



Cat. No. 32-1159
OWNER'S MANUAL

Please read before using this equipment.

Stereo Dual-Cassette Karaoke Center

with AM/FM Radio



OPTIMUS®



FEATURES

Your Optimus Stereo Dual-Cassette Karaoke Center lets you be the “star” as you sing along with your favorite recordings and hear your voice with the music through the speakers. You can sing along with regular cassette tapes or special karaoke cassette tapes (such as the supplied tape) that let you balance the volume of the prerecorded voice, your voice, and music tracks.

You can also connect another audio source (such as a stereo VCR or a CD player) to the system and sing along. If you connect a stereo VCR and play a karaoke music video cassette, the cassette shows the lyrics on a TV and lets you adjust the volume of the prerecorded original singer’s voice and music.

Note: Additional karaoke cassette tapes, as well as karaoke video cassettes, are available through RadioShack Unlimited. Contact your local RadioShack store for ordering information.

The music system’s features include:

Supplied Karaoke Audio Tape — lets you sing along with the music and adjust the volume of the prerecorded voice and music.

Automatic Voice Control — using a karaoke tape, lets you replace the prerecorded original singer’s voice with your voice.

Supplied Microphones — let you sing along with the music through the speaker.

Dual Microphone Jacks — let you use two microphones simultaneously to sing duets or for lead and background vocals.

Auxiliary Input Jacks — allow input from another audio source, such as a stereo VCR or CD player.

Auxiliary Output Jacks — allow output to another audio component, such as an equalizer/booster or a PA system.

Dual Cassette Decks — let you play one side of two tapes in a row, or dub from one cassette to another.

Recording — lets you record your voice as you sing along with a tape or an external audio source connected to the system.

Auto-Stop — automatically stops a tape when it finishes playing or recording, to protect the tape and tape-handling parts.

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Optimus is a registered trademark used by Tandy Corporation.

5 Band Frequency Equalizer — lets you precisely adjust the tone and sound to your preference and your room's unique acoustics.

Echo Control — lets you add an echo to your voice for a concert hall effect.



Tape Speed Control — adjusts the tape speed to match your voice pitch.

Balance Control — adjusts the balance between the left and right speakers if you use an external speaker, or adjusts the balance between the pre-recorded original singer's voice and the music if you use a karaoke tape.

Built-In Speaker — lets you share the music with friends.

External Speaker Jack — lets you connect the system to an external speaker for stereo effects.

Warning: To prevent fire or shock hazard, do not expose this product to rain or moisture.

	CAUTION RISK OF ELECTRIC SHOCK. DO NOT OPEN.	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.		



This symbol is intended to alert you to the presence of uninsulated dangerous voltage within the product's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the product's case.



This symbol is intended to inform you that important operating and maintenance instructions are included in the literature accompanying this product.

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CONNECTIONS



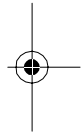
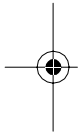
Caution: Do not plug in the power cord until all other connections are complete.

CONNECTING ANOTHER AUDIO SOURCE TO THE INPUT JACKS

You can connect another audio source (such as a stereo VCR or CD player) so you can sing along with the audio source's sound. Connect the source's stereo audio output jacks to the system's **AUX IN L** and **R** jacks.

CONNECTING AN AUDIO COMPONENT TO THE OUTPUT JACKS

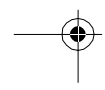
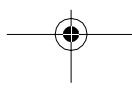
You can connect an audio component (such as a PA system amplifier) to the system's **AUX OUT L** and **R** jacks. The **AUX OUT L** and **R** jacks let you hear the system's sound through the component.

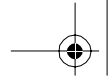


CONNECTING AN EXTERNAL SPEAKER

Note: If your audio source does not have **AUX OUT L** and **R** jacks, but has only a headphone jack (such as on a portable tape or CD player), use a shielded Y-adaptor cord with phono jacks on each end (such as Cat. No. 42-2475). Connect the single-plug end to the audio source's headphone jack, and connect the other end's two phono plugs to the system's **AUX IN L** and **R** jacks.

You can connect an external 20-watt stereo speaker with 8-ohm impedance to the system's **EXT. 8OHM SPEAKER** jack for stereo effect.

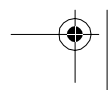
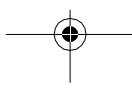
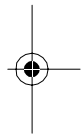
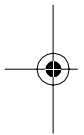


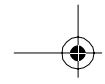


CONNECTING POWER

When you have made all connections, plug your system's power cord into a standard AC outlet.

Caution: Your system's power cord has a polarized plug (one blade is wider than the other). If you have difficulty inserting the plug into the outlet, do not force it. Turn the plug over and try again.





USING THE 5 BAND EQUALIZER

You can use the 5 band frequency equalizer to customize the sound you hear through the speaker. Each of the five controls lets you adjust the sound level in a specific frequency range. Slide the control up to boost or down to reduce the level. If you set the control to the center position (0), the frequency is unaltered.

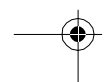
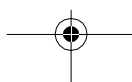
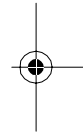
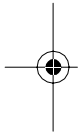
120 Hz — Adjusts the frequencies in the low-bass range (bass drums). Reduces rumble or other low-frequency noise.

300 Hz — Adjusts mid-range low frequencies (organ notes).

1 kHz — Adjusts the range of frequencies where the ear is most sensitive (low vocals).

3.3 kHz — Adjusts mid-range high frequencies (high vocals).

10 kHz — Adjusts high-frequency sounds (cymbals, flutes, and violins).





USING THE RADIO

Warning: To protect your hearing, set **MASTER VOLUME** to **MIN** before you play the radio.

3. Set **BAND SELECTOR** to **AM**, **FM STEREO**, or **FM**.

1. Press **POWER** to turn on the system. The **POWER** indicator lights.

4. Rotate **TUNING** to select the desired station.

2. Set **FUNCTION SELECTOR** to **TUNER**.

Notes:

- The AM antenna is built in. For the best AM reception, adjust the radio's position.
- If the **BAND SELECTOR** is set to **FM STEREO**, the FM STEREO indicator lights when the radio receives an FM broadcast in stereo. If the FM reception is weak, set **BAND SELECTOR** to **FM** to improve it. The sound is mono, but the reception should improve.

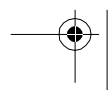
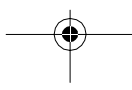
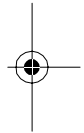
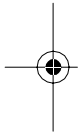
5. Rotate **MASTER VOLUME** to a comfortable listening level.



6. Adjust **BALANCE** if you connected an external speaker.

7. Adjust the **5 BAND EQUALIZER** controls as desired.

To turn off the system, press **POWER**.





USING THE CASSETTE DECK



You can play a cassette tape in either cassette deck, and record tapes in TAPE 1.

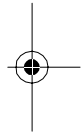
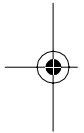
1. Press **STOP/EJECT** to open the cassette compartment.

Warning: To protect your hearing, set **MASTER VOLUME** to **MIN** before you play a cassette tape.

LOADING A CASSETTE TAPE

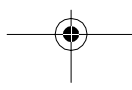
Note: Take up any slack in the tape by turning the cassette's hub with a pencil or your finger. If you do not remove excess slack, the tape might become tangled in the record/playback mechanism. Avoid touching the tape.

2. Load the cassette tape with its open edge facing down, the side you want to play or record on facing you, and the full reel to the left.



3. Close the compartment door.

Follow these steps to load a cassette tape in TAPE 1 or TAPE 2.



PLAYING A CASSETTE TAPE

You can play a cassette tape in either TAPE 1 or TAPE 2, or you can load cassette tapes in both decks and play them consecutively.

Normal Play

Follow these steps to play a cassette tape in TAPE 1 or TAPE 2.

1. Load a cassette tape in TAPE 1 or TAPE 2.
2. Press **POWER** to turn on the system. The POWER indicator lights.
3. Set **FUNCTION SELECTOR** to **TAPE**.
4. Press **PLAY** on the deck where the tape is loaded.
5. Adjust **MASTER VOLUME** and the **5 BAND EQUALIZER** controls for the desired sound.
6. Adjust **BALANCE** if you connected an external speaker.
7. Press **STOP/EJECT** to stop the tape. Press **STOP/EJECT** again to open the cassette compartment. Then remove the cassette tape.

Turn the tape over and press **PLAY** to play the other side.



Notes:

- To temporarily stop play, press **PAUSE**. Press **PAUSE** again to resume play.

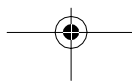
- To rapidly wind the tape forward or backward, press **FAST-F** or **REWIND**. Press **STOP/EJECT** when you reach the desired section.

Consecutive Play

Follow these steps to play one side of the tape in TAPE 2, then play one side of the tape in TAPE 1.

1. Follow Steps 1–3 under “Normal Play” on Page 11, loading tapes in both TAPE 1 and TAPE 2.
2. Press **PLAY** on TAPE 2.
3. Press **PAUSE** then **PLAY** on TAPE 1.

The tape in TAPE 2 plays to the side's end. Then the tape in TAPE 1 plays to its side's end.





SINGING ALONG



Now get ready for some fun! In this section, we tell you how to use your system's karaoke features. First, plug a supplied microphone's 1/4-inch plug into one of the microphone jacks.

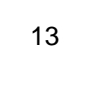
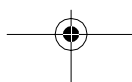
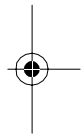
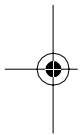
AUTO VOICE CONTROL — While you play a karaoke cassette tape, rotate **AUTO VOICE CONTROL** to replace the prerecorded voice with your voice. If you have a high voice, turn **AUTO VOICE CONTROL** towards **LOW**. If you have a low voice, turn **AUTO VOICE CONTROL** towards **HIGH**.

Note: Your friends can also sing along with the music if you connect a unidirectional 600-ohm dynamic microphone with a 1/4-inch plug to the system's other microphone jack. Your local RadioShack store sells a wide variety of microphones.

ECHO — This adds an echo effect to your voice while you sing. rotate **ECHO** between **LOW** and **HIGH** for the desired effect.

Next, you can use these four controls to get the sound just right.

TAPE SPEED — While you play a tape, rotate **TAPE SPEED** towards **LOW** to slow down the tape or towards **HIGH** to speed it up.



BALANCE — While you play a karaoke cassette tape, turn **BALANCE** to adjust the balance between the pre-recorded original singer's voice and the music. If you use an external speaker, turn **BALANCE** to adjust the balance between the left and right speakers.

3. Set **FUNCTION SELECTOR** to **TAPE**.

SINGING WITH A CASSETTE TAPE

Follow these steps to sing along with a regular or karaoke cassette tape (such as the one supplied).

1. Press **POWER** to turn on the system. The **POWER** indicator lights.

4. Press **PLAY** to play the tape.

5. Adjust **MASTER VOLUME** and the **5 BAND EQUALIZER** controls to the desired sound.

6. Set the microphone's **ON/OFF** switch to **ON**. Sing directly into the microphone along with the music.

7. Use **MIC 1 VOLUME** or **MIC 2 VOLUME** to adjust the volume of each microphone.

2. Load a prerecorded tape in **TAPE 1** or **TAPE 2**.

8. Adjust **ECHO** to add an echo to your voice.

9. Adjust **TAPE SPEED**.

10. If you are using a karaoke cassette tape, adjust **BALANCE** and **AUTO VOICE CONTROL** for the desired effect.

SINGING WITH ANOTHER AUDIO SOURCE

If you connected another audio source (see "Connecting Another Audio Source to the Input Jacks" on Page 5), follow these steps to sing along with that audio source.

1. Set **FUNCTION SELECTOR** to **AUX**.
2. Press **POWER** to turn on the system. The **POWER** indicator lights.
3. Turn on the audio source.
4. Adjust **MASTER VOLUME** and the **5 BAND EQUALIZER** controls for the desired sound.
5. Set the microphone's **ON/OFF** switch to **ON**. Sing directly into the microphone along with the music. Use **MIC 1 VOLUME** or **MIC 2 VOLUME** to adjust your voice's volume.

6. When you finish, press **POWER** to turn off the system, turn off the audio source, and set the microphone's **ON/OFF** switch to **OFF**. The **POWER** indicator turns off.



USING OPTIONAL COMPONENTS

LISTENING TO ANOTHER AUDIO SOURCE

If you connected another audio source (see “Connecting Another Audio Source to the Input Jacks” on Page 5), follow these steps to listen to that source.

Warning: To protect your hearing and prevent damage to the system, always set the source’s and the system’s volume controls to their lowest settings before turning on the source and the system.

1. Set **FUNCTION SELECTOR** to **AUX**.

2. Press **POWER** to turn on the system. The **POWER** indicator lights.
3. Turn on the audio source.
4. Adjust the system’s **MASTER VOLUME** and the **5 BAND EQUALIZER** controls for the desired sound.
5. To turn off the system, press **POWER**. The **POWER** indicator turns off. Then turn off the audio source.

USING ANOTHER AUDIO COMPONENT

If you connected an audio component (see “Connecting an Audio Component to the Output Jacks” on Page 5), follow these steps to listen to the system’s sound through that component.

Warning: To protect your hearing and prevent damage to the audio system, always set the system’s and the audio component’s volume controls to their lowest settings before you turn on the component and the system.

1. Set the **FUNCTION SELECTOR** to **AUX**.

2. Press **POWER** to turn on the system. The **POWER** indicator lights.
3. Turn on the audio component.
4. Sing through the microphone (see “Singing Along” on Page 13).
5. When you finish listening, turn off the audio component. Then press **POWER** to turn off the system. The **POWER** indicator turns off.

RECORDING

You can record as you sing along with a tape or another audio source. You can also record only the external audio source, or dub from one cassette tape to another.

RECORDING TIPS

- Tape quality greatly affects the quality of the recording. We recommend RadioShack Supertape Extended Range or Low-Noise Type 1 tape. We do not recommend long-play cassette tapes, such as C-120s, because they are thin and can easily tangle in the cassette mechanism. For low-noise, wide-range recordings, use normal-bias tape.
- Before recording, be sure the tape you are using has its erase-protection tabs in place. See "Preventing Accidental Erasure" on Page 20.
- Recording automatically stops when the tape in TAPE 1 reaches the end. To record on the other side, turn over the tape.

RECORDING YOUR VOICE WITH MUSIC

Follow these steps to record your voice along with music from a tape in TAPE 2 or an audio source connected to the system's **AUX INPUT** jacks.

1. Load a blank tape, or one that you want to record over, into TAPE 1, with the side you want to record on facing you, and the full reel to the left.
 2. Follow Steps 1–10 under "Singing with a Cassette Tape" on Page 14 or Steps 1–5 under "Singing with Another Audio Source" on Page 15.
 3. Press **RECORD** on TAPE 1 to begin recording. **RECORD** and **PLAY** both lock down.
- Note:** Press **PAUSE** on TAPE 1 to temporarily stop recording. Press **PAUSE** again to resume recording.
4. Press **STOP/EJECT** on TAPE 1 to stop recording. **RECORD** and **PLAY** release.
 5. Press **STOP/EJECT** on TAPE 2 or stop the audio source.

RECORDING FROM THE RADIO

1. Set **FUNCTION SELECTOR** to **TUNER**.
2. Load a blank tape (or one that you want to record over) into TAPE 1, with the side you want to record on facing you, and the full reel to the left.
3. Press **PAUSE** then **RECORD** on TAPE 1. **PLAY** and **RECORD** both lock down.
4. When the selection you want plays on the radio, press **PAUSE** again to start recording.

Note: Sometimes AM broadcasts produce a hum or whistling sound that you hear while playing a recorded tape. To reduce or eliminate this sound, set **BEAT CUT** on the back of the system to the position that gives you the best quality recording.

DUBBING A CASSETTE TAPE

Follow these steps to dub (copy) from one cassette tape to another.

1. Set **FUNCTION SELECTOR** to **TAPE**.
2. Load the cassette you want to copy into TAPE 2 with the side you want to record from facing you.
3. Load a blank cassette (or one you want to record over) into TAPE 1 with the side you want to record on facing you.
4. Press **PAUSE**, then **RECORD** on TAPE 1. **RECORD** and **PLAY** both lock down.
5. Press **PLAY** on TAPE 2 to begin recording. **PAUSE** on TAPE 1 automatically releases.

Note: You can listen to the tape playing in TAPE 2 as you copy it. Set **MASTER VOLUME** to a comfortable level. The volume setting does not affect the recording level.

6. Press **STOP/EJECT** on TAPE 1 to stop recording. **RECORD** and **PLAY** release.
7. Press **STOP/EJECT** on TAPE 2 to stop playing the tape.

MAINTENANCE

Your Optimus Stereo Dual-Cassette Karaoke Center is an example of superior design and craftsmanship. The following suggestions will help you care for the system so you can enjoy it for years.



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



Use and store the system only in normal temperature environments. Temperature extremes can shorten the life of electronic devices and distort or melt plastic parts.



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



Handle the system gently and carefully. Dropping it can damage circuit boards and cases and can cause the system to work improperly.



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

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

TAPE CARE TIPS

Preventing Accidental Erasure

Cassette tapes have two erase-protection tabs — one for each side. To protect a recording from being accidentally recorded over or erased, use a screwdriver to remove one or both of the cassette tape's erase-protection tabs.

If you want to record on a tape side after you have removed the erase-protection tab, place a piece of strong plastic tape over that side's erase-protection hole.

Notes:

- Be sure you cover only the hole originally covered by the erase-protection tab.
- Removing the erase-protection tabs does not prevent a bulk eraser from erasing a cassette tape.

Erasing a Cassette Tape

If you no longer want a recording, you can record over it or erase it.

To erase a previously recorded section of a tape, simply record over it.

To erase the entire cassette tape, record silence by setting **FUNCTION SELECTOR** to **TAPE** and recording with no tape in TAPE 2.

You can quickly erase both sides of a cassette tape using a bulk tape eraser (such as Cat. No. 44-232), available at your local RadioShack store.

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 cassette player. Use the following cleaning procedure after every 20 hours of tape player operation.

1. Disconnect the AC power cord.
2. Open the cassette compartment doors on TAPE 1 and TAPE 2.
3. Press **PLAY** on TAPE 1 and TAPE 2 to expose the tape-handling parts.

4. Use a cotton swab dipped in denatured alcohol or tape head cleaning solution to clean the record/play heads, pinch rollers, capstans, tape guides, and erase heads.

TAPE 1

TAPE 2

5. When you finish cleaning, press **STOP/EJECT** on TAPE 1 and TAPE 2 and close the cassette compartment doors. Then reconnect power.

Your local RadioShack store sells a full line of cassette deck cleaning supplies.

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.

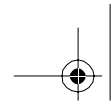
THE FCC WANTS YOU TO KNOW

This music system complies with the limits for a Class B digital device as specified in Part 15 of *FCC Rules*. These limits provide reasonable protection against radio and TV interference in a residential area. However, your system might cause TV or radio interference even when it is operating properly. To eliminate interference, you can try one or more of the following corrective measures:

- Reorient or relocate the receiving antenna
- Increase the distance between the system and the radio or TV
- Use outlets on different electrical circuits for the system and the radio or TV

Consult your local RadioShack store if the problem still exists.

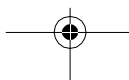
You must use shielded interface cables with this system.

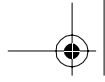


SPECIFICATIONS

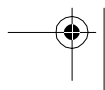
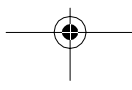
Power Output (at 10% THD)	20 Watts per Channel
Equalizer	120 Hz \pm 10 dB 300 Hz \pm 10 dB 1 kHz \pm 10 dB 3.3 kHz \pm 10 dB 10 kHz \pm 10 dB
Track System	4 Track Two Channel Stereo
Tape Speed	17/8 ips
Recording System	AC Bias
Erasing System	AC
Wow and Flutter (WRMS)	Less Than 0.35%
Record/Play Frequency Response (at \pm 3 dB)	125–8000 Hz
Signal-To-Noise	40 dB
Speaker	10-Inch Woofer/3-Inch Tweeter (8 Ohms)
Microphone (Monaural) Impedance	600 Ohm
Power Source	AC 120V, 60 Hz, 85 W
Dimensions (HWD)	15 \times 28 \times 9 $\frac{1}{2}$ Inches (381 \times 711 \times 242 mm)
Weight	38 lb 9.3 oz (17.5 kg)
Included Accessories	2 Microphones, Karaoke Cassette Tape

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





NOTES





RadioShack Limited Warranty

This product is warranted against defects for 90 days from date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. Within this period, we will repair it without charge for parts and labor. Simply **bring your RadioShack sales slip** as proof of purchase date to any RadioShack store. Warranty does not cover transportation costs. Nor does it cover a product subjected to misuse or accidental damage.

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