

Cat. No. 14-1245  
**OWNER'S MANUAL**

Please read before using this equipment.

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**SCP-98**

**AM/FM Stereo  
Cassette Player**

**OPTIMUS®**

# FEATURES

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Your Optimus SCP-98 AM/FM Stereo Cassette Player delivers excellent sound from radio broadcasts or your favorite cassette tapes, through optional speakers or stereo headphones. The digital tuner's PLL (Phase-Locked Loop) circuitry gives you precise tuning and drift-free reception.

Its features include:

**Auto-Stop Cassette Deck** — automatically stops the tape when it reaches the end, reducing wear on your tape and the cassette deck.

**Liquid Crystal Display with Clock and Alarm** — shows the current time and lets you set the SCP-98 to sound an alarm at the time you select.

**20-Station Memory** — lets you store up to 20 radio stations (10 FM and 10 AM) in memory so you can quickly tune to a stored station.

**E-BASS** — so you can boost the bass sounds.

**Three Power Options** — you can power the SCP-98 from internal batteries (not supplied), a standard AC outlet (with an optional AC adapter), or your vehicle's cigarette-lighter socket (with an optional DC adapter).

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**PHONES Jack** — lets you connect headphones for private listening, or speakers to share the sound with others.

**Seek Tuning** — searches forward or backward to the next strong station in the selected band so you can quickly find new stations.

**Lock** — lets you lock the SCP-98's controls to avoid accidentally changing the station you are listening to, replacing a stored station, or setting the time or alarm.

**Removable Belt Clip** — lets you attach the SCP-98 to your belt for hands-free carrying almost anywhere you go.

**Note:** To listen to your cassette player, you need a pair of headphones or speakers with a 1/8-inch plug. Your local RadioShack store sells a wide variety of headphones and speakers.

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# PREPARATION

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You can power your SCP-98 from any of three power sources:

- Internal battery power
- Standard AC power (with an optional AC adapter)
- Vehicle battery power (with an optional DC adapter)

**Note:** Connecting an adapter disconnects internal batteries.

## USING INTERNAL BATTERY POWER

You can power your SCP-98 from two AA batteries (not supplied). For the best performance, we recommend alkaline batteries, such as RadioShack Cat. No. 23-557. You can also use rechargeable nickel-cadmium batteries (Cat. No. 23-125) with a battery charger (Cat. No. 23-133).

*(illus)*

1. Press down on the battery compartment cover and slide it in the direction of the arrow until it stops, then lift up the curved edge of the cover (opposite the arrow).

**Caution:** The battery compartment cover is attached to the SCP-98 by a hinge. Do not attempt to remove the cover completely.

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- Put the batteries into the compartment as indicated by the polarity symbols (+ and -) marked inside, with the back battery over the attached ribbon. **12:00 AM** appears.

**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.\*

- Close the cover.

When the SCP-98 stops operating properly, replace the batteries. To prevent stored stations from being lost, set **STEREO/MONO/TAPE** to **TAPE** before replacing batteries.

**Cautions:**

- If you do not plan to use the SCP-98 with batteries for a month or more, remove the batteries. Batteries can leak chemicals that can destroy electronic parts.
- Dispose of old batteries promptly and properly. Do not burn or bury them.

**Notes:**

- To easily remove the batteries, open the battery compartment cover and pull up the ribbon.

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- Your SCP-98 is capable of using rechargeable nickel-cadmium batteries. At the end of a nickel-cadmium 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 curbside collection, drop-off boxes at retailers such as your local RadioShack store, recycling collection centers, and mail-back programs.

## USING STANDARD AC POWER

You can power the SCP-98 from standard AC power using an optional AC adapter, such as Cat. No. 273-1654.

### **Cautions:**

- The recommended AC adapter supplies 3 volts and delivers at least 300 milliamps. Its center tip is set to negative, and its plug correctly fits the SCP-98's **DC 3V** jack. Using an adapter that does not meet these specifications could damage the SCP-98 or the adapter.
- Always plug the AC adapter into the SCP-98 before you plug it into the AC outlet and always unplug it from the AC outlet before you unplug it from the SCP-98.

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Follow these steps to power the SCP-98 from a standard AC outlet.

*(illus)*

1. Set the AC adapter's voltage switch to 3V.
2. Put the adapter's 3.4 mm outer diameter/1.3 mm inner diameter barrel plug onto the adapter cord's small end so it reads TIP-.
3. Insert the barrel plug into the SCP-98's **DC 3V** jack.
4. Plug the AC adapter's other end into a standard AC outlet. **12:00 AM** appears.

## **USING VEHICLE BATTERY POWER**

You can power the SCP-98 from a vehicle's cigarette-lighter socket using an optional DC adapter, such as Cat. No. 270-1560 or 273-1810.

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## Cautions:

- The recommended DC adapters supply 3 volts and deliver at least 300 milliamps. Their center tips are set to negative, and their plugs correctly fit the SCP-98's **DC 3V** jack. Using a DC adapter that does not meet these specifications could damage the SCP-98 or the adapter.
- Always plug the DC adapter into the SCP-98 before you plug it into the vehicle's cigarette-lighter socket, and always unplug it from the cigarette-lighter before you unplug it from the SCP-98.
- Unplug the adapter from your vehicle's cigarette-lighter socket when you turn off the ignition. This prevents your vehicle's battery from being drained if you leave the SCP-98 on when you turn off the ignition.

Follow these steps to power the SCP-98 from your vehicle's battery power.

*(illus -- add  
callout line)*

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

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- 
2. Put the 3.4 mm outer diameter/1.3 mm inner diameter barrel plug onto the adapter cord's smaller end so it reads TIP-.
  3. Insert the barrel plug into the SCP-98's **DC 3V** jack.
  4. Plug the DC adapter's other end into the vehicle's cigarette-lighter socket. **12 : 00 AM** appears.

## **CONNECTING HEADPHONES/ SPEAKERS**

To listen to the cassette player, you need a pair of stereo headphones or amplified speakers with a 1/8-inch plug. Your local RadioShack store sells a wide variety of headphones and amplified speakers.

Insert the stereo headphones' or speakers' 1/8-inch stereo plug into the SCP-98's **PHONES** jack.

*(illus)*

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## **Listening Safely**

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

- Set the volume to the lowest setting before putting on the headphones. After you put on the headphones, adjust the volume to a comfortable level.
- Do not listen at extremely high volume levels. Extended high-volume listening can lead to permanent hearing loss.
- Once you set the volume, do not increase it. 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 headphones 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 headphones let you hear some outside sounds when listening at normal volume levels, they still can present a traffic hazard.

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## SETTING THE CLOCK

1. Set **STEREO/MONO/TAPE** to **TAPE**. The display shows the currently set time.

*(illus)*

**Note:** You can set the clock only when the radio is off.

2. Press **MODE** twice. The time flashes.

*(illus)*

**Note:** If you do not press  $\vee$ /**HOUR** or  $\wedge$ /**MINUTE** within 10 seconds, the currently set time stops flashing and you must press **MODE** twice again.

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- 
3. Repeatedly press  $\vee$ /**HOUR** until the display shows the correct hour. (To rapidly advance the hours, hold down down  $\vee$ /**HOUR**.)

*(illus)*

4. Repeatedly press  $\wedge$ /**MINUTE** until the display shows the correct minute. (To rapidly advance the minutes, hold down down  $\wedge$ /**MINUTE**.)

*(illus)*

5. When the display shows the correct time, either press **MODE** or wait until the display stops flashing.

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## SETTING THE 10KHZ/9KHZ SWITCH

The **10kHz/9kHz** switch on the back of the cassette compartment door is preset to **10kHz**. At this setting, the SCP-98 displays the time in the 12-hour format and tunes frequencies in increments of 10 kHz (AM) and 0.1 MHz (FM), which are standard in the United States.

In Europe and some other parts of the world, AM and FM frequencies are broadcast in increments of 9 kHz (AM) and 0.05 MHz (FM). If you use the SCP-98 in these countries, use a pointed object, such as a straightened paper clip, to set **10kHz/9kHz** to **9kHz**.

*(illus)*

**Note:** If you set **10kHz/9kHz** to **9kHz**, the time appears in the 24-hour format. For example, 1:00 PM appears as **13:00**.

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## USING THE BELT CLIP

To attach the supplied belt clip to the SCP-98, press the clip's three latches into the corresponding slots on the back of the SCP-98. Then push the clip upward until it locks into place.

*(illus)*

To remove the belt clip, press down at the point where the clip attaches to the SCP-98, slide the clip down until it stops, then pull it out.

# OPERATION

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## USING THE RADIO

### Listening to the Radio

Make sure that you have headphones or speakers connected to the SCP-98.

**Note:** To protect your hearing, set – **VOLUME +** to its lowest setting before you turn on the radio.

1. To turn on the radio, set **STEREO/MONO/TAPE** to **STEREO** for stereo sound on FM stations. **STEREO** appears during FM stereo reception. Set **STEREO/MONO/TAPE** to **MONO** for monaural reception.

*(illus)*

2. Adjust – **VOLUME +** to a comfortable listening level.

*(illus)*

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- 
3. Press **AM/FM** so the display shows the desired band (**AM** or **FM**).

*(illus)*

4. Tune to the desired station.

**Manual Tuning:** Repeatedly press  $\nabla$ /**HOUR** or  $\wedge$ /**MINUTE** to tune up or down the selected band. To tune the band more quickly, hold down down  $\nabla$ /**HOUR** or  $\wedge$ /**MINUTE**.

*(illus)*

**Seek Tuning:** hold down down  $\nabla$ /**HOUR** or  $\wedge$ /**MINUTE** for about 1 second. The SCP-98 tunes up or down the selected band, then stops at the next higher or lower station with a strong signal.

The display shows the selected frequency.

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## Notes:

- The SCP-98 has a built-in AM antenna, and the headphones' or speakers' cord serves as an FM antenna. For the best AM reception, rotate the SCP-98. For the best FM reception, fully uncoil the headphones' or speakers' cord.
  - If FM stereo reception is poor or noisy, set **STEREO/MONO/TAPE** to **MONO**. The sound is not in stereo, but FM reception should improve.
5. Set **E-BASS IN/OUT** to **IN** for extra bass effect, or to **OUT** to leave the bass sound unchanged.

*(illus)*

6. To turn off the radio, set **STEREO/MONO/TAPE** to **TAPE**.

## Storing Radio Stations in Memory

Follow these steps to store up to 20 stations (10 FM and 10 AM) in memory.

1. Set **STEREO/MONO/TAPE** to **STEREO** or **MONO**.
2. Press **AM/FM** so the display shows the desired band (**AM** or **FM**).

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- 
3. Tune to the first station you want to store. The display shows the selected frequency.
  4. Press **STORE**. **M** flashes on the display.

*(illus)*

5. To store stations into memory locations 1–5, while **M** flashes on the display, press a memory location button (1–5) to store the current frequency into that memory location. **M** stops flashing and the display shows the selected frequency.

*(illus)*

To store stations into memory locations 6–10, while **M** flashes on the display, press **+5** then one of the memory location buttons (1–5). This increases the selected memory location number by 5.

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*(illus)*

For example, if you press **+5** then memory location button **2**, the radio stores the frequency you selected into memory location 7.

**Note:** If you do not press a memory location button or **+5** within about 10 seconds, **M** disappears from the display. Start again from Step 1.

6. Tune to the next station you want to store, then repeat Steps 4 and 5 for each frequency.

To delete a station you stored, simply store a new one in that memory location.

## **Tuning to a Memory Station**

To quickly tune to a stored station, press the memory button (or **+5** and the memory button) that corresponds to the location you assigned it.

## **USING THE CASSETTE PLAYER**

Make sure that you have headphones or speakers connected to the SCP-98. See “Connecting Headphones/Speakers” on Page 10.

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**Notes:**

- To protect your hearing, set **-VOLUME +** to its lowest setting before you play a cassette tape.
  - 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 easily tangle in the playback mechanism.
1. Set **STEREO/MONO/TAPE** to **TAPE**.

*(illus)*

2. Pull open the cassette compartment door.

*(illus)*

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3. Take up any slack in the cassette tape by turning its hub with your finger or a pencil.

*(illus)*

**Cautions:**

- If you do not remove excess slack, the tape might become tangled in the play mechanism.
  - Avoid touching the tape.
4. Slide the cassette tape into the guides inside the cassette compartment door with the tape's open edge toward the front, the side you want to hear facing out, and the full reel to the right.
  5. Close the door.
  6. Press ▷ to play the tape. The button locks down and play begins.

*(illus)*

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7. Adjust – **VOLUME +** to a comfortable listening level.
  8. Set **E-BASS IN/OUT** to **IN** for extra bass effect, or to **OUT** to leave the bass sound unchanged.
  9. To fast-forward the tape, press ▷▷. ▷▷ locks and the tape fast-forwards until it reaches the end of the tape or you press ▷ or □. To rewind the tape, eject it, turn it over, and press ▷▷.

*(illus)*

10. The tape automatically stops when it reaches the end. To stop it sooner, press □.

*(illus)*

## USING THE ALARM

You can set the SCP-98 to automatically sound a beeping alarm at a time you select.

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## Setting the Alarm Time

1. Set **STEREO/MONO/TAPE** to **TAPE**. The display shows the currently set time.
2. Press **MODE** once. **AL** (alarm) appears and the currently set alarm time flashes.

**Note:** If you do not press  $\nabla$ /**HOUR** or  $\wedge$ /**MINUTE** within 10 seconds, **AL** and the currently set alarm time disappear from the display.

3. Repeatedly press  $\nabla$ /**HOUR** until the display shows the correct alarm hour. To rapidly advance the hours, hold down down  $\nabla$ /**HOUR**.

*(illus)*

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- 
4. Repeatedly press  $\wedge$ /**MINUTE** until the display shows the correct minute. To rapidly advance the minutes, hold down  $\wedge$ /**MINUTE**.

*(illus)*

5. When the display shows the correct alarm time, either:
  - Press **MODE**. The currently set time flashes for 10 seconds then appears steadily, or
  - Wait for about 10 seconds until the newly set alarm time stops flashing. **AL** disappears from the display, then the currently set time appears.

## Turning the Alarm On/Off

To turn on the alarm, press **ON/OFF** once. **AL** appears.

At the preset alarm time, the alarm sounds for about 10 minutes, or until you press **STOP**. This stops the alarm beep, but leaves the alarm set to sound again the next day at the set time.

To turn off the alarm completely so it will not sound the next day, press **ON/OFF** so **AL** disappears from the display.

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## LOCKING THE SCP-98

You can lock the SCP-98 to prevent accidentally changing the station you are listening to, replacing a stored station, or setting the time or alarm. When your settings are locked, **LOCK** appears on the display and you cannot adjust the tuner or set the clock or the alarm.

To lock or unlock your selected settings, hold down **ALARM STOP**, then press **MODE/LOCK**.

*(illus)*

**Note:** You can still adjust the volume when the settings are locked.

# CARE AND MAINTENANCE

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Your Optimus SCP-98 AM/FM Stereo Cassette Player is an example of superior design and craftsmanship. The following suggestions will help you care for the SCP-98 so you can enjoy it for years.



Keep the SCP-98 dry. If it gets wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.



Use and store the SCP-98 only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.



Keep the SCP-98 away from dust and dirt, which can cause premature wear of parts.



Handle the SCP-98 gently and carefully. Dropping it can damage circuit boards and the case and can cause the SCP-98 to work improperly.



Wipe the SCP-98 with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the SCP-98.

Modifying or tampering with the SCP-98's internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to operate it. If your SCP-98 is not performing as it should, take it to your local RadioShack store for assistance.

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## RESTORING TAPE TENSION AND SOUND QUALITY

After you play a cassette 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 turn the tape over and fast-forward to the end again. 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.

## CLEANING THE TAPE-HANDLING PARTS

Dirt, dust, or particles of the tape's coating can accumulate on the tape heads and other parts that the tape touches. This can greatly reduce the performance of the SCP-98. Use the following cleaning procedure after every 20 hours of operation.

1. Remove the batteries and disconnect any other power source.
2. Open the cassette compartment door.
3. Press  $\blacktriangleright$  to expose the tape-handling parts.

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4. Use a cotton swab dipped in denatured alcohol or tape head cleaning solution to clean the play head, pinch roller, tape guides, and capstan.

*(illus)*

**Note:** Your local RadioShack store has a complete line of cassette deck cleaning supplies.

5. When you finish cleaning, press  and close the cassette compartment door.

## THE FCC WANTS YOU TO KNOW

Your SCP-98 AM/FM Stereo Cassette Player might cause TV or radio interference even when it is operating properly. To determine whether the SCP-98 is causing the interference, turn off the SCP-98. If the interference goes away, the SCP-98 is causing it.

Try to eliminate the interference by:

- Moving the SCP-98 away from the TV or radio
- Connecting the SCP-98 to an outlet that is on a different electrical circuit than the TV or radio

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- Contacting your local RadioShack store for help \_\_\_\_\_

If you cannot eliminate the interference, the FCC requires that you stop using the SCP-98.

# SPECIFICATIONS

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<b>RADIO</b>	<b>FM</b>	<b>AM</b>
Frequency Range	88–108 MHz	530–1710 kHz
IF Rejection	49 dB	50 dB
Image Rejection	11 dB	50 dB
Selectivity	15 dB	22 dB
Signal-to-Noise Ratio	50 dB	29 dB
Stereo Separation	25 dB	—
Usable Sensitivity	25 $\mu$ V	1700 $\mu$ V/m

## **CASSETTE PLAYER**

Cassette Mechanism .....	Auto-stop
Wow and Flutter .....	0.4%
Signal-to-Noise Ratio .....	40 dB
Separation .....	27 dB
Frequency Response (–3 dB) .....	70–5000 Hz

## **GENERAL**

Power Requirements .....	DC 3V, 300 mA (2 AA Batteries) DC Adapter (Cat. No. 270-1560 or 273-1810) AC Adapter (Cat. No. 273-1654)
Speaker Output Impedance .....	6 Ohms
Dimensions (HWD) .....	$3\frac{3}{8} \times 5\frac{1}{8} \times 1\frac{5}{8}$ Inches (86.5 $\times$ 130 $\times$ 41 mm)
Weight .....	7.2 oz. (205 gm)

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, 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.

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3/97

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