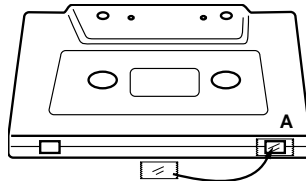


**Caution:** Removing the erase-protection tabs does not prevent
a bulk tape eraser from erasing a cassette tape.

## RESTORING TAPE TENSION AND SOUND QUALITY

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

To restore the sound quality, fast-forward the tape from the be-
ginning to the end of one side, then completely rewind it. Then
loosen the tape reels by gently tapping each side of the cas-
sette'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-115 for a long time:

- Keep the CTR-115 dry. If it gets wet, wipe it dry immediately.

- Use and store the CTR-115 only in normal temperature environments.

- Handle the CTR-115 gently and carefully. Don't drop it.

- Keep the CTR-115 away from dust and dirt.

- Wipe the CTR-115 with a damp cloth occasionally to keep it looking new.

Modifying or tampering with the CTR-115's internal components can cause a malfunction and invalidate its warranty. If your CTR-115 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 (such as an adapter).

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2. Lift 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, and capstans.
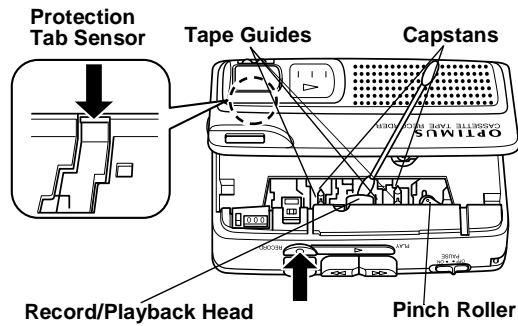


**Cautions:**

- 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.

# 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) .................................... 38 dB

Erase System ............................................................. Magnet

Record System ........................................................... AC Bias

Tape Type Recommended .......................... Normal Bias Type I

Power Requirement:

    DC ..................................... Two AA batteries (3 volts DC)
                           or vehicle's cigarette-lighter socket
                          with Cat. No. 273-1810 DC adapter
    AC ............. 120 volts with Cat. No. 273-1654 AC adapter

Size (HWD) .................................... $3^9/_{16} \times 4^{15}/_{32} \times 1^3/_8$ Inches
                                    ($90.5 \times 112 \times 34.9$ mm)

Weight (without batteries) ................................................ 5.6 oz
                                            (158 g)

Included Accessories ....................... Earphone and Erase Plug

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

**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, setup 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**