

# KENWOOD

# TR-50

## 1200 MHz FM PORTABLE TRANSCEIVER



The TR-50 is a multi-purpose, portable FM transceiver, designed for use in the 1200 MHz Amateur band. New microprocessor controlled operating features assure maximum flexibility and ease of operation. Features include 1 watt RF output power, Repeater offset switch and REVERSE switch, 5 memory channels, UP/DWN scan, memory scan, program scan, priority alert, 4 digit LCD display with S/RF/battery check bar graph, 1/4 wave sleeve antenna with flexible mounting bracketed, and RIT (Receiver Incremental Tuning).

### <FEATURES>

#### MULTI-PURPOSE PORTABLE TYPE TRANSCEIVER WITH AN ADJUSTABLE 1/4 WAVE SLEEVE ANTENNA.

The TR-50 is a portable transceiver designed to contain the battery, and antenna, all in one compact package. Provisions are included for external power sources such as a car battery, or fixed station supply. An 8 position adjustable antenna mounting bracket is provided on the side of the radio. The bracket may be adjusted in 30 degree steps.

#### EASY REPEATER OPERATION

##### \* TONE switch

This switch is provided to activate the optional TU-6 CTCSS Subaudible Tone Encoder.

##### \* SHIFT switch

-20MHz or simplex operation is easily selected by the front panel shift switch.

##### \* Repeater Reverse Switch

The repeater reverse switch allows the operator to quickly check the input frequency of the repeater so that he may determine if simplex communications would be possible. The switch also helps to determine if a repeater is using an "upside-down" offset.

#### MICROPROCESSOR CONTROL OF VARIOUS FREQUENCY FUNCTIONS

##### (1) 5 Memory Channels

Memory channel 1 is the Priority alert channel.

Memory channel 5 is used for storing the transmit and receive frequencies for "Odd split repeaters," or for storing the upper and lower limits for program scan.

##### (2) Scanning Functions

###### \* Program Scan

Depressing the SCAN switch on the front panel initiates program scan function. By then depressing either the microphone UP or DWN key will start scan in the corresponding direction. The upper and lower scan limits are stored in memory channel 5.

###### \* Memory Scan

Depressing the MS key for more than one second will initiate memory scan. Memories in which no data is stored are

automatically skipped during memory scan.

\* Both Memory Scan and Program Scan continue scan after a preset time period. (Time Operated Resume)

\* Priority Alert

Memory channel 1 will be scanned approximately once every 7 seconds to check for activity, when the AL switch has been depressed. If there is activity on the channel, a double "beep" will sound through the speaker as an audio alert to this activity.

##### (3) Memory Shift Function

Operation will be returned to VFO tuning when the VFO knob is rotated during MR operation, beginning at the frequency of the current memory channel.

##### (4) Memory Erase Function

Allows the operator to easily clear unwanted memory channels.

##### (5) Memory Check Function

Display memory channel numbers sequentially in the display, that currently contain data, whenever the MR or M.IN switch are depressed.

##### (6) Dual Digital VFO's

Two Digital VFO's are provided for increased operator flexibility. VFO A (20 kHz steps) and VFO (10 kHz steps) are easily selected with the A/B switch on the front panel.

##### (7) Dual Function Keyboard and Audio "Beeper"

An easy to operate front panel control layout is provided that incorporates several dual-function keys. The operation of various functions is confirmed by the use of several distinct audio tones.

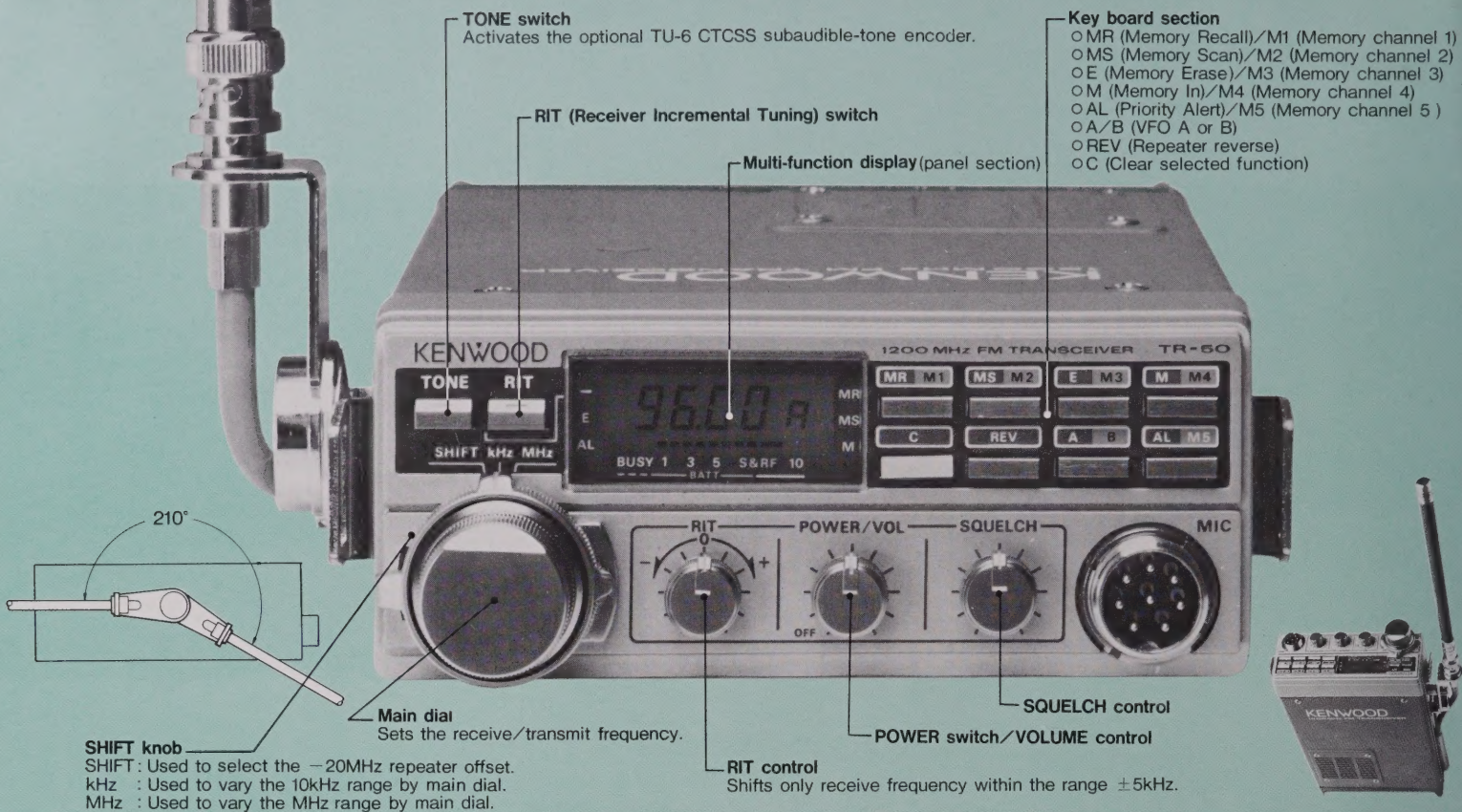
#### MULTI-FUNCTION LCD DISPLAY WITH "S-METER"

An easy to read, green multi-function LCD display indicates frequency, memory channel, VFO A/B, repeater offset, and S/RF level or battery indicator. Several arrow annunciators are provided that include MR (Memory Recall), MS (Memory Scan), AL (Priority Alert), Tone, and E (Memory Erase), M (Memory).

#### OTHER FEATURES:

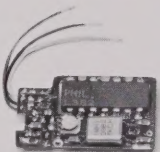
- RIT (Receiver Incremental Tuning)
- MHz switch Depressing the microphone UP/DWN key will cause the frequency to shift 1 MHz up or down, providing quick tuning.
- 16-key Auto-patch UP/DWN microphone supplied (U.S.A. only).
- Ni-cd battery and charger supplied.





### TR-50 OPTIONAL ACCESSORIES

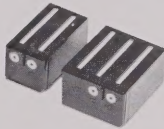
**TU-6**  
CTCSS Subaudible  
Tone Encoder



**MC-42S**  
UP/DOWN Microphone



**PB-16**  
Ni-Cd Battery



**SC-10**  
Soft Case



**SWC-4**  
1200 MHz Coupler  
(for SW-200A/B, SW-2000.)



**SW-200A/B, SW-2000**  
SWR/POWER Meter



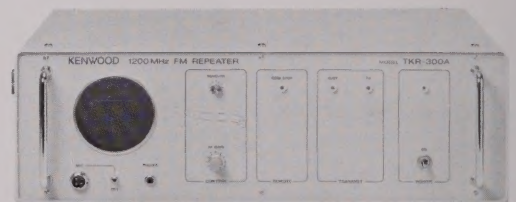
**MC-55 (8 pin)**  
Mobile Microphone with time-out-timer



Some accessories may not be available in your area.

### REPEATER

**TKR-300A : 1200 MHz FM Repeater**



**Frequency Range:** TX 1291.02 - 1292.98MHz (1ch)  
RX 1271.02 - 1272.98MHz (1ch)

**RF Output Power:** 10W

**(Option) TD-1 Remote control unit**

### TR-50 SPECIFICATIONS

#### [General]

**Frequency Range:** 1260 - 1300 MHz  
**Mode:** F3  
**Operating Temperature:** -20°C ~ +50°C  
**Antenna Impedance:** 50 Ω  
**Power Requirement:** 13.8 VDC +15%, -25%  
**Power Consumption:** 850mA approx. in transmit mode  
180mA approx. in receive mode (no signal)  
123(4.84)W × 51(3.01)H × 192(7.56)D mm(inch)  
(Projections not included)  
**Dimensions:**  
**Weight:** 1.2kg(2.65 lbs.) with battery and antenna

#### [Transmitter]

**RF Output Power:** 1W  
**Modulation:** Reactance Modulation  
**Maximum Frequency Deviation:** ± 5kHz  
**Spurious Radiation:** Less than -40dB  
**Frequency Stability:** Less than  $\pm 5 \times 10^{-6}$  (-10°C ~ +50°C)

#### [Receiver]

**Circuitry:** Triple Conversion Superheterodyne  
1st IF 139MHz, 2nd IF 20.935MHz  
3rd IF 455kHz  
**Sensitivity:** 12dB SINAD Less than 0.3μV  
**Squelch Sensitivity:** More than 0.25μV  
**Spurious Response:** Better than 40dB  
**Selectivity:** More than 15kHz(-6dB), Less than 30kHz(-60dB)  
**RIT Variable Range:** More than ± 5kHz  
**Audio Output Power:** More than 1W (8Ω at 10% distortion)

Circuit and ratings are subject to change without notice due to developments in technology.

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