

RadioShack®



32-2059

Dual 15 Band Graphic Equalizer



Thank you for purchasing your Dual 15 Band Graphic Equalizer from RadioShack. Your new equalizer features narrow band frequency balance controls that provide a wide array of frequency response variations. You can now match the speakers to your room, reduce or eliminate inadequacies in your high fidelity sound system, and tailor the reproduction of music to your heart's desire.

what's included

Dual 15 Band Graphic Equalizer
Quick Start Guide
User's Guide

Please read this user's guide before installing,
setting up and using your new product

www.radioshack.com

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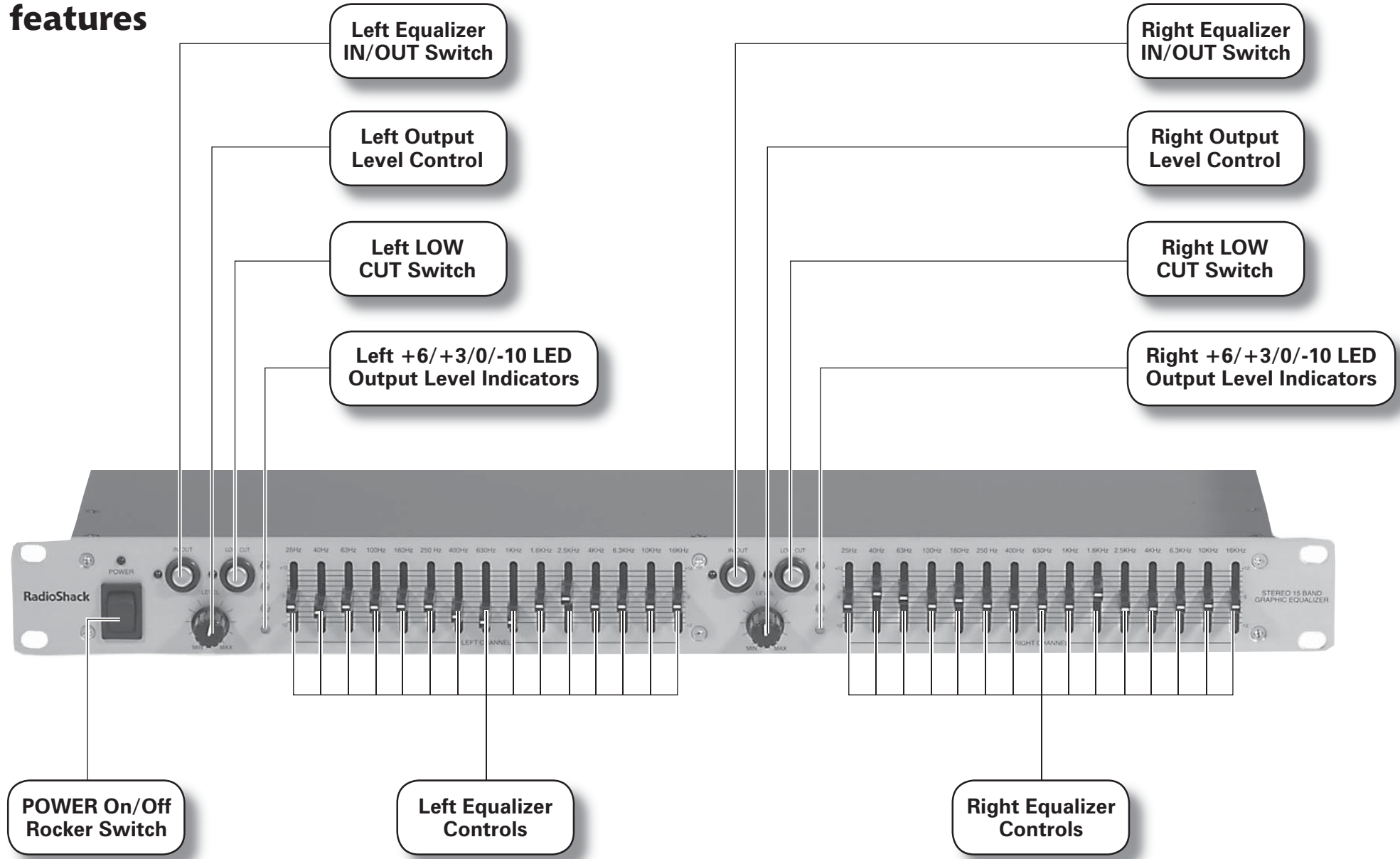
getting to know your equalizer

Your new equalizer can enhance your sound system in the following ways:

- Remedy any system suffering from rumble or low frequency below 30Hz overload by attenuating the lowermost equalizer controls so that you will not miss any of the music.
- Eliminate or reduce noise due to scratches on record surfaces or even the hiss on a tape by bringing down the control level at 9 kHz. You can even compensate for the boosted highs on Dolby processed tape or encoded FM Broadcasts.
- Equalize the tonal quality of broadcast stations if they attenuate or accentuate either highs or lows.
- Adjust the controls to accommodate high performance recording tapes that require special equalization in playback.
- Correct turntable cartridge or speaker inadequacies for pleasant listening.
- Find the appropriate equalizer control and adjust it up or down a few dB.
- Adjust the equalizer to accommodate voices or music.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN		WARNING: To reduce the risk of fire or shock hazard, do not expose this product to rain or moisture
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.			
	The lightning symbol is intended to alert you to the presence of uninsulated, dangerous voltage within this product's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the product's case.		
	The exclamation symbol is intended to inform you that important operating and maintenance instructions are included in the literature accompanying this product.		

features



features

back of equalizer

Stereo Phono Audio Input Jacks

Connect audio input source (CD or DVD player, TV, video camera, etc.) here via an unbalanced audio cable. Match left (white) and right (red) jacks with white and red connections on the audio cable.

REC Output Jacks

Connect to your recorder's input so that you can record sound from the equalizer.

XLR Output Jacks

Connect to your amplifier or audio mixer via an XLR (balanced) audio cable.

Ground Wire Connection

Connect the ground wire here.

1/4" Audio Input Jacks

Connect audio input source (CD or DVD player, TV, video camera, etc.) here via a 1/4-inch (balanced) audio cable.

1/4" Audio Output Jacks

Connect to your amplifier or audio mixer via a 1/4-inch (balanced) audio cable.

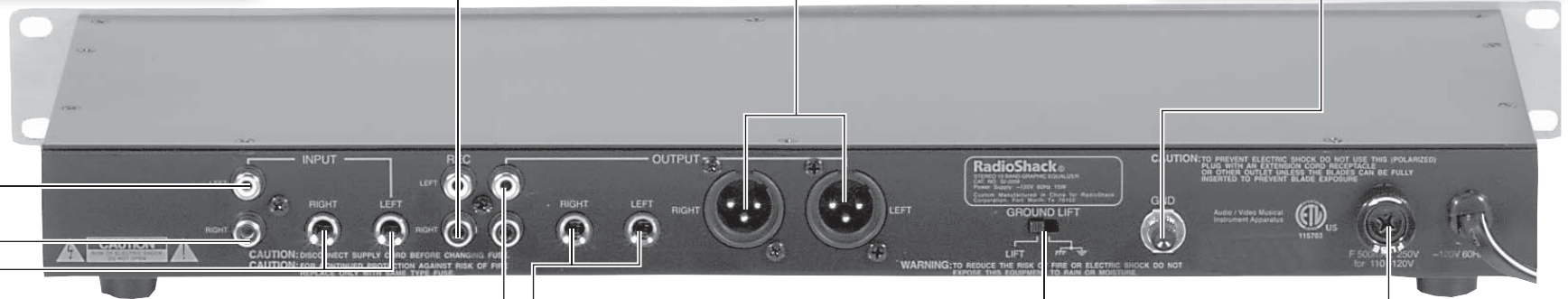
Stereo Phono Audio Output Jacks

Connect to your amplifier or audio mixer via an unbalanced audio cable. Match red and white jacks with the red and white connections on the cable.

GROUND LIFT Switch

Allows you to disconnect the signal ground from the mains and chassis earth ground. If the equalizer causes a hum or buzz in your sound system due to a ground loop, move the switch to the **LIFT** position.

Fuse



features

front of equalizer

POWER on/off rocker switch with LED indicator

Press up to power your equalizer. The LED will light up. Press down to turn your equalizer off. The indicator light will also turn off.

equalizer IN/OUT switches

The switch on the left is for the left channel and the switch on the right is for the right channel. Press in to activate your equalizer. The equalizer LED indicator lights up. Press again to defeat the equalizer function.

LOW CUT switches

The switch on the left is for the left channel and the switch on the right is for the right channel. Press in to attenuate the unwanted low frequency sound created by the source equipment. The **LOW CUT** LED indicator lights up. Press again to release the switch and turn off **LOW CUT**.

output level indicators

The indicators on the left correspond with the left channel and the indicators on the right correspond with the right channel. The +6/+3/0/-10 LED output level indicators light up to indicate the output level of each side of your sound system, from -10dB to +6dB.

output level control

The control on the left is for the left channel. The control on the right is for the right channel. Turn to adjust the output signal of each channel so the average output equals the input signal level without distortion.

equalizer controls

The 15 controls on the left correspond with the left channel and the 15 on the right correspond with the right channel. Use these Equalizer Controls to adjust the frequency response of each side of your sound system. Each frequency control cuts or boosts up to ± 12 dB.

important safety instructions (UL 6500)

1. Read all safety and operating instructions before the appliance is operated.
2. Keep all safety and operating instructions for future reference.
3. Follow all warnings on the appliance and in the operating instructions.
4. Unplug this appliance from the wall outlet before cleaning. Use only a damp cloth for cleaning. Do not use liquid or aerosol cleaners.
5. Do not use this appliance near water (for example, near a bathtub, washbowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool).
6. Do not place this appliance on an unstable cart, stand, tripod, bracket, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the appliance. Follow the manufacturer's instructions for mounting, and use a recommended mounting accessory.
7. Slots and openings in the cabinet provide ventilation, ensure reliable operation, and protect from overheating. Do not block or cover these openings, and do not place the appliance on a bed, sofa, rug, or other similar surface. Do not place the appliance in a built-in installation such as a bookcase or rack unless it provides proper ventilation as specified by the manufacturer.
8. Keep appliance away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

9. Operate this appliance using only the power source indicated on its marking label. If you are not sure of your home's power type, consult your appliance dealer or local power company.
10. This appliance is equipped with a polarized power cord plug (a plug having one blade wider than the other). This plug will fit in the power outlet only one way. This is a safety feature. If you cannot insert the plug fully into the outlet, try reversing the plug. If the plug still doesn't fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
11. Route power-supply cords so they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
12. Clean only as recommended by the manufacturer.
13. An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
14. Unplug the power cord from the outlet when you know that you will not be using the appliance for a long period of time.
15. Do not overload wall outlets, extension cords, or integral convenience receptacles, as this can result in a risk of fire or electric shock.
16. Never push objects of any kind into this appliance through openings, as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.

17. Move appliance and cart combinations with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
18. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - When the power-supply cord or plug is damaged.
 - If liquid has been spilled or objects have fallen into the appliance.
 - If the appliance has been exposed to rain or water.
 - If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
 - If the appliance has been dropped or damaged in any way.
 - When the appliance exhibits a distinct change in performance.
19. Do not attempt to service this appliance yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
20. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
21. Upon completion of any service or repairs to this appliance, ask the service technician to perform safety checks to determine that the appliance is in proper operating condition.

22. For added protection for this product during a lightning storm, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power line surges.
23. Only use attachments recommended by the product manufacturer.
24. The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
25. Overloading — Do not overload wall outlets, extension cords, or integral convenience receptacles, as this can result in a risk of fire or electric shock.

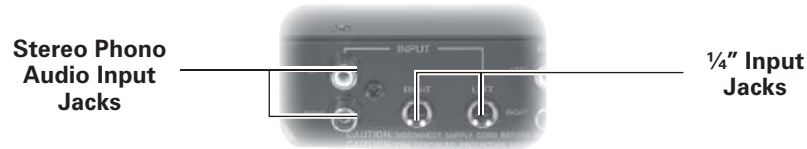
before you begin

Before you use your equalizer, be sure to set the power switch to the off position. All connections must be made when your equipment is turned off.

connecting your equalizer

connecting input sources

Connect line level inputs (i.e.: tuners, CD players, etc.) to the **INPUT** jacks on the back of your equalizer through either stereo phono audio cables or 1/4" (6.35 mm) audio cables.



NOTE Use only one type of cable at a time.

connecting output sources

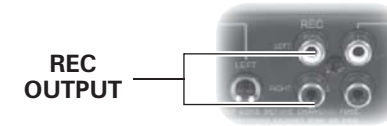
To play the equalizer's output signal through your sound system for events such as parties, dances, conferences, etc., connect either stereo phono, 1/4" (6.35 mm), or XLR audio cables to the equalizer's **OUTPUT** jacks and to your amplifier's input jacks.




- NOTES**
- Use only one type of audio cable at a time.
 - You can use the equalizer as a sound effect device for a mixer, by connecting the mixer's **SEND** jack to the equalizer's **INPUT**, and playing back through the equalizer's output to the mixer's **RECEIVE** jack.

connecting REC output


You can record the equalizer's output signal by connecting the left and right cables from the equalizer's **REC OUTPUT** to the input of a recorder.



using the ground lift switch

1. Move the **GROUND LIFT** switch to the ground  position. Turn on the equalizer and listen to the sound system with no signal present.



2. Turn off the equalizer and move the **GROUND LIFT** switch to the **LIFT** position.
3. Turn on the equalizer again. Listen to determine which switch position provides a background noise or hum in your sound system.
4. Keep the switch in the ground  position if the noise level remains the same in either position. Keep the switch in the **LIFT** position if the equalizer provides a signal free of background noise and hum.

using your equalizer

1. Set the volume on the output devices (receiver, amplifier, or tape deck) to minimum and turn them on.
2. Turn on the equalizer. The red power LED indicator lights up.
3. Set the **IN/OUT** switch to **IN** to activate the equalizer. The red LED indicator lights up.

IN/OUT Switch



- If you set the **IN/OUT** switch to out, the input signal is bypassed and routed directly to the other sound system's output jacks. The red LED indicator goes off.
 - To operate left channel **IN/OUT**, use the **IN/OUT** switch on the left. To operate right channel **IN/OUT**, use the **IN/OUT** switch on the right.
4. Adjust some or all of the fifteen (15) equalizer controls ranging from 25 Hz to 16 kHz for each channel to get the desired frequency output. Each equalizer control adjustment can be cut or boosted up to ± 12 dB.

Equalizer Controls



5. To insert an electronic filter into the equalizer's signal path, press **LOW CUT** to cut the low frequencies. The red **LOW CUT** LED lights up.

LOW CUT Switch



6. It is possible that at certain settings, the frequency equalization slide controls will increase or decrease the total average signal level. Use the left and right **LEVEL** controls to adjust each channel so the average output equals the input signal level.

LEVEL Control



NOTE

Each **LEVEL** control has four output level LED indicators that light up to reflect the output level from -10 dB to $+6$ dB. The $+6$ dB LED lights up to warn you that there is too much output power and distortion. Lower the **LEVEL** control until this LED goes off.

replacing the fuse

Your equalizer requires a 250 Volt, 0.5 Amp fuse to protect it from power surges and short circuits. If the equalizer suddenly turns off or will not turn on, the fuse could be blown. Replace the fuse with a 0.5 Amp, 250 Volt, fast-blow, $1\frac{1}{4} \times \frac{1}{4}$ inch (32 mm x 6.35 mm) fuse (not supplied, available at RadioShack or online at www.radioshack.com).

Follow these steps to replace the fuse.

1. Remove the fuse compartment cap on the back of the equalizer.



Fuse Compartment Cap

2. Remove the old fuse and replace it with an identical fuse.
3. Replace the fuse compartment cap.

NOTE

Never use a fuse of a different type or rating.

caring for your equalizer

- Keep the equalizer dry. If it goes wet, wipe it dry immediately.
- Use and store the equalizer only in normal temperature environments.
- Handle the equalizer gently and carefully. Do not drop it.
- Keep the equalizer away from dust and dirt.
- Wipe the equalizer with a soft cloth occasionally to keep it looking new.
- Modifying or tampering with the equalizer's internal components can cause a malfunction and might invalidate its warranty.

FAQs

What do I do if my equalizer doesn't seem to be working?

- Check the AC power connection and make sure the AC outlet is "live."
- Check the power connections to the rest of system (amplifier/receiver, input sources, and so on).
- Check the fuse. See "Replacing the Fuse" on Page **.

There's no signal coming from one of my audio input sources! What should I do?

- Check the equalizer's and the source's control settings.
- Check the connection between the equalizer and input source.

I hear a hum coming from the input source. How do I fix this?

- Make sure there are no low-level inputs connected to the **LINE** input jacks.

product specifications

Equalizer Control Frequencies	25/40/63/100/ 160/250/400/630/ 1K/1.6K/2.5K/4K/ 6.3K/10K/16K Hz
Equalizer Control Range.....	+/- 12dB
Input Sensitivity/Impedance	150mV/20K Ohms
Output Level (Level Max; EQ Flat)	500mV/10k Ohms
Record Level (Level Max; EQ Flat)	450mV/10k Ohms
S/N Ratio (A-WTD).....	90dB
500mV OUTPUT T.H.D	0.01% @1kHz
Frequency Response.....	10 Hz to 50 kHz +/-3dB
Channel Separation.....	70dB @1kHz
LED Level (500mV=0dB).....	0dB @1kHz
Low Cut.....	-6dB @100 Hz
Power Source	AC 120V, 60 Hz, 15-Watt
Power Fuse	F 0.5 Amp, 250Volts Fast blow
Dimensions (HWD).....	1 3/4 x 19 x 8 11/16 Inches (44 x 480 x 220 mm)
Weight.....	5.47 lbs (2.48kgs)

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

NOTE: Actual product may vary from the images found in this document.

care and service

- Keep the equalizer dry. If it gets wet, wipe it dry immediately.
- Use and store the equalizer only in room temperature environments.
- Handle the equalizer carefully; do not drop it.
- Keep the equalizer away from dust and dirt, and wipe it with a soft cloth occasionally to keep it looking new.
- If your equalizer is not performing as it should, take it to your RadioShack store for assistance. To locate your nearest RadioShack, use the store locator feature on RadioShack's website (www.radioshack.com), or call 1-800-The Shack (843-7422) and follow the menu options. Modifying or tampering with the equalizer's internal components can cause a malfunction and might invalidate its warranty.

limited one-year warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. For complete warranty details and exclusions, check with your local RadioShack store.

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