

Cat. No. 21-406

USER GUIDE

TRC-506

1- Channel Radio Transceiver



RadioShack™

TRC-506 (1CH FM TRANSCEIVER)

Care and Maintenance

Your TRC-506s are examples of superior design and craftsmanship. The following suggestions will help you care for the transceivers so that you can enjoy them for years.

Keep the transceivers dry. If they do get wet, wipe them dry immediately. Liquids can contain minerals that can corrode electronic circuits.

Use and store the transceivers only in normal temperature environments. High temperatures can shorten the life of electronic devices and distort or melt plastics.

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

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

Wipe the transceivers with a wet cloth to keep them looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the transceivers.

Use only fresh 9-volt batteries. Always dispose of the old batteries promptly.

Modifying or tampering with the transceivers' internal components can cause a malfunction and invalidate the transceivers' warranty and void your FCC authorization to operate it. If your transceivers are not performing as they should, take them to your local Radio Shack store. Our personnel can assist you and arrange for service if needed.

Features

The Realistic TRC-506s are compact, portable FM 2-way radios with handsfree operation. You can communicate with another TRC-506 or any FM transceiver operating on the same frequency. Use your TRC-506s to add to your fun while at sporting events, on camping trips, biking, or hiking with your friends.

The TRC-506s are also practical for use on the job. Use them when you take inventory in the warehouse, to keep track of your staff in a large building, or to talk to your crew on a construction site. The uses for your TRC-506s are practically unlimited.

The TRC-506s' special features include:

Up to 1/4-Mile Transmission Range - You get clean, noise-free reception through the double-conversion superheterodyne circuit.

Switchable VOX Operation - Automatically switches from receiver to transmit when you talk, (Or, you can use the push-to-talk button as on an ordinary transceiver).

Adjustable VOX Sensitivity - Lets you adjust the VOX for the best handsfree operation.

Whip Antenna - Provides clear reception.

Lightweight - Weights only seven ounces, so it's easy to carry or clip to your belt or pocket.

Operation

Follow these steps to operate the transceivers.

1. Straighten the whip antenna.
2. Put on the headset. Adjust the headset for a comfortable fit. Put the microphone within 1 inch of your mouth.
3. Set POWER to VOX (for hands-free communication) or MAN (for manual push-to-talk operation).
4. Set VOLUME for the most comfortable listening level.
5. If you selected VOX operation, set VOXMIC for best operation as follows:

In a noisy environment, set VOXMIC to L (low).

This prevents surrounding noise from keeping the transceiver in the transmit mode.

You must speak louder into the microphone at this setting to make the transceiver transmit.

In a quieter area, set VOXMIC to M (medium) or H (high).

At these settings, you do not have to speak as loudly to switch to transmit.

While you transmit, you hear your voice through the earphone. If you cannot hear your voice, you are talking too softly -- speak a little louder or set VOXMIC to H or M. Shouting into the microphone does not increase the signal strength; it only increases distortion.

If you selected manual operation, press PUSH TO TALK to transmit. Release PUSH TO TALK to receive.

The TRC-506 cannot receive while transmitting. Wait for the other person to stop talking before you transmit.

FCC NOTICE

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

Moving your transceiver away from the receiver.

Contacting your local Radio Shack store for help.

If you cannot eliminate the interference, the FCC requires that you stop using your transceiver.

PARTS LIST

To order parts call 1-800-843-7422 or visit your local RadioShack store.

Reference #	Cat.No.	Description	NP Part #
	11319605		1S2473
	10517613	REPLACED BY MPS9626	1TR0114
	10517845	REPLACED BY MPS9634C	1TR0217
	10517886	REPLACED BY MPS9681	1TR0223
	10518181	REPLACED BY MPS9426B	1TR0302
2	10540474	ANTENNA	A0479
L4	10559425	COIL, DETECTOR 455KHZ	CA1180
	10559425	SMALL CAN LARGE SLUG	CA1180
L3	10559433	COIL, RECEIVER OSCILLATOR	CA1181
	10559433	CAN GRAY SMALL SLUG	CA1181
L6	10559441	COIL, TX POWER 48MHZ	CA1182
	10559441	CAN WHITE/BLACK SLUG	CA1182
L1	10563385	COIL, RF AMP 49MHZ	CA3566
	10563385	CAN SMALL SLUG	CA3566
L7	10563393	COIL, TUNE 50MHZ	CA3567
	10563393	CAN BLACK SLUG	CA3567
L8	10563401	COIL, OSCILLATOR 16MHZ	CA3568
	10563401	CAN GRAY/BLACK SLUG	CA3568
L2	10567865	COIL, 10.7 MHZ MIX	CA8820
	10567865	BLACK SLUG	CA8820
L5	10571594	COIL, CHOKE 100UH PC TYPE	CB2583
	10571594	BOBBIN TYPE RADIAL	CB2583
C34	10578037	CAP ALP 1UF +-20 50V	CE105MJBAC
	10578037	PKG OF 10	CE105MJBAC
C6 C32	10578060	CAP CER 10UF +-20 16V	CE106MDCA
X1	10588952	CRYSTAL, 10.245MHZ	CX0044
X2	10588960	CRYSTAL, 39.130MHZ	CX0045
X3	10591899	CRYSTAL, 16.610 MHZ	CX0528
32	10610673	COVER, BATTERY BLACK	DB0996
	10623528	REPLACED BY 1S2473	DX0684
D8	10627446	DIODE VARICAP SVC251Y	DX2066
25	10637973	CUSHION, EAR 2 PCS=1 SET	E1114
9	10651529	CLIP, ANTENNA BLACK	HB0101
	10651529	PLASTIC	HB0101
36	10673234	BUSHING, CORD MOUNTING	HC2668
3	10673309	TUBE, VOICE	HC2683
34	10704765	CLIP, BELT BLACK PLASTIC	HL0229
	10715316	QTY 1	Hw2100406
35	10772598	KNOB, PUSH TO TALK GRAY	K3362
	10895951	AMPLIFIER 14 PIN DIP	LM324N
	11391927	IC LM386 DIP8 T LO PWR AU	LM386
	10802122	WINDSCREEN	M0046
A-4	10804599	MICROPHONE, CONDENSER	MA0008
	11392339	SYSTEM	MC3357P
	11370285		MPS9426B
	11370319	CASE STYLE T092	MPS9626
	11370350	CASE STYLE T092	MPS9634C
	11370368	CASE STYLE T092	MPS9681
	11370525	XSTR MP SH10 SI NPN HI	MPSH10
	10823474	MANUAL, SERVICE 21-406	MS2100406
	10845477	XEROXCOPY	MU2100406
	10891190	REPLACED BY MC3357P	MX3439
	10895951	REPLACED BY LM324N	MX4213
	10912376	REPLACED BY LM386	MX7790
RV-1	10965101	POT, SEMI-FIXED 20KB +-25%	P0803
	10965101	8 DIA V	P0803
17	11033552	PLATE, BLACK FOR	RJ0022
	11033552	MICROPHONE	RJ0022
SW4	11061017	SWITCH, TOUCH EVQ8B11K	S1685
	11061017	CONTACT	S1685
SW1-3	11061892	SWITCH, SLIDE SS-23D03 2P	S3078
	11061892	HORIZONTAL PC MOUNT	S3078
A-3	11087053	SPEAKER, 040X10 32 OHM	SP5120
	11155207	CHANNEL A	XB4193
	11206646	PRSSURE, CUSHIONS FELT	Z5225
	11206653	CUSHION BATTERY SPONGE	Z5226
	11206661	59.6X9XT0.3	Z5227
	11223609	BAND, HEAD ABS	Z7232
10	12324265	WISH BONE "A" HEAD BAND	Z93259
	12324265	HEADBAND/ METAL	Z93259

Specifications

GENERAL:

Operation Frequency.....49.830 MHz
Number of Channels.....1
Input Voltage.....9 V DC
Current Drain (Standby).....13 mA
 (Receive).....40 mA max
 (Transmit).....40 mA max
Dimensions.....4 5/8 x 2 5/8 x 1 1/8 Inches (118 x 67 x 28.5 mm) (HWD)
Weight.....7.3 oz (207.3 g)

RECEIVER:

Sensitivity (20 dB S/N).....0.5 microV
Squelch Sensitivity (Threshold).....0.5 microV
Modulation Acceptance Bandwidth.....+/-7 kHz
Spurious and Image Rejection.....20 dB
Frequency Stability (0 C to 40 C).....+/-2 kHz

TRANSMITTER:

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