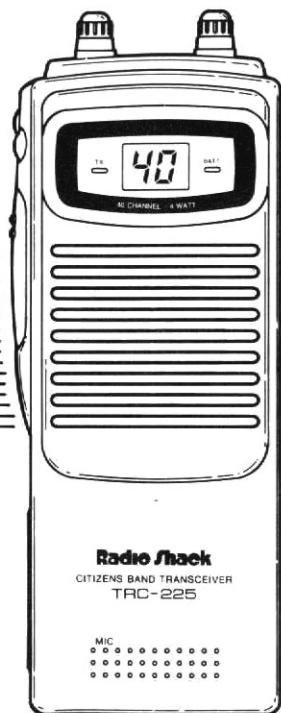


# OWNER'S MANUAL

## TRC-225 5-WATT, 40-CHANNEL WALKIE-TALKIE

Please read before using this equipment.



Cat.No. 21-1647

**Radio Shack**<sup>®</sup>

# FEATURES

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Your Radio Shack TRC-225 5-Watt, 40-Channel Walkie-Talkie is a portable, easy-to-use, two-way radio you can carry almost anywhere. It will give you reliable communications in many different applications.

You can use your transceiver around the house, in your office, car or boat, or anywhere on the go. It is useful on fishing and camping trips, or in your business for security patrols, for supervisors, or warehouse personnel.

Its features include:

**Automatic Modulation Limiter**—prevents over-modulation to ensure a clear sound.

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

**Transmit Power Selection**—lets you adjust the output power to save battery power during short-range transmissions.

**Power-Saver Display**—Saves battery power by dimming the display after showing the selected channel.

**BATT (Battery Low) Indicator**—shows when it is time to replace or recharge the batteries.

**TX (Transmit) Indicator**—indicates when the transceiver is transmitting.

For your permanent records, we recommend you record the serial number of your transceiver in the space provided below. The serial number is printed on the back panel of the transceiver.

Serial Number \_\_\_\_\_

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## NO FCC LICENSE REQUIRED

The FCC does not require you to have a license to operate this CB transceiver. However, the FCC does require you to read and know Part 95 of FCC Rules. These rules apply to the operation of a class D CB transceiver. We have provided a copy of these regulations with your TRC-225.

**Warning:** Do not open your CB to make any internal adjustments. Internal adjustments can be made only by or under the direct supervision of a person holding an FCC 1st or 2nd Class radio operator's license.

Internal adjustments and/or modifications can lead to illegal operation as defined by FCC Rules, Part 95. Such illegal operation can lead to very serious consequences.

To be safe and sure:

- Never open your CB transceiver's case.
- Never modify your CB transceiver.

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# PREPARATION

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## POWER SOURCES

You can power your transceiver from any of these sources:

- Internal battery power
- 12-volt vehicle battery power (with the supplied adapter)
- Household AC power (with optional adapter)

## USING INTERNAL BATTERY POWER

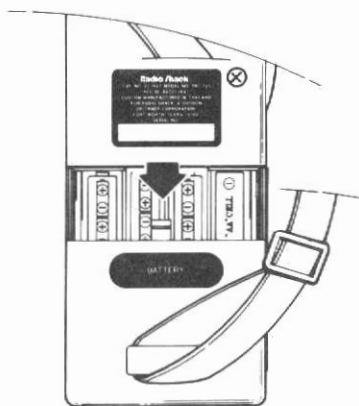
### Installing/Replacing Batteries

Power your transceiver using one of the following:

- 8 AA batteries (not supplied) and the 2 supplied dummy batteries. For best results, we recommend alkaline batteries such as Radio Shack Cat. No. 23-552.
- 10 rechargeable nickel-cadmium batteries (such as Cat. No. 23-125, not supplied).

When the **BATT** (battery low) indicator lights, replace or recharge the batteries.

1. Remove the battery compartment cover by sliding it in the direction of the arrow.

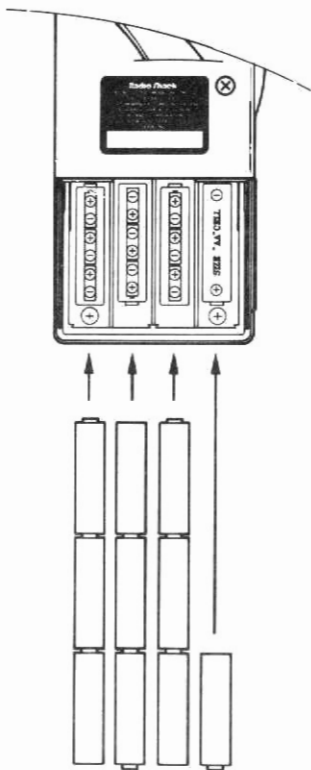


2. Remove the old batteries if necessary.

**Cautions:**

- Always dispose of old batteries promptly and properly.
- Never leave dead, old, or weak non-rechargeable batteries in the transceiver. They can leak chemicals and corrode or damage electronic circuits.
- Do not expose batteries to extreme heat or fire. They might explode and cause personal injury or damage equipment.

3. Install eight fresh non-rechargeable batteries and the two supplied dummy batteries or ten nickel-cadmium batteries as indicated by the polarity symbols (+ and -) marked inside the battery compartment.



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### **Cautions:**

- Improper installation (incorrect polarity) might damage the transceiver.
- Always replace all the batteries. Never mix new and old batteries or chargeable and non-chargeable batteries in the transceiver.
- Use only fresh batteries of the required size and type.
- If you do not plan to use the transceiver for a month or more, or if you use AC or external DC power, remove the batteries. This protects the transceiver from possible battery leakage.

4. Replace the cover.

### **Charging Nickel-Cadmium Batteries**

Nickel-cadmium batteries come fully discharged. You can charge the batteries while they are in the battery compartment using an optional AC adapter (such as Cat. No. 21-516, not supplied), or you can use an optional external battery charger (such as Cat. No. 23-239, not supplied).

**Warning:** Do not try to charge non-rechargeable batteries. They might get very hot and they could explode.

Follow these steps to recharge nickel-cadmium batteries in the battery compartment.

1. Turn **VOLUME** counterclockwise to **OFF**.
2. Set the adapter's tip to positive (+).
3. Insert the adapter's barrel plug into the transceiver's **CHARGER** jack.

**Caution:** Do not plug the charger into the **POWER** jack. Doing so might damage the transceiver.

4. Plug the adapter's other end into a standard AC outlet.

**Note:** Fully discharged batteries require 16 to 18 hours to fully charge.

5. When the batteries are fully charged, unplug the AC adapter from the AC outlet, then disconnect the adapter from the transceiver.

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## Charging Tips

- Fully discharge the rechargeable batteries occasionally by using the transceiver until it no longer transmits or receives. Then fully recharge the batteries. This helps restore and maintain the batteries full charging capacity.
- Avoid charging the batteries in a hot (more than 113 degrees F) or cold (less than 40 degrees F) environment. Doing so can permanently reduce the batteries' charging capacity.
- Do not connect anything to the **CHARGER** jack when you have installed non-rechargeable batteries. Doing so might damage your transceiver.
- Do not operate the transceiver while you charge batteries.
- Do not overcharge batteries. Overcharging can severely reduce the battery's useful life.
- Always disconnect the adapter's AC plug before you disconnect the barrel plug.

This product is capable of using 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 curb-side collection, drop-off boxes at retailers, recycling collection centers, and mail-back programs.

## USING VEHICLE BATTERY POWER

You can power your transceiver from your vehicle's cigarette lighter socket using the supplied 12-volt power cord.

### **Cautions:**

- Your vehicle must have a 12-volt, negative-ground electrical system.
- Using a power cord other than the one supplied might damage your transceiver.

- 
1. Insert the power cord's barrel plug into the transceiver's **POWER** jack.

**Caution:**

- Before plugging the power cord's cigarette lighter plug into the vehicle's cigarette lighter socket, make sure the tip is screwed firmly onto the plug.
  - Do not insert the plug into the **CHARGER** jack. Doing so might damage the transceiver.
2. Plug the other end of the cord into your vehicle's cigarette lighter socket.

**Note:** If the transceiver does not operate when you use the power cord, unplug the cord from the lighter socket and clean the socket to remove ashes and other debris. If your transceiver still does not work, check the in-line fuse in the power cord and your vehicle and replace either if necessary.

3. When you finish using the power cord, disconnect it from the cigarette lighter socket. Then disconnect the cord from your transceiver.

## USING STANDARD AC POWER

To power your receiver from an AC outlet, you need an AC adapter (such as Cat. No. 273-1653, not supplied).

**Caution:** You must use an AC adapter that supplies 12 volts DC power and delivers at least 1 amp. Its center tip must be set to positive, and it must have a plug that properly fits your receiver's **POWER** jack. Using an adapter that does not meet these specifications could damage your transceiver or cause it not to operate properly.

Follow these steps to power the receiver from AC power.

1. Connect the adapter's barrel plug to the adapter's cord with the TIP set to-POS.
2. Insert the barrel plug into the transceiver's **POWER** jack.

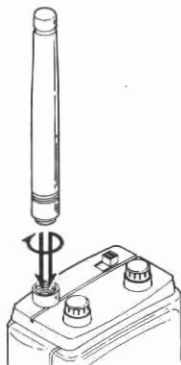
**Caution:** Do not insert the plug into the **CHARGER** jack. Doing so might damage the transceiver.

- 
3. Plug the adapter into a standard AC outlet. This disconnects the internal batteries.
  4. When you finish using the AC adapter, disconnect it from the AC outlet. Then disconnect the adapter's barrel plug from your transceiver.

## CONNECTING AN ANTENNA

Your transceiver includes a convenient, flexible rubber antenna that is ideal for most applications. Simply screw the antenna into the transceiver's antenna socket.

For mobile or base-station applications, you might want to connect a more efficient external mobile or outdoor base antenna to your transceiver's **ANTENNA** jack (on the left side of the transceiver). This connection requires a coaxial plug adapter such as Cat. No. 278-208, not supplied.



Your local Radio Shack store carries a variety of external antennas for your transceiver.

**Warning:** When installing or removing a base station CB antenna, use extreme caution. If the antenna starts to fall, let it go! It might contact overhead power lines. If the antenna is touching a 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 remove the antenna yourself.

**Caution:** Never try to transmit without an antenna. You might damage the transceiver.

# OPERATION

## BASIC OPERATION

Follow these steps to operate your transceiver.

1. Turn **SQUELCH** fully clockwise to 10.

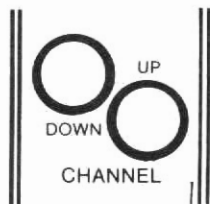


2. Rotate **VOLUME** clockwise until it clicks to turn on the power. A channel number line momentarily appears then disappears from the display.



3. Press **CHANNEL UP** or **DOWN** to select the desired channel.

**Note:** If you press **CHANNEL UP** when you are on Channel 40, the channel selector returns to Channel 1. If you press **CHANNEL DOWN** when you are on Channel 1, the channel selector returns to Channel 40.



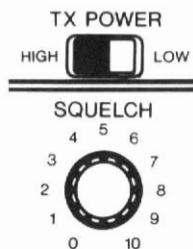
4. Slowly turn **SQUELCH** counter-clockwise until you hear static, then slowly turn it clockwise until you no longer hear static. The display quickly fades (see "Power Saver Display").

**Note:** Do not turn **SQUELCH** too far clockwise because you might not be able to hear weak signals.

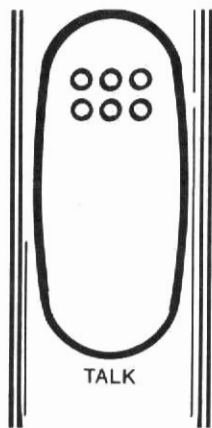


5. Set **TX PWR** to **HIGH** or **LOW** as follows:

- To transmit at short distances (less than 2 miles) set **TX PWR** to **LOW**. This conserves battery power by transmitting at a low power level.
- To transmit at longer distances (greater than 2 miles), or if the receiver you are transmitting to hears excessive noise during your transmission (even at short distances), set **TX PWR** to **HIGH**.



6. To transmit a message, hold the transceiver's microphone about 3 inches from your mouth. Press and hold **TALK** while you speak slowly and clearly into the transceiver's microphone. The **TX** indicator lights.



7. To receive a message, release **TALK**.

**Note:** To eliminate static noise between transmissions, readjust **SQUELCH** as necessary until you no longer hear static.

8. Adjust **VOLUME** to a comfortable listening level.



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## Operational Hints

Your transceiver's transmission range depends on a variety of conditions—the terrain, battery condition, and type and position of the antenna. Buildings absorb signals, and if the buildings contain metal, they might completely block signals. Trees and heavy cloud formations have a similar effect, though not as severe. Large bodies of water sometimes increase the range considerably.

To ensure maximum transmission and reception range, always use fresh or fully charged batteries. When the range decreases significantly, replace or recharge the batteries. (See "Installing/Replacing Batteries" and "Charging Nickel-Cadmium Batteries.")

## POWER SAVER DISPLAY

If you keep **SQUELCH** at the recommended position, each time you turn on the transceiver or change channels, the display briefly shows the channel, then fades out. This happens because, when the transceiver is not in use, a special power-saver circuit gradually reduces power to the display (and all other functions except the receiver) until all indicators disappear. This reduces the current drain to the batteries during periods of non-use.

You can periodically check the current channel by pressing **TALK**. The display remains lighted while you press this button.

# CITIZENS BAND FREQUENCY CHART

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CHANNEL	FREQUENCY(MHz)	CHANNEL	FREQUENCY(MHz)
1	26.965	21	27.215
2	26.975	22	27.225
3	26.985	23	27.255
4	27.005	24	27.235
5	27.015	25	27.245
6	27.025	26	27.265
7	27.035	27	27.275
8	27.055	28	27.285
9	27.065	29	27.295
10	27.075	30	27.305
11	27.085	31	27.315
12	27.105	32	27.325
13	27.115	33	27.335
14	27.125	34	27.345
15	27.135	35	27.355
16	27.155	36	27.365
17	27.165	37	27.375
18	27.175	38	27.385
19	27.185	39	27.395
20	27.205	40	27.405

## CARE AND MAINTENANCE

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Your Radio Shack TRC-225 5-Watt, 40-Channel Walkie-Talkie is an example of superior design and craftsmanship. The following suggestions will help you care for your transceiver so you can enjoy it for years.



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



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



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



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



Occasionally wipe the transceiver with a damp cloth to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the transceiver.

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

# SPECIFICATIONS

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## Receiver

Frequency Coverage .....	26.965 to 27.405 MHz
Sensitivity .....	0.5 $\mu$ V for 10 dB (S+N)/N Adjacent Channel
Rejection .....	60 dB
Squelch .....	Adjustable from 1 $\mu$ V
Audio Output .....	400 mW (10% THD)
Current Drain .....	55 mA to 550 mA

## Transmitter

Frequency Coverage .....	26.965 to 27.405 MHz
Power Input .....	5 W (at HIGH) 2.5 W (at LOW)
Power Output .....	4 W (at HIGH) 1 W (at LOW)
Conducted Spurious Emission Harmonics .....	60 dB or better
Type of Modulation .....	A3
Frequency Tolerance .....	0.002 %
Antenna Impedance .....	50 Ohms
Current Drain .....	600 mA to 1600 mA
Dimension .....	(W/O Antenna) 7 <sup>9</sup> / <sub>16</sub> × 2 <sup>7</sup> / <sub>8</sub> × 2 Inches
	(With Antenna) 17 <sup>1</sup> / <sub>16</sub> × 2 <sup>7</sup> / <sub>8</sub> × 2 Inches
Weight .....	13.3 Oz (380g)

# NOTES

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# NOTES

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# NOTES

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### **RADIO SHACK LIMITED WARRANTY**

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

EXCEPT AS PROVIDED HEREIN, RADIO SHACK MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

*We Service What We Sell*

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