

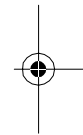
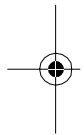


Cat. No. 14-1230  
**OWNER'S MANUAL**

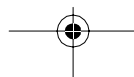
Please read before using this equipment.

**SCP-87**

**Digital AM/FM Stereo  
Cassette Player**



**OPTIMUS®**





## FEATURES

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Your Optimus SCP-87 Digital AM/FM Stereo Cassette Player delivers excellent stereo sound through your headphones or amplified speaker system. Because the SCP-87 is portable, you can listen to cassette tapes or the AM/FM radio indoors or out.

**Important:** To listen to your SCP-87, you need a pair of headphones or amplified speakers (not supplied) with a 1/8-inch mini-plug. Your local RadioShack store sells many headphones and speakers.

This player's features include:



**PLL (Phase-Locked Loop) Tuning** — gives you precise tuning and drift-free reception.




**Automatic Reverse** — automatically changes the tape direction at the end of a tape side so you can continuously play both sides of a cassette tape.

**Tape Direction Control** — lets you change the tape's direction to play the other side at any time without having to eject the tape and turn it over.

**Display** — shows the currently tuned station.

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Dolby B noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.



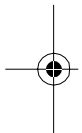


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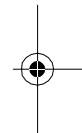
**AM/FM Radio with 18-Station Memory** — lets you store up to 18 of your favorite radio stations for quick tuning.

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

**Preset Equalization** — lets you select one of four preset sound characteristics (classic, pop, rock, or jazz).



**Dolby B Noise Reduction** — reduces background and tape noise to improve the sound of your tapes.

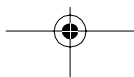


**Tape Selector** — lets you select the proper equalization for normal or CrO<sub>2</sub>/metal cassette tapes.

**Three Power Choices** — let you power your SCP-87 from internal batteries (not supplied), standard AC power (with an optional AC adapter), or your vehicle's battery (with an optional DC adapter) so you can listen to music almost anywhere.

**Belt Clip** — lets you attach the SCP-87 to your belt for hands-free carrying when you are on the go.

Take a few minutes to read this manual so you can enjoy all the features of your SCP-87.





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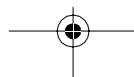
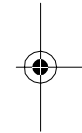
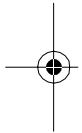



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## **PREPARATION**

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### **BEFORE YOU BEGIN**

To protect the playback head during shipment, a protective sleeve is attached. Remove it before you use the SCP-87's cassette player.



### **CONNECTING TO POWER**

You can power your SCP-87 from:

- Internal batteries
- AC power (using an AC adapter)
- Your vehicle's battery (using a DC adapter)

#### **Using Battery Power**

The SCP-87 can use two AA batteries for power. For the best performance and longest life, we recommend alkaline batteries, such as RadioShack Cat. No. 23-557.

You can also use rechargeable nickel-cadmium batteries (Cat. No. 23-125). These batteries (and a battery charger, Cat. No. 23-133) are available at your local RadioShack store.

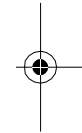
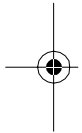
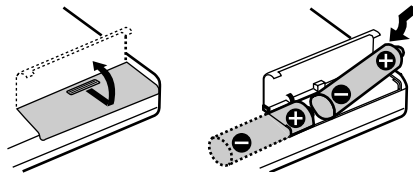




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**Caution:** Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

Follow these steps to install batteries.



1. Open the battery compartment cover by pressing down and sliding it in the direction of the arrow on the cover, then lifting open the cover.

**Caution:** The battery compartment cover is hinged. Do not try to remove it.

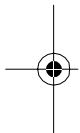
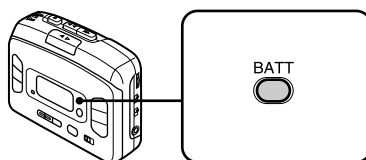
2. Insert the batteries into the compartment as indicated by the polarity symbols (+ and -) marked outside the compartment.
3. Close the cover.



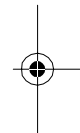


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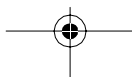
If the BATT indicator becomes dim during operation or does not light when you turn on the SCP-87, replace (alkaline) or recharge (nickel-cadmium) both batteries.



**Caution:** Always dispose of old batteries promptly and properly.



**Important:** This product is capable of using rechargeable nickel-cadmium batteries. At the end of the batteries' useful life, they 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.







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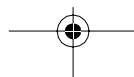
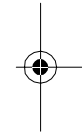
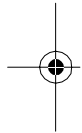
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## Using AC Power

To power the SCP-87 from a standard AC outlet, you need an AC adapter, such as Cat. No. 273-1654.

### Cautions:

- You must use an AC adapter that supplies 3 volts DC power and delivers at least 300 milli-amps. Its center tip must be set to negative, and its plug must properly fit the SCP-87's **DC 3V** jack. The recommended adapter meets these requirements. Using an adapter that does not meet these requirements could damage the SCP-87 or the adapter.
- Be sure you connect the adapter to the SCP-87 before you plug it into the AC outlet and that you unplug the adapter from the AC outlet before you unplug it from the SCP-87, to prevent damage to the SCP-87 or the adapter.



Follow these steps to connect the SCP-87 to AC power.



1. Set the adapter's voltage switch to 3V.
2. Insert the adapter's 3.4 mm outer diameter/1.3 mm inner diameter tip into the adapter's cord, so it reads -TIP.
3. Insert the plug into the SCP-87's DC 3V jack.
4. Plug the adapter into a standard AC outlet.

**Note:** Connecting the AC adapter automatically disconnects internal batteries.



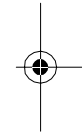
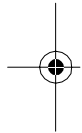
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## Using Your Vehicle's Battery Power

To power the SCP-87 from your vehicle's battery, you need a DC adapter, such as Cat. No. 270-1560.

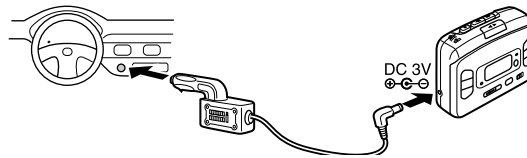
### Cautions:

- You must use a DC adapter that supplies 3 volts DC power and delivers at least 300 milliamps. Its center tip must be set to negative, and its plug must properly fit the SCP-87's **DC 3V** jack. The recommended adapter meets these requirements. Using an adapter that does not meet these requirements could seriously damage the SCP-87.
- Be sure you plug the adapter into the SCP-87 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 SCP-87, to prevent damage to the SCP-87 or the adapter.



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Follow these steps to power the SCP-87 from your vehicle's battery.

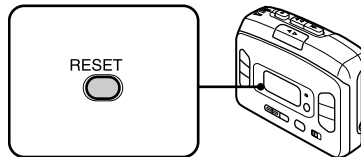


1. Set the adapter's voltage switch to 3V.
2. Insert the adapter's 3.4 mm outer diameter/1.3 mm inner diameter tip into the adapter's cord, so it reads -TIP.
3. Insert the plug into the SCP-87's **DC 3V** jack.
4. Plug the other end of the adapter into the vehicle's cigarette-lighter socket.


## RESETTING THE SCP-87

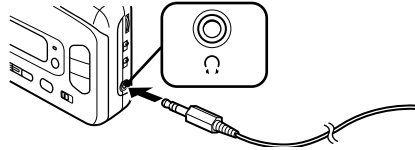
If the SCP-87's display locks up or does not work properly after you connect power, reset the SCP-87. To reset the SCP-87, press **RESET** using a pointed object, such as a ball-point pen.

**Caution:** Resetting the SCP-87 clears all the settings you have stored. Reset the SCP-87 only when you are sure it is not working properly.



## USING HEADPHONES OR SPEAKERS

To connect headphones or an amplified speaker system, insert the mini-plug into the SCP-87's  jack.



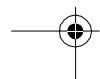
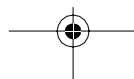
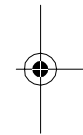
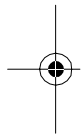
## Listening Safely

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

- Set the volume to the lowest setting before you begin listening. After you begin listening, 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.

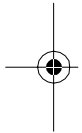




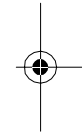
- Once you set the volume, do not increase it. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.

### Traffic Safety

Do not wear headphones while operating a motor vehicle or riding a bicycle. This can create a traffic hazard and can be illegal in some areas.



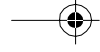
Even though some headphones are designed to let you hear some outside sounds when listening at normal volume levels, they still can present a traffic hazard.



### USING THE BELT CLIP

The belt clip lets you keep your hands free while you listen to the SCP-87. To attach the belt clip to the SCP-87, slide the belt clip's latches into the slots on

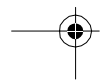
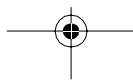
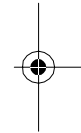
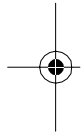
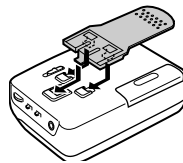




the cassette player and slide it up until it locks into



place.







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To remove the belt clip from the SCP-87, push in on **PUSH RELEASE**, slide the belt clip down, then lift it off.

## SETTING THE FREQUENCY RANGES AND STEPS

The SCP-87 is set to tune frequencies in steps (increments) of 10 kHz (AM) and 0.2 MHz (FM) as used in the United States.

In Europe and some other countries, frequency ranges and steps are not the same as those in the United States. For example:

In North and South America:

AM: 530–1,710 kHz (10 kHz increment)

FM: 87.5–108.1 MHz (0.2 MHz increment)

**Note:** Actual FM broadcast frequencies are assigned between 88 and 108 MHz.

In Europe and other countries:

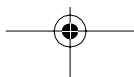
AM: 531–1,602 kHz (9 kHz increment)

FM: 87.5–108 MHz (0.05 MHz increment)

In Japan:

AM: 531–1,629 kHz (9 kHz increment)

FM: 76–108 MHz (0.1 MHz increment)



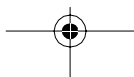
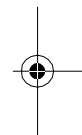
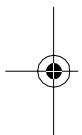
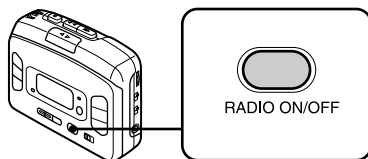


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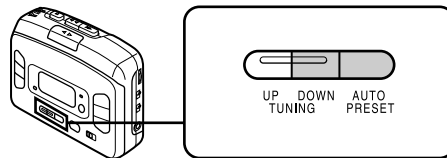
**Caution:** Changing the frequency ranges and steps erases all stored stations.

To listen to the radio in another country, follow these steps to change the frequency ranges and steps.

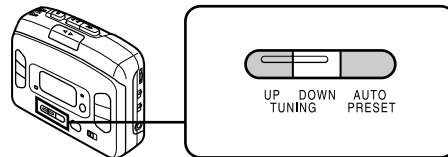
1. Press **RADIO ON/OFF** to turn on the radio.



2. To change to Europe's and other countries' frequencies and steps, hold down **AUTO PRESET** and **TUNING DOWN** at the same time for about 7 seconds. **EU** appears briefly on the display and a beep sounds, then the display shows the lowest frequency in the AM band.



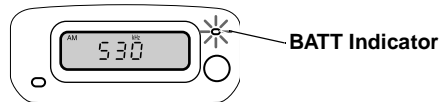
To change to Japan's frequencies and steps, hold down **AUTO PRESET** and **TUNING UP** at the same time for about 7 seconds. **JP** appears briefly on the display and a beep sounds, then the display shows the lowest frequency in the AM band.



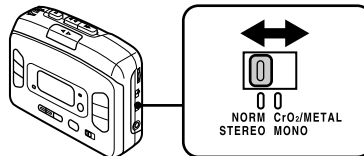
To return to the local (U.S.) setting, hold down **TUNING DOWN** and **UP** at the same time for about 7 seconds. **US** appears briefly on the display and a beep sounds, then the display shows the lowest frequency in the AM band.

## USING THE RADIO

1. Press **RADIO ON/OFF** until the display shows the desired band (**AM**, **FM1**, or **FM2**). The BATT indicator lights.



2. Set **STEREO/MONO** to **STEREO** for stereo sound on FM stations, or to **MONO** for monaural sound.



### Notes:

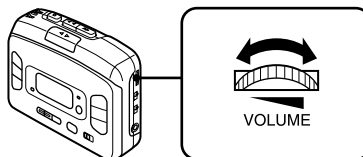
- For the best FM reception, fully uncoil the headphones' or speaker's cord.
- The AM antenna is built-in. Move the SCP-87 to the best position for AM reception.
- To improve reception for weak FM stereo stations, set **STEREO/MONO** to **MONO**. The sound will be monaural, but reception should improve.



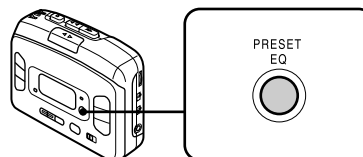
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3. Tune to the desired station using manual, seek, or memory tuning (see “Manual Tuning,” “Seek Tuning,” or “Memory Tuning” on Page 22).

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



5. Repeatedly press **PRESET EQ** (preset equalizer) to select classic, pop, rock, or jazz sound characteristics. A bar appears above the selected sound.



6. To turn off the radio, press **RADIO ON/OFF** until the display clears and the BATT indicator turns off.

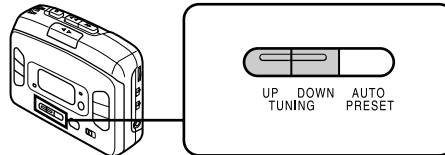


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## MANUAL TUNING

Press **TUNING UP** or **DOWN** to tune up or down the band.



## SEEK TUNING

Hold down **TUNING UP** or **DOWN** for about 1–2 seconds. The SCP-87 automatically searches up or down the band and stops when it finds the next strong station.

## MEMORY TUNING

You can store up to 6 AM and 12 FM stations in memory, automatically or manually.

**Note:** You can assign one station to each preset number. When you assign another frequency to the same preset number, the new frequency replaces the old one.

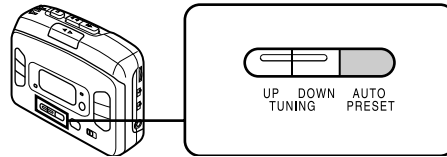
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### Storing Stations Automatically

You can set the SCP-87 to search the selected band and store the first six stations it finds into memory locations 1–6.

1. Press **RADIO ON/OFF** until the desired band appears.
2. Hold down **AUTO PRESET** for about 1–2 seconds. The SCP-87 starts searching.



When the SCP-87 finds a station, it plays the station for about 3 seconds then stores it in memory. Then the SCP-87 continues searching. After storing six stations in that band, the SCP-87 plays the last station stored.

**Note:** If you do not want to store a particular station, press **AUTO PRESET** while the station is playing. The SCP-87 automatically tunes and stores the next station.

### Storing Stations Manually

1. Press **RADIO ON/OFF** until the desired band appears.
2. Press **TUNING UP** or **DOWN** to tune to the station you want to store.
3. Hold down one of the preset number buttons (1–6) for 1–2 seconds. The number and **PRESET** appear on the display to indicate that the station is being stored in memory. **PRESET** disappears, but the number remains on the display.



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



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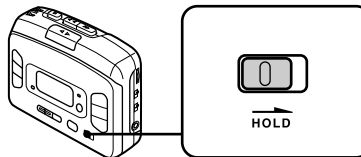
## Selecting Stored Stations

1. Repeatedly press **RADIO ON/OFF** to select the desired band.
2. Press one of the preset number buttons (1–6) to select a station.

**Note:** Do not hold down the preset number button for more than one second. Otherwise, another station will be stored in that memory location.

## SETTING THE HOLD SWITCH

The **HOLD** switch locks the radio control keys so you cannot accidentally change the radio's settings. To lock the keys, slide **HOLD** in the direction of the arrow. To unlock the keys, slide **HOLD** to the left.



**Note:** The **HOLD** switch also locks **PRESET EQ** during radio and cassette operation.

## USING THE CASSETTE PLAYER

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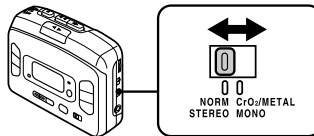
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### PLAYING A TAPE

1. Gently pull open the cassette compartment door and insert a pre-recorded cassette into the guides with the exposed tape edge facing out. Then close the door.



2. Set the tape select switch to **NORM** for normal bias cassette tapes or to **CrO<sub>2</sub>/METAL** for chrome or metal cassette tapes.

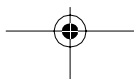
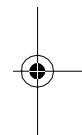
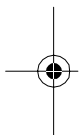
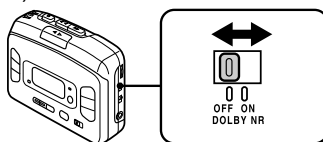


3. Set **DOLBY NR** to **ON** if you are playing a cassette tape that was recorded with Dolby B noise

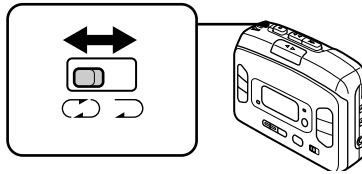


reduction (see “Dolby Noise Reduction” on

Page 32).



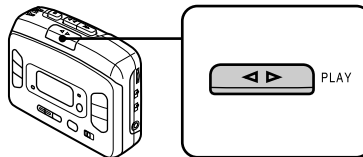
4. Set the automatic reverse switch to the desired position.



Continuous Playback (↔) — alternately plays each side of the tape until you press ■ **STOP**.

One-Time Playback (→) — plays both sides of the tape, then stops.

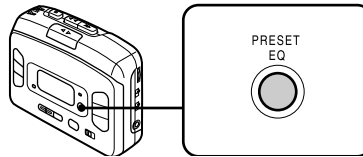
5. Make sure the radio is turned off.
6. Press ◀▶ **PLAY**. The BATT indicator lights and **TAPE** appears on the display. The tape plays.



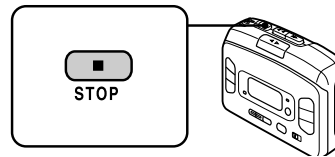
7. Adjust **VOLUME** to the desired listening level.



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8. Press **PRESET EQ** to select classic, pop, rock, or jazz sound characteristics. A bar appears above the selected sound.



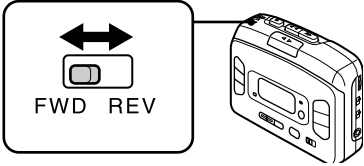
9. To stop the tape, press **■ STOP**.



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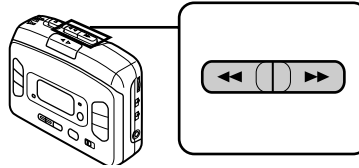
## CHANGING THE TAPE DIRECTION

You can change the tape's direction to play the other side using the **FWD/REV** switch. To listen to the tape's forward side (facing out), set the switch to **FWD**. To listen to the tape's reverse side (facing in), set the switch to **REV**.



## USING FAST-FORWARD AND REWIND

When the tape is stopped, press ◀◀ or ▶▶ to rewind or fast-forward it. To stop the tape before it reaches the end, press ■ STOP.



Tape Direction	Press to Fast-Forward	Press to Rewind
FWD (Forward)	▶▶	◀◀
REV (Backward)	◀◀	▶▶

**Note:** To protect the tape after the tape has fully wound to either end, press ■ STOP to release the ◀◀ or ▶▶ button.

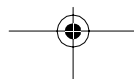
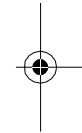
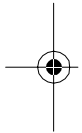


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## DOLBY NOISE REDUCTION

Your cassette player uses the Dolby B Noise-Reduction system to reduce background noise or tape hiss on your tapes. When a Dolby-encoded tape is recorded, the Dolby circuit listens to the program material to find soft passages where you might later be able to hear the tape noise. The Dolby NR system increases the recording level during these passages. When you play the tape, the circuit reduces the volume of these passages to their original levels and reduces the level of tape hiss to as little as one-third of the usual noise level.







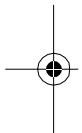
## **TAPE TIPS**



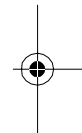
The following tips can help you get the best performance and the longest life from your SCP-87.

**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.

## **RESTORING TAPE TENSION AND SOUND QUALITY**

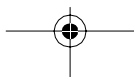


After you play a cassette tape several times, the tape might become tightly wound on the reels. This can cause playback sound quality to deteriorate.



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.



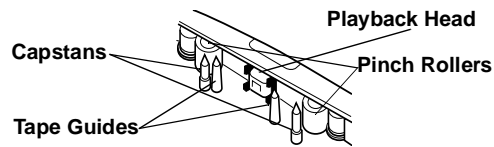
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## CLEANING THE TAPE-HANDLING PARTS

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 SCP-87. To protect the SCP-87, clean the tape-handling parts after about every 20 hours of tape player operation. Your local RadioShack store sells a complete line of cassette deck cleaning supplies.

1. Remove the batteries and disconnect any other power source.
2. Open the cassette compartment cover.
3. Press ◀ ▶ **PLAY** to expose the tape-handling parts.
4. Use a cotton swab dipped in denatured alcohol or tape head cleaning solution to clean the playback head, pinch rollers, tape guides, and capstans.



5. When you finish cleaning, press ■ **STOP** and close the cassette compartment cover. Then reconnect power.



## **CARE AND MAINTENANCE**



Your Optimus SCP-87 Digital AM/FM Stereo Cassette Player is an example of superior design and craftsmanship. The following suggestions will help you care for the SCP-87 so you can enjoy it for years.

- Keep the SCP-87 dry. If it gets wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.
- Handle the SCP-87 gently and carefully. Dropping it can damage circuit boards and cases and can cause the system to work improperly.
- Use and store the SCP-87 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-87 away from dust and dirt, which can cause premature wear of parts.
- Wipe the SCP-87 with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the SCP-87.

Modifying or tampering with the SCP-87's internal components can cause a malfunction and might invalidate the SCP-87's warranty and void your FCC authorization to operate it. If your SCP-87 is not performing as it should, take it to your local RadioShack store for assistance.



### 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.,  
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**Fort Worth, Texas 76102**

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## POWER REQUIREMENTS

Batteries ..... 2 AA Batteries  
AC ..... 120 Volts with AC Adapter  
(Cat. No. 273-1654)  
DC ..... 12 Volts DC with DC Adapter  
(Cat. No. 270-1560)

Typical Radio Playing Time  
with AA Alkaline Batteries ..... 35 Hours (approx.)

Typical Cassette Playing Time  
with AA Alkaline Batteries ..... 18 Hours (approx.)

## GENERAL

Power Output ..... 12 mW/Channel at 32 ohms  
Phones Output Impedance ..... 32 ohms  
Dimensions (HWD) .....  $3\frac{1}{2} \times 4\frac{5}{8} \times 1\frac{9}{16}$  Inches  
(88.1 x 115.1 x 39.2 mm)  
Weight ..... 7.6 oz  
(218 g)

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



# NOTES

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