

# TR-50

## Portable Repeater



- CTCSS/CDCSS Function
- Floating Charge
- LED Indicators
- PC Programming & Tuning

The smallest portable repeater;  
Exquisite industrial design, the best choice of business consumer and amateur hobbyist;  
Durable die-cast chassis, easily assembled & disassembled;  
Diverse applications for residence security management, hotel & restaurant, entertainment spot, agriculture & farming industry etc.



# TR-50

## Portable Repeater

### Super Features

- CTCSS/CDCSS encode & decode function, providing high flexibility for network application;
- AC/DC power supply selectable, with optional DC auto-revert feature & external jack for floating charge function;
- Switchable PTT Controlled/Continuous/Temperature Controlled fan;
- PC programmable with external RJ45 I/O port;
- Compact portable design, internal installation available for duplexer.



LED Indicator

Power & Volume Control Knob

RJ45 Interface

## Applicable MIL-STD-810C/D/E/F

Applicable MIL-STD	810C		810D		810E		810F	
	Methods	Procedures	Methods	Procedures	Methods	Procedures	Methods	Procedures
Low Pressure	500.1	1	500.2	1,2	500.3	1,2	500.4	1
High Temperature	501.1	1,2	501.2	1,2	501.3	1,2	501.4	1,2
Low Temperature	502.1	1	502.2	1,2	502.3	1,2	502.4	1,2
Temp. Shock	503.1	1	503.2	1	503.3	1	503.4	1
Solar Radiation	505.1	1	505.2	1	505.3	1	505.4	1,2
Rain	506.1	2	506.2	2	506.3	1,2	506.4	1,2
Humidity	507.1	2	507.2	2,3	507.3	2,3	507.4	1
Salt Fog	509.1	1	509.2	1	509.3	1	509.4	1
Dust	510.1	1	510.2	1	510.3	1	510.4	1
Vibration	514.2	8,10	514.3	1	514.4	1	514.5	1
Shock	516.2	1,2,5	516.3	1,4	516.4	1,4	516.5	1,4

## General

Frequency Range(MHz)	VHF: 146-174 UHF: 440-470
Channel Capacity	1
Channel Spacing( KHz)	25 /12.5
Operating Voltage(v)	AC 100-240 / DC 10.2-14.6
Current Drain	Standby Receive Transmit
	0.2A or less 0.8A or less 2.2A or less
Frequency Stability(ppm)	±2.5
Operating Temperature(°C)	-30~+60
Antenna Impedance(Ω)	50
Dimensions (L×W×H)(mm)	218×90×222
Weight (g)	2900

## Transmitter

RF Power Output	4.5±0.5W
Modulation	16k φ F3E / 8k5 φ F3E
Spurious and Harmonics	70dB
FM Noise	40/35dB
Audio Distortion	≤5%

All specifications are tested according to TIA/EIA-603, and subject to change without notice due to continuous development.

## Receiver

Sensitivity	≤0.35 μV
Selectivity	70/60dB
Intermodulation	65/60dB
Spurious Response Rejection	70/65dB
S/N	45/40dB
Rated Audio Power Output	500mW
Rated Audio Distortion	≤5%



ISO9001:2000 Certificate NO:FM 61540



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Your Local Dealer





## Main Features

### CTCSS/CDCSS Encoder & Decoder

Set up talkgroups/users with unique CDCSS/CTCSS to prevent unwanted conversations on the same frequency.

### Floating Charge

The TR-50 provides selectable AC(100~240V 50/60Hz)/DC(10.2~14.6V) power supply. Normally users can equip battery back-up system connected to the external DC jack with floating charge function in the mean time. This supports auto-switching to DC battery once the AC power supply fails.

### Multi-control For Onset Of The Fan

The powerful DC brushless fan inside the cabinet is to effectively ensure the transmitter's durability and stability while working at tough situations. Three options for the jumpers are PTT controlled, Continuous and Temperature controlled respectively.

### LED Indicators

The LED indicators on the front panel highlight system status at a glance, including power-up, receive and transmit.

### Programmable Channel Spacing

Users can set either a 25KHz or a 12.5KHz channel spacing to accommodate present and future channel allocations according to local radio regulations.

## PC Programming & Tuning

The repeater provides tuning in the field from a desktop or portable PC. Radio parameters for programming are TX/RX frequency, CTCSS/CDCSS, squelch level, etc.

## Base Station Capabilities & Local Speaker

The TR-50 can be operated as a full-duplex base station with the optional SM-08R Microphone connected. In addition, a built-in speaker on the front panel makes it available that the channel conversation can be monitored.

## Compact Desktop Design & Duplexer Installation

This portable repeater can be placed in office environments or dispatch center with minimal space required whereas duplexer installation is still available inside the cabinet.

## Recommended Applications

Hospitality

Farming Industry

Construction

Entertainment Spot

Property Management

## Accessories

### Standard Accessories

AC power cable (EUplug) PWC03 DC power cable PWC07 Palm microphone SM08R1

### Optional Accessories



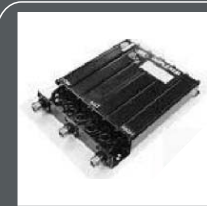
BRK06  
External duplexer  
installation kit



PC15  
Receiver programming cable



PC14  
Transmitter programming cable



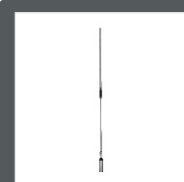
DT01  
External duplexer  
(Frequency 137-172MHz;  
Tx-Rx separation 4-15MHz)

DT02  
External duplexer  
(Frequency 336-370MHz;  
Tx-Rx separation 5-20MHz)

DT03  
External duplexer  
(Frequency 380-470MHz;  
Tx-Rx separation 5-20MHz)

DT04  
External duplexer  
(Frequency 136-174MHz;  
Tx-Rx separation 5.2-8MHz)

DT05  
Internal duplexer  
(Frequency 400-480MHz;  
Tx-Rx separation 8-15MHz)



Mobile Antenna



Omni-directional  
Antenna

