

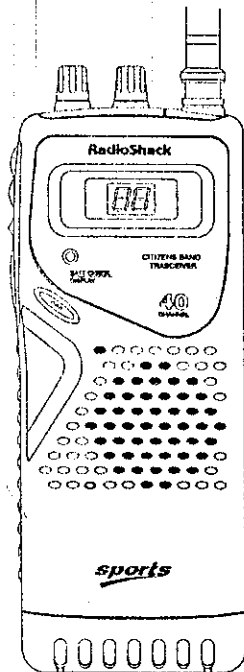
OWNER'S MANUAL

Cat. No. 21-1670

TRC-238 Sports CB Walkie-Talkie

Please read before using this equipment.

sports



RadioShack®

FEATURES

Your RadioShack TRC-238 Sports CB Walkie-Talkie is a portable, easy-to-use, two-way radio that you can carry almost anywhere. It is ideal for around the house, in your car or boat, on camping trips, or at your business for security patrols or warehouse communication.

Your TRC-238 has these features:

40-Channels, 5-Watt — makes available the full range of CB channels with the maximum transmit power allowed for a handheld CB.

Water Resistant — makes it perfect for outdoor use. The water-resistant, heavy-texture, and soft-grip case make it easy to hold and ideal for use in the rain or anywhere it's wet.

Digital Phase-Locked-Loop (PLL) Frequency Synthesizer — provides reliable and exact tuning.

Adjustable Squelch — eliminates background noise.

Flexible Antenna with BNC Connector — provides excellent reception and transmission, and is designed to help prevent antenna breakage. The connector also lets you easily connect an optional antenna.

Push Button Channel Selectors — provide maximum convenience when selecting channels.

Battery Test Indicator — lights when batteries are in good condition.

Built-In Modulation Limiter Circuit — automatically adjusts to a variety of voice levels to ensure a clear transmission.

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Automatic Noise Limiter — reduces noise caused by nearby electrical equipment such as motors or automotive ignition systems.

2-Digit Channel Display — highly visible, day or night, and automatically turns off to save power.

Power/Charging Jack — lets you power your TRC-238 from an AC or DC power source (using an optional adapter), so you can use the TRC-238 in your house or car without draining the batteries. And, lets you charge nickel-cadmium batteries without removing them from the TRC-238.

Notes:

- The CB requires ~~nine~~ alkaline or ten nickel-cadmium AA batteries.
- This CB radio is water resistant, not waterproof. Do not submerge it in water.

We recommend you record the TRC-238's serial number here. The number is on the CB's back panel.

Serial Number _____

FCC INFORMATION

The Federal Communications Commission (FCC) does not require you to have a license to operate this CB radio. However, the FCC does require that you read and know Part 95 of *FCC Rules*. These rules apply to the operation of a Class D CB radio. We enclosed a copy of Part 95 with your TRC-238.

Warning: Do not open the CB to make any internal adjustments. A CB is set up to transmit a regulated signal on an assigned frequency. It is against the law to alter or adjust the settings inside the unit to exceed these limitations.

To be safe and sure:

- Never open your TRC-238's case.
- Never change or replace anything in your TRC-238.

Your TRC-238 might cause TV or radio interference even when it is operating properly. To determine if your TRC-238 is causing the interference, turn off your TRC-238. If the interference goes away, your TRC-238 is causing it. Try to eliminate the interference by:

- Moving your TRC-238 away from the receiver
- Connecting your TRC-238 to an outlet that is on a different electrical circuit from the receiver (if you are using an optional AC adapter)
- Contacting your local RadioShack store for help

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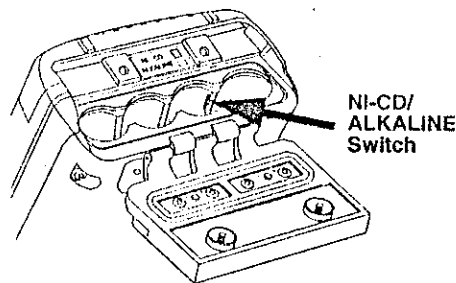
POWERING THE CB

You can power your TRC-238 from any of these sources:

- Nine AA alkaline batteries (not supplied) with the one supplied dummy batteries
- Ten rechargeable AA nickel-cadmium batteries (not supplied)
- Standard AC power (using an optional 13.8-volt DC adapter)
- Vehicle battery power (using an optional 13.8-volt power cord)

IMPORTANT INFORMATION ABOUT THE POWER JACK

The TRC-238 has a slide switch (NI-CD/ALKALINE) inside the battery compartment that lets you set the POWER jack to provide power to the TRC-238 or charge the rechargeable batteries in the battery compartment.



It is important that you properly set NI-CD/ALKALINE before you connect any power device to the POWER jack:

- Set it to ALKALINE before you connect an external power source (AC outlet or vehicle battery power). This disconnects the internal batteries.
- Set it to NI-CD only when you connect a battery charger to the POWER jack to charge installed rechargeable batteries.

Warning: To avoid injuring yourself or damaging the TRC-238, connect a battery charger to the **POWER** jack *only* when nickel-cadmium batteries are installed (see "Recharging Nickel-Cadmium Batteries" on Page 9). Never try to recharge non-rechargeable batteries. They could get very hot and explode.

Note: You can connect an external power source to the **POWER** jack, regardless of the type of batteries you install.

USING BATTERIES

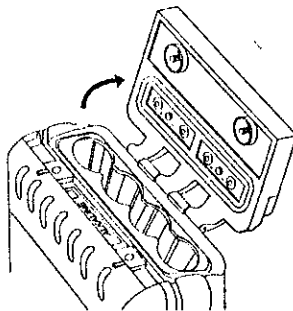
You can power the TRC-238 from *nine* AA alkaline batteries (such as RadioShack Cat. No. 23-552) with the *one* supplied dummy batteries, or ten rechargeable AA nickel-cadmium batteries (such as Cat. No. 23-125).

Cautions:

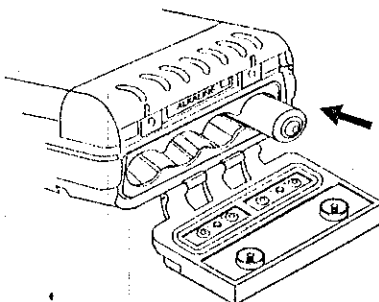
- Always use fresh, or freshly charged, batteries of the required size and type.
- Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

Follow these steps to install the batteries.

1. Loosen the battery compartment cover screws and lift to open it.



2. Set NI-CD/ALKALINE inside the battery compartment to match the battery type you are installing.
3. Insert ~~nine~~ AA alkaline batteries and the supplied dummy batteries, or ten AA nickel-cadmium batteries, as indicated by the polarity symbols (+ and -) marked on the back of the walkie-talkie.



Note: Before you use nickel-cadmium batteries, you need to charge them (see "Recharging Nickel-Cadmium Batteries" on Page 9).

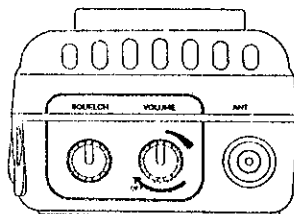
4. Replace the cover.

Cautions:

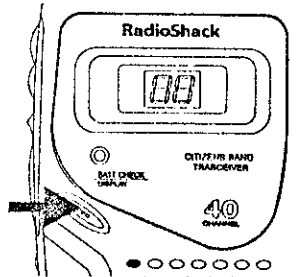
- If you will not be using the TRC-238 with batteries for several months, remove the batteries.
- Dispose of old batteries promptly and properly.

Testing the Battery Power

1. Turn on the TRC-238 by rotating VOLUME clockwise until it clicks.



2. Hold down BATT CHECK/DISPLAY. If the BATT CHECK/DISPLAY indicator lights, there is enough battery power to operate the CB. If the indicator is dim or does not light, replace or recharge the batteries.



Recharging Nickel-Cadmium Batteries

You can use a battery charger, such as RadioShack Cat. No. 23-249 (not supplied), to charge or recharge nickel-cadmium batteries while they are inside the TRC-238's battery compartment.

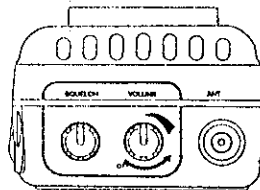
Do not use the TRC-238 while you are charging the nickel-cadmium batteries.

Cautions:

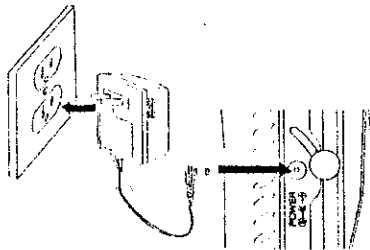
- Use only the recommended battery charger to recharge the batteries in the TRC-238. Other chargers could damage your TRC-238 or the batteries.
- Be careful not to overcharge nickel-cadmium batteries.
- To prevent damage to rechargeable nickel-cadmium batteries, never charge them in an area where the temperature is above 90°F (32°C) or below 40°F (4.5°C).

Follow these steps to charge nickel-cadmium batteries in the TRC-238.

1. If the TRC-238 is on, turn **VOLUME** fully counterclockwise until it clicks to turn it off.



2. Set **NI-CD/ALKALINE** inside the battery compartment to **NI-CD**.
3. Lift off the TRC-238's **POWER** jack cover on the side of the TRC-238 and connect the battery charger's barrel plug to the **POWER** jack. Then plug the battery charger's plug into a standard AC outlet.



It takes about 20 hours to charge new or fully discharged nickel-cadmium batteries. Subsequent charges take about 15 hours.

Note: You can use an external charger (such as Cat. No. 23-134, not supplied) to recharge the nickel-cadmium batteries. After removing the batteries from the TRC-238, follow the instructions that come with the external charger.

Important: Your TRC-238 can use 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.

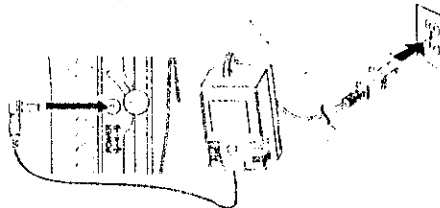
USING AC POWER

You can power the TRC-238 from standard AC power using an optional 12-volt DC adapter that provides 1 amp.

Cautions:

- The adapter must be able to deliver 12 volts and at least 1 amp, its center tip must be set to positive, and the barrel plug must correctly fit the TRC-238's POWER jack. The recommended adapter meets these specifications. Using an adapter that does not meet these specifications could damage the TRC-238 or the adapter.
- To help prevent an electrical short, unplug the adapter from the AC outlet before you unplug the adapter from the TRC-238.

Follow these steps to connect the TRC-238 to AC power.



1. Connect the adapter's 5.5 mm outer diameter/2.1 mm inner diameter barrel plug to the adapter's cord, setting TIP to + (positive).

2. Set NI-CD/ALKALINE inside the battery compartment to **ALKALINE**.
3. Lift off the TRC-238's **POWER** jack cover and connect the adapter's barrel plug to the **POWER** jack.
4. Plug the other end of the adapter into a standard AC outlet.

USING VEHICLE BATTERY POWER

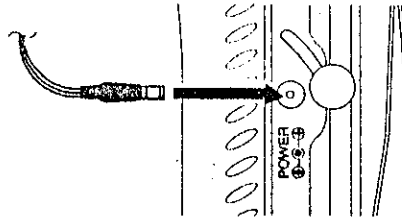
You can power your TRC-238 from your vehicle's cigarette-lighter socket with an optional 12.8-volt DC power cord (such as Cat. No. 270-1533).

Cautions:

- You must use a DC fused cord that delivers at least 1 amp of automotive power. Its center tip must be set to positive, its plug must correctly fit the TRC-238's **POWER** jack, and it must be fuse-protected with a 2-amp fuse. The recommended power cord meets these specifications. Using a power cord that does not meet these specifications could damage the TRC-238 or the power cord.
- When you finish using the TRC-238, unplug the power cord from the cigarette-lighter socket before you disconnect it from your TRC-238.

1. Set NI-CD/ALKALINE inside the battery compartment to **ALKALINE**.

2. Lift off the TRC-238's **POWER** jack cover and insert the power cord's 5.5 mm outer diameter/2.1 mm inner diameter barrel plug into the **POWER** jack.



3. Plug the power cord's other end into your vehicle's cigarette-lighter socket.

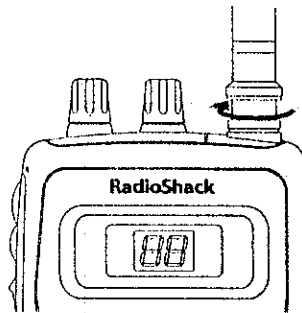
Note: If the TRC-238 does not operate when you use the DC power cord, unplug the cord from the cigarette-lighter socket and clean any ashes or debris from the socket. If your TRC-238 still does not work, check the fuse in the DC power cord and replace it if necessary.

PREPARATION

Your walkie-talkie comes with a helical antenna that is ideal for most applications. However, the walkie-talkie's BNC antenna connector makes it easy to connect other types of antennas, too. See "Connecting an Optional Antenna."

CONNECTING THE FLEXIBLE ANTENNA

Follow these steps to connect the supplied antenna.



1. Position the antenna's connector over the ANT jack on the walkie-talkie.
2. Slide the slot in the antenna connector over the antenna jack's tab on top of the walkie-talkie.
3. Press down and turn the antenna's base clockwise until it locks into place.

CONNECTING AN OPTIONAL ANTENNA

To improve reception (in remote areas, for example), you can connect a mobile or base-station antenna (not supplied) to your TRC-238. Your local RadioShack store sells a wide variety of antennas. Choose the one that best meets your needs.

When deciding on a mobile or base-station antenna and its location, consider the following:

- The antenna should be mounted as high as possible.
- The antenna and antenna cable should be as far as possible from sources of electrical noise (appliances, ignition systems, gauges, and so on).
- The antenna should be vertical for the best performance.

When connecting an optional antenna, always use 50-ohm coaxial cable, such as RG-58 or RG-8. For lengths over 50 feet, use RG-8 low-loss dielectric coaxial cable. If the coaxial cable's connector does not fit on the TRC-238's antenna jack, you might also need a PL-259-to-BNC antenna plug adapter, such as Cat. No. 278-120.

Your local RadioShack store carries a wide variety of coaxial antenna cable and connectors.

Follow the mounting instructions supplied with the antenna. Then route the antenna cable to the TRC-238, and connect it to the ANT jack on the top of the TRC-238 (see "Connecting the Flexible Antenna" on Page 14).

Cautions:

- Do not run the cable over sharp edges or moving parts.
- Do not run the cable next to power cables or other CB antenna cables.
- Do not run the cable through a vehicle's engine compartment or other areas that produce extreme heat.
- Follow all cautions and warnings included with the antenna.

Warning: When installing or removing a base station CB antenna, use extreme caution. If the antenna starts to fall, let it go! It could contact overhead power lines. If the antenna touches the power line, contact with the antenna, mast, cable or guy wires can cause electrocution and death! Call the power company to remove the antenna. DO NOT attempt to do so yourself.

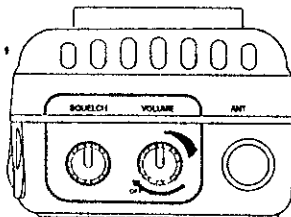
OPERATION

Before you use your TRC-238, you should know how to use it effectively and courteously. The section "CB Operation Tips" on Page 20 contains information that will help you get more enjoyment from your TRC-238.

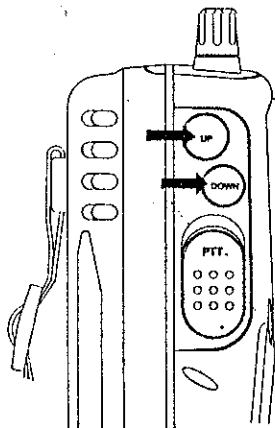
Important: An antenna must be connected to the TRC-238 before you can use it.

RECEIVING TRANSMISSIONS AND ADJUSTING SQUELCH

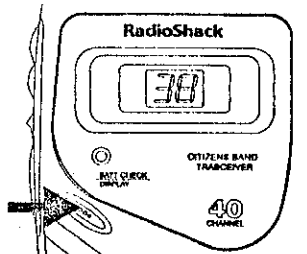
1. Turn on the TRC-238 by rotating **VOLUME** clockwise until it clicks.



2. Press **UP** or **DOWN** until the desired channel appears on the display.



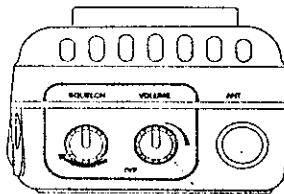
The channel number appears briefly then fades away to preserve battery power. To display the channel number for a longer time, hold down **BATT CHECK/DISPLAY**.



Note: Hold down **UP** or **DOWN** to rapidly select a channel.

Important: Channel 9 is reserved for motorist assistance and for reporting emergency information about accidents, hazardous road conditions, and so on. Always give emergency messages priority on Channel 9.

3. Adjust **VOLUME** until you hear a hissing sound or a transmission.
4. Rotate **SQUELCH** clockwise until any hiss stops. This lets you hear transmissions without background noise.

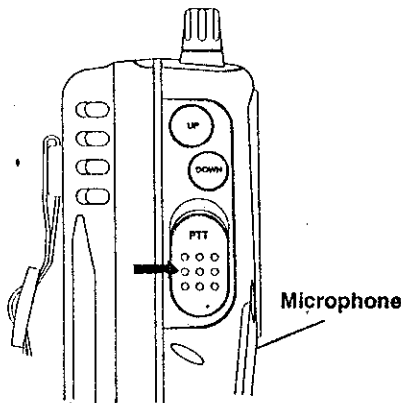


Note: Be sure not to rotate **SQUELCH** too far clockwise. Doing so might prevent the TRC-238 from receiving transmissions.

5. To turn off the TRC-238, turn **VOLUME** toward **OFF** until it clicks.

TRANSMITTING

1. Follow Steps 1–4 in "Receiving Transmissions and Adjusting Squelch" on Page 17.
2. Hold the walkie-talkie 2 to 3 inches from your mouth. Hold down PTT (push to talk) and speak into the microphone on the front of the TRC-238 in a normal voice. Do not speak too loudly. That does not make your signal any stronger, and might distort your transmission.



When you finish speaking, release PTT.

Note: The TRC-238's modulation circuit automatically adjusts the microphone's sensitivity for a wide variety of voice levels.

3. To turn off the TRC-238, turn **VOLUME** toward OFF until it clicks.

CB OPERATION TIPS

Like most activities, CB radio has its customs and courtesies. The following tips will help you get the most enjoyment from your TRC-238.

COMMON USES FOR A CB RADIO

Business Uses

- Truck drivers and delivery personnel can learn road and traffic conditions and get assistance in locating destinations. A CB radio is also good company on those "long hauls."
- On construction crews, a CB radio quickly pays for itself when you are calling for additional materials or coordinating the activities of different work crews.
- For security officers, a CB radio is more than a convenience — it is a must for both safety and efficiency.

Personal Uses

- Keep in touch with home while driving to work, to the store, or to a social activity. Let your family know you are tied up in traffic or that you will stop by the store on the way home.
- If you are a two-car (or more) family, CB radios are great for communicating with family members while they are in their cars.
- Contact friends or neighbors — find out "what's happening" or plan a get-together.
- Ever have car trouble or run out of gas on the highway? What an assurance it is to be able to radio for assistance.

-
- Camping, fishing, and other sports are more fun with a CB radio. Locate a friend or find out "what's cooking" back at camp.

CB COURTESY

- Wait for a pause in someone else's transmission before you ask for a break.
- If you do not receive an answer to your call after a second attempt, sign off and wait several minutes before trying again.
- Do not hold down the transmit button when you are not talking. (This is called *dead keying*.)
- Assist callers with directions, information about road conditions, and any other reasonable requests.

MAXIMUM RANGE

The maximum range and quality of CB transmissions vary depending on these conditions:

- Amount of power in the batteries
- The surrounding terrain — mountains and tall buildings limit the range
- Weather conditions
- The number of nearby CBs operating on the same channel
- Standing wave ratio (SWR) between the antenna and the CB

To ensure maximum range, always keep fresh alkaline batteries or fully charged nickel-cadmium batteries in your TRC-238 when using battery power.

USING COMMON 10-CODES

Citizen's band operators have largely adopted the 10-codes for standard questions and answers. Their use permits faster communication and helps prevent misunderstanding in noisy areas.

Code	Meaning
10-1	Cannot understand your message.
10-2	Your signal is good.
10-3	Stop transmitting.
10-4	Message received and understood.
10-5	Relay information to _____.
10-6	I am busy.
10-7	Out of service.
10-8	In service.
10-9	Repeat last message.
10-10	Negative (No).
10-11	_____ in service.
10-12	Stand by.
10-13	Report _____ conditions.
10-14	Information.
10-15	Message delivered.
10-16	Reply to message.
10-17	En route.
10-18	Urgent.
10-19	Contact _____.
10-20	My location is _____.
10-21	Call _____ by telephone.
10-22	Cancel last message.
10-23	Arrived at the scene.

Code	Meaning
10-24	Assignment complete.
10-26	Estimated time of arrival is _____.
10-30	Use caution.
10-31	Pick up.
10-33	Emergency traffic. Clear the channel.
10-34	The time is _____.

Note: Although this table lists the 10-codes' meanings in the form of a statement, they can also be phrased as questions (10-6: Are you busy?, 10-20: What is your location?).

TROUBLESHOOTING

If your TRC-238 is not working as it should, follow these suggestions to see if you can eliminate the problem. If you cannot, take the TRC-238 to your local RadioShack store for assistance.

Symptom:	Suggestion:
Trouble with reception	Be sure the TRC-238 is turned on.
	Be sure VOLUME is turned up.
	Be sure SQUELCH is adjusted properly.
	Be sure you are not pressing PTT on the side of the TRC-238.
Trouble with transmission	Be sure the antenna is securely connected to the TRC-238.
	Clean and tighten all connectors.
	Be sure you are fully pressing PTT on the side of the TRC-238.
TRC-238 does not work when connected to DC power	Be sure the fuse in the DC power cord's plug is not blown.
	Be sure the metal tip on the adapter is firmly attached.

MAINTENANCE

Your RadioShack TRC-238 Sports CB Walkie-Talkie is an example of superior design and craftsmanship. The following suggestions will help you care for your TRC-238 so you can enjoy it for years.



Keep the TRC-238 dry. If it gets wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.



Handle the TRC-238 gently and carefully. Dropping it can damage circuit boards and cases and can cause the TRC-238 to work improperly.



Use and store the TRC-238 only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.



Keep the TRC-238 away from dust and dirt, which can cause premature wear of parts.



Wipe the TRC-238 with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the TRC-238.

Modifying or tampering with the TRC-238's internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to use it. If your TRC-238 is not performing as it should, take it to your local RadioShack store for assistance.

SPECIFICATIONS

Receiver

Frequency
Coverage 26.965-27.405 MHz

Sensitivity
(Maximum) 1.0 μ V
for 10 dB (S+N)/N

Adjacent Channel Rejection 45 dB

Squelch Adjustable
from 1 μ V-1 mV

Audio Output 400 Milliwatt
(10% THD)

Current Drain 95 mA-300 mA

Transmitter

Frequency
Coverage 26.965-27.405 MHz

Power Input (at 13.8V DC) 5 Watts

Power Output 3.7 Watts

Spurious Emission -67 dB or Better

Type of Modulation A3

Frequency Tolerance ± 100 Hz

Antenna Impedance 50 Ohms

Antenna Length
(Maximum) 10 Inches
(254 mm)

Current Drain 650 mA-800 mA

General

Size (HWD) 7 7/8 $\times$ 3 $\times$ 2 1/4 Inches
(200 $\times$ 78 $\times$ 57 mm)

Weight:
With Batteries 1 lb 6 oz (624 g)
Without Batteries 14.8 oz (420 g)

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

NOTES

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., Suite 600, Fort Worth, TX 76102

We Service What We Sell

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