

VOICE ACTUATED FM TRANSCEIVER



TRC-500 OWNER'S MANUAL

PLEASE READ BEFORE
USING THIS EQUIPMENT

REALISTIC®*

*TRADEMARKS OF RADIO SHACK DIVISION, TANDY CORPORATION

RADIO SHACK LIMITED WARRANTY

This product is warranted against defects for ninety (90) days from the date of purchase from Radio Shack company-owned stores and authorized Radio Shack dealers. Within this period Radio Shack will repair the product without charge for parts and labour. 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.

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

WE SERVICE WHAT WE SELL

RADIO SHACK DIVISION, TANDY ELECTRONICS LIMITED

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U.S.A.: FORT WORTH, TEXAS 76102

TANDY CORPORATION *

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MOUNT DRUITT, N.S.W. 2770

U.K.

BILSTON ROAD, WEDNESBURY
WEST MIDLANDS WS10 7JN

BELGIUM

PARC INDUSTRIEL DE NANINNE
5140 NANINNE

Your Realistic TRC-500 is a compact, portable FM 2-way radio with hands-free operation. You can communicate with another TRC-500 or any FM transceiver operating on the same frequency. Take your TRC-500 to sporting events or on camping, hiking or bicycling outings. It can add to the fun of any recreational activity. Locate a friend or find out "what's cooking back at camp." It can have more practical uses, too: at your business, in the warehouse during inventory, in the hospital, at the construction site. The uses are practically unlimited!

FEATURES

- * Transmission range of 1/4 mile (line of sight) -- you get clean, noise-free reception through the double conversion superheterodyne circuit.
- * Switchable VOX operation -- you can send your message automatically or use the push-to-talk button as an ordinary transceiver.
- * Adjustable headset -- soft foam-cushioned earphone plus high-quality microphone that you can swivel freely.
- * Whip antenna -- you can tuck it onto the headset in case it hinders your movement.
- * VOX sensitivity -- you can adjust to three levels.
- * Volume level switch.
- * Lightweight -- It weighs only nine ounces, so it's easy to carry or, with the belt clip, to clip to your belt or pocket.

SPECIFICATIONS

GENERAL

Operation Frequency	49.830 MHz
Number of Channels	1
Input Voltage	9V DC
Current Drain (Standby)	13.5 mv
(Receive)	40 mA max.
(Transmit)	40 mA max.
Dimensions	(H) 4-9/16" (116mm) x (W) 2-1/2" (64mm) x (D) 15/16" (24mm)
Weight	9 oz (25.5g)

RECEIVER

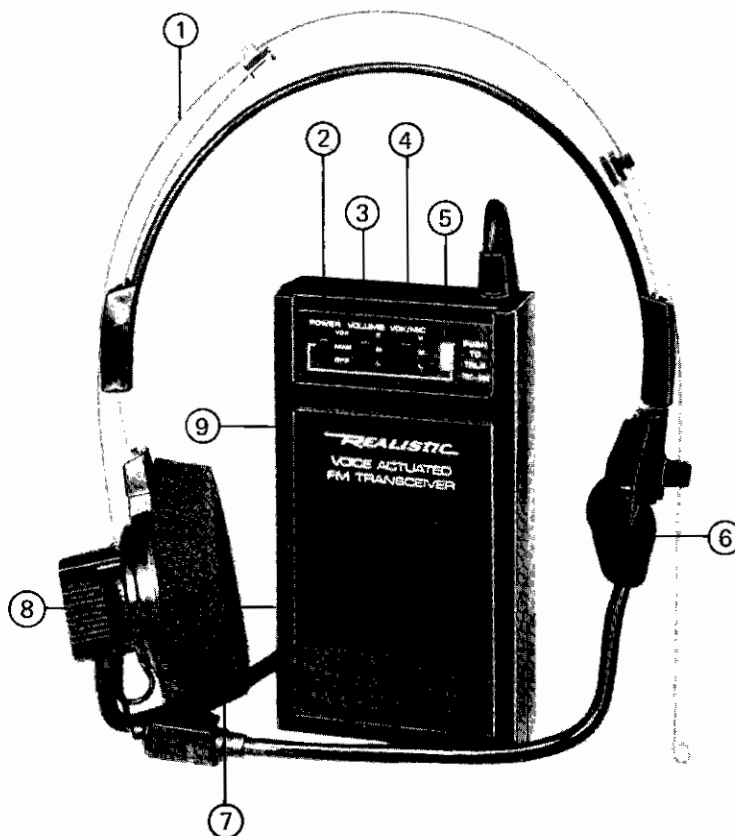
Sensitivity (20 dB Quieting)	0.5 μ V
Squelch Sensitivity (Threshold)	0.5 μ V
Modulation Acceptance Bandwidth	\pm 7 kHz
Spurious and Image Rejection	20 dB min.
Frequency Stability (0°C to +40°C)	\pm 2 kHz max.

TRANSMITTER

RF Energy Output	10,000 μ V/m@3 meters (FCC max.)
Spurious and Harmonic Emissions	20 dB
FM Hum and Noise	40 dB min.
Audio Distortion	10% max.
Frequency Stability (0° to 40°C)	\pm 2 kHz

CONTROLS AND FUNCTIONS

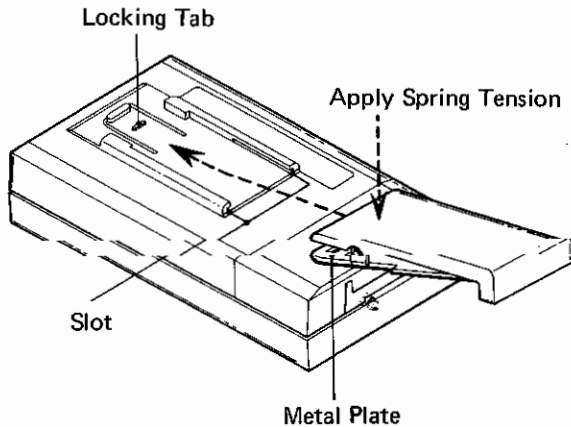
1. Whip antenna
Be sure to straighten the antenna fully when communicating. Secure it to the headset when not in use or when the straightened antenna hinders your movement. Note, however, that the efficiency will be reduced by about 75% when the antenna is retracted.
2. POWER switch
Set to MAN for manual operation and press the PUSH TO TALK button when you transmit. At VOX position, transmit/receive switching is automatic: your voice activates the transmit circuit. Set to OFF when you have finished communicating.
3. VOLUME control
Select the position that will give you the most comfortable listening level via earphone.
4. VOX/MIC switch
Adjust for sensitivity of the microphone.
5. PUSH TO TALK button
Press to talk; release to listen when you're in manual mode.
6. Microphone
Speak here. Adjust the position for best fit.
7. Earphone
Listen here.
8. Battery compartment (on the rear)
Load a 9-volt battery here.
9. Belt clip (on the rear)
Clip your unit to your belt or pocket.



INSTALLING A BATTERY

One 9-volt rectangular battery is required to operate your unit. We recommend our 23-583 or 23-553 for long life. Insert a coin in the slot on the bottom of the unit and twist to open the cover. Observing polarity -- as shown inside the compartment -- put the battery in place. Replace the battery cover.

BELT CLIP INSTALLATION



Slide the metal plate of the belt clip into the slot on the back of the transceiver until the clip snaps into place, as shown above. You will have to apply tension to the clip spring as you insert the metal plate into the slot.

To remove the belt clip, press the locking tab and slide the clip out of the slot.

OPERATION

1. Straighten the whip antenna.
2. Put on the headset. Adjust the headset for comfortable fit. Put the microphone within 1" of your mouth.
3. Set the POWER switch to VOX (for hands-free communication) or MAN (for manual push-to-talk operation).
4. With the VOLUME switch, select the most comfortable listening level.
5. When you select the VOX mode, select the mic sensitivity by using the VOX/MIC switch.

The setting of the VOX/MIC switch can be important. In a noisy environment, you will have to set to Low because the surrounding noise may keep the unit in the transmit mode continuously. You will have to speak louder into the mic at this setting. In a quieter area, use Medium or High settings. At these settings a softer voice can key the transmitter on. During transmitting, your voice can be heard through the earphone. If you cannot hear your voice, you are talking too softly: speak a little louder, or use a higher setting of VOX/MIC. Remember, shouting into the mic does not increase the signal strength; it only increases distortion.

6. When you select the MAN mode, press PUSH TO TALK in order to transmit; release it to receive. (In VOX mode, this switching is automatic. When you start to talk, the unit is in the transmit mode; when you stop, the unit will receive.)

The TRC-500 cannot receive while transmitting. Wait for the break before you transmit (either automatically or manually).

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CARE AND MAINTENANCE

Your unit uses conservatively rated parts and is built in accordance with Radio Shack's exacting quality control. However, you should treat it with the care accorded to any electronic equipment. Don't expose it to temperature extremes -- either high or low. Avoid using it in dusty or humid areas.

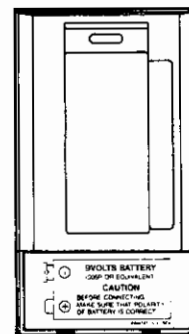
When the case needs be cleaned, use a soft, lint-free cloth slightly moistened with mild detergent. Never use a harsh solvent such as thinner.

If the communication range decreases, chances are that the battery is weak. Replace it with a new one. By the way, never leave a weak or dead battery in your unit. Even so-called leak-proof types can swell and leak damaging chemicals.

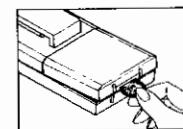
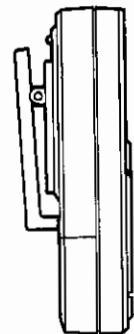
Also, if you are not going to use your unit for a week or more, remove the battery.

If your unit seems defective, do NOT try to repair it. Only a qualified technician can repair this unit. Bring it to your local Radio Shack store.

Installing Battery



Belt Clip

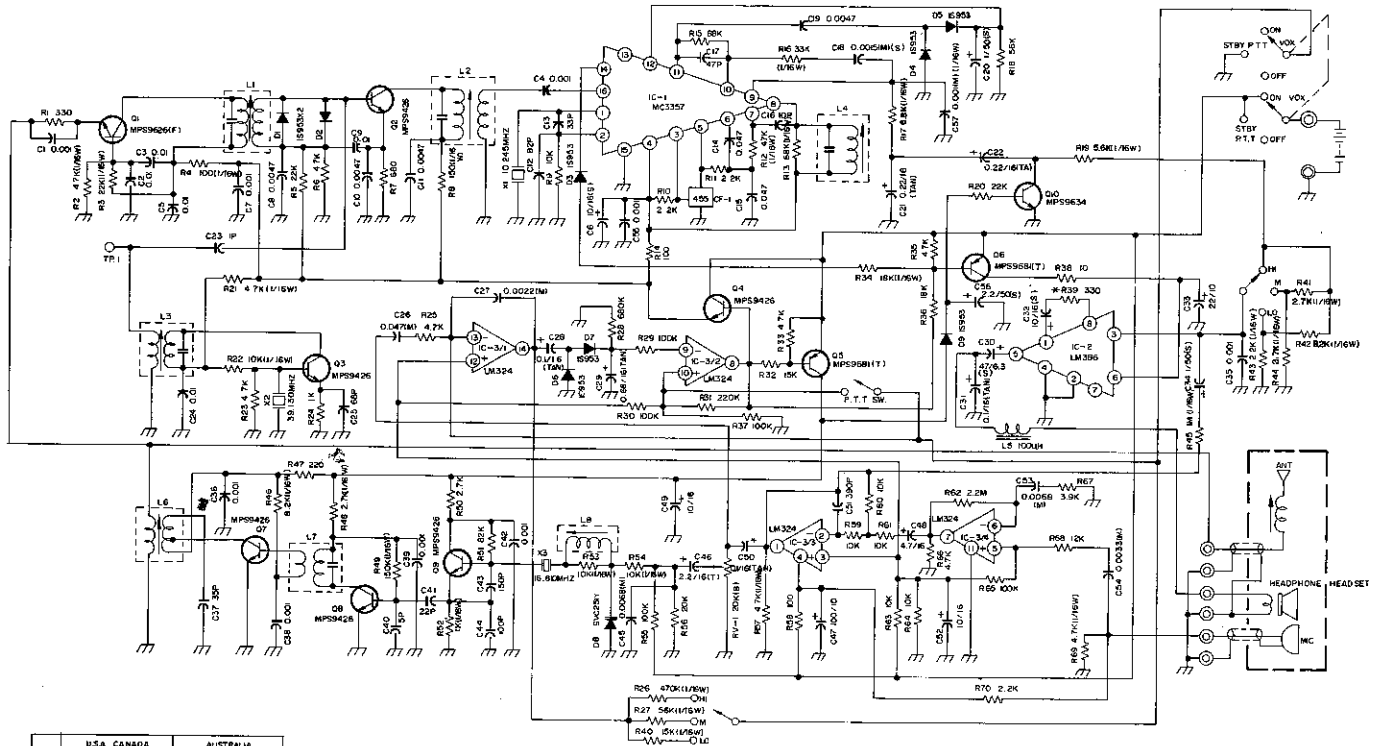


How to open the Battery Cover

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SCHEMATIC DIAGRAM

Schematic subject to change without notice. For most accurate Schematic (and parts) contact Radio Shack, National Parts Dept., Barrie, Ontario.



CF	USA CANADA		AUSTRALIA	
	X2	X3	X2	X3
CHI	39.130	16.610	44.320	18.340
CHI	39.145	16.615	44.335	18.345
CHI	39.160	16.620	44.350	18.350
CHI	39.175	16.625	44.365	18.355
CHI	39.190	16.630	44.380	18.360

NOTES: (1) ALL RESISTANCE VALUES ARE INDICATED IN OHM
 (2) ALL CAPACITANCE VALUES ARE INDICATED IN "UF"
 (3) 1K=1000 OHM, 1M=1000000 OHM
 (4) 10³=1000 OHM, 10⁶=1000000 OHM