

 **KENWOOD**

**2 METER  
FM HAND-HELD  
TRANSCEIVER**

# TR-2500



**COMM.-PACKED  
HAND-HELD**

The TR-2500 is a compact, designed for tomorrow, 2 Meter FM Handheld transceiver, incorporating the latest in electronic technology, including LCD readout, 10 channel memory with improved memory back up memory scan, programmable automatic band scan, key-board channel selection, built-in autopatch encoder, sub tone encoder, and improved flexibility with a variety of new accessories. Big in features, big in performance, the TR-2500 will surprise you with its small size, and attractive price.



## FEATURES:

**EXTREMELY COMPACT SIZE AND LIGHT WEIGHT**  
Measures only 66 (2-5/8)W x 168 (6-5/8)H x 40 (1-5/8)D mm (inches) with a weight of only 540 grams (1.2 lbs.) including Ni-Cd battery pack.

### LCD DIGITAL FREQUENCY READOUT

Easy to read, in direct sunlight, or in the dark (with lamp switch). Virtually no current drain (much less than LED's). Displays transmit and receive frequencies and memory channels. Display includes four "Arrow" indicators: "F · LOCK" (Frequency Lock), "REV" (Repeater Reverse), "PROG · S" (Programmed Scan), "MS" (Memory Scan).

### TEN-CHANNEL MEMORY

Nine memories may be operated in simplex mode, or with transmit frequency offset — 600 kHz, using offset switch, permitting access to most repeaters. One memory (M0) may be used to shift the transmit frequency any desired amount to permit operation on repeaters with non-standard split frequencies.

### LITHIUM BATTERY MEMORY BACK-UP

No loss of memory because of complete discharge (or removal) of the Ni-Cd batteries. Current (approximately 1 microampere) to maintain memory supplied by built-in separate lithium batteries, with estimated life of more than 5 years.

### MEMORY SCAN

Scans only those channels (maximum 10) in which frequency data is stored. Less time required to complete one scan cycle. Stops on "Busy" channel, resumes scan automatically approximately 2 seconds after signal goes off, or when "MS" key is pressed. The "STOP" key or the PTT switch may be

used to cancel the scan function. LCD displays memory channel number and "MS" arrow while memory scan function is in use.

### PROGRAMMABLE AUTOMATIC BAND SCAN

Scan bandwidth (lower and upper frequency limits) and scan steps of 5 kHz and larger (5, 10, 15, 20, 30 kHz, etc.) may be programmed into memory for increased efficiency of operation, and to avoid undesirable scan stops on adjacent channels. Memory protected against loss by built-in lithium battery. Scan automatically locks on busy channel and resumes approximately 2 seconds after signal goes off, or when "PROG · S" key is pressed. "STOP" key or PTT switch cancels the scan function.

### UP/DOWN MANUAL SCAN

UP/DOWN manual scan capability in 5 kHz steps.

### EXTENDED FREQUENCY COVERAGE

Covers 144.000 — 145.995 MHz in 5 kHz steps, allowing simplex or repeater operation.

### KEYBOARD FREQUENCY SELECTION

To set the operation frequency (across full range) simply press the four appropriate keys to call out MHz, 100 kHz, 10 kHz and 5 or 0 kHz.

### TONE SWITCH

The TONE switch activates the accurate 1,750 Hz repeater access tone oscillator.

### HI/LOW POWER OUTPUT SELECTION

HI/LOW power output switch allows operation at 2.5 W or, for extended battery life, 300 mW RF output, as needed.

### REVERSE OPERATION

Handy "REV" switch shifts the receiver to the transmit frequency, and the transmitter to the receive frequency. Useful for checking signals on the input of a repeater, to determine if you are within simplex range, and to check for an "upside down" repeater on a specific frequency pair.

### OPTIONAL POWER SOURCES

Using optional MS-1 or ST-2 charger/power supply, the TR-2500 may be operated simultaneously with the charging process. When the TR-2500 is placed in position on the stand, switching is accomplished that separates the charging circuit from the opera-

tion circuit within the TR-2500, allowing operation of the unit during charge without affecting the charge rate or the time required to reach completion of the charge cycle (automatic drop-in connections). The ST-2 is an AC unit capable of providing a quick charge rate, while the MS-1 is a mobile unit that operates from the automotive electrical system and provides a standard charge rate.

### HIGH IMPACT PLASTIC CASE

Provides extra strength to resist damage from rough handling or severe physical shock, enhances appearance.

### "SLIDE-LOCK" BATTERY PACK

Slides into position using special support guides, locks into place to prevent accidental displacement during use. Optional extra battery pack, model PB-25, available.

### BATTERY STATUS INDICATOR

LED battery condition indicator flashes when battery charge level approaches nominal discharged battery potential.

### TWO "LOCK" SWITCHES

"F · LOCK" switch prevents accidental loss of chosen frequency when in "LOCK" position. "TX · STOP" switch prevents accidental transmission if PTT switch is accidentally pressed in handling.

### HIGH EFFICIENCY, EXTRA THIN, QUALITY SPEAKER

Driven by generous 400 mW audio output allows outdoor use under less than ideal ambient noise levels.

### BNC ANTENNA TERMINAL

Allows antenna changeover to be quick and easy.

### STANDARD ACCESSORIES

- Flexible rubberized antenna with BNC connector.
- 400 mA heavy-duty Ni-Cd battery pack.
- AC charger.
- Plug for external microphone and speaker.
- Hand strap.

## OPTIONAL ACCESSORIES

• ST-2  
BASE STAND



• MS-1  
MOBILE  
STAND



• SMC-25  
SPEAKER  
MICROPHONE



• BT-1 AA MANGANESE  
BATTERY CASE



• PB-25 Ni-Cd  
BATTERY  
PACK



• SC-4  
SOFT  
CASE



• LH-2  
DELUXE  
LEATHER  
CASE



- ST-2 Base stand
- Built-in quick charger 1 hour with full charge indicator.
- Full operation while charging. Separate battery trickle charge and power feed for extended base operation.
- Drop-in connections.

- MS-1 Mobile stand
- Cigar plug for instant connection.
- Full operation while charging (trickle charge only). Separate power feed for extended base operation. Built-in illumination for front keyboard.
- Drop-in connections.

- SMC-25 Speaker microphone.

- BT-1 6 pieces AA manganese battery case.

- PB-25 Extra Ni-Cd battery pack, 400 mA heavy duty.

- SC-4 Soft case, with belt hook
- LH-2 Deluxe, top grain cowhide, leather case.

• VB-2530 RF POWER AMPLIFIER

## SPECIFICATIONS

### [GENERAL]

Frequency Range: 144,000 — 145.995 MHz  
Memory Channels: 10 CH  
Mode: FM (F3)  
Operating Voltage Range: 8.4 V DC  $\pm$  25%  
Power Requirement: 8.4 V 400 mA (Ni-Cd battery pack)  
Back-up Power Requirement: BR-2325 type lithium battery (built-in)  
Current Drain: Less than 30 mA in receive mode with no input signal  
Less than 800 mA in HI transmit mode (at 8.4 V)  
Less than 400 mA in LOW transmit mode (at 8.4 V)  
Less than 1  $\mu$ A for memory back-up  
Grounding: Negative  
Antenna Impedance: 50  $\Omega$   
Operating Temperature: -20°C to +50°C  
Dimensions: 66(2-5/8)W x 168(6-5/8)H x 40(1-5/8)D mm (inch)  
Weight: With Ni-Cd battery: 540 g (1.2 lbs.)

[TRANSMITTER]  
RF Power Output:

HI = 2.5 W  
LOW = 0.3 W approx.

Modulation: Variable reactance direct shift  
Maximum Frequency Deviation:  $\pm$  5 kHz  
RPT Tone Burst Frequency: 1,750 Hz  
Frequency Tolerance: Less than  $\pm$  20 x 10<sup>-6</sup>  
Spurious Radiation: Less than -60 dB

[RECEIVER]  
Circuitry: Double conversion superheterodyne  
Intermediate Frequency: 1st IF = 10.7 MHz  
2nd IF = 455 kHz

Sensitivity:

Pass-band Width: Better than 1  $\mu$ V for 30 dB S/N  
Selectivity: Better than 12 kHz (-6 dB)  
Spurious Response: Less than 24 kHz (-60 dB)  
Squelch Sensitivity: Better than 50 dB  
Audio Output Power: Less than 0.25  $\mu$ V (threshold)  
More than 400 mW (at 10% distortion and 8  $\Omega$  load)

66(2-5/8)W x 168(6-5/8)H x 40(1-5/8)D mm (inch)  
Weight: With Ni-Cd battery: 540 g (1.2 lbs.)

Note: Circuit and rating are subject to change without notice due to developments in technology.

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