HYT

TR-50

Portable
Repeater

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

Applicable MIL-STD	810C Methods Procedures	810D Methods Procedures	810E Methods Procedures	810F 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	0.2A or less
Current Drain — Receive	0.8A or less
Current Drain — Transmit	2.2A or less
Frequency Stability(ppm)	±2.5
Operating Temperature(℃)	-30~+60
Antenna Impedance(Ω)	50
Dimensions (L×W×H)(mm)	218 × 90 × 222
Weight (g)	2900

Transmitter

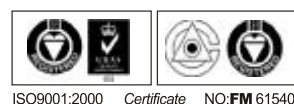|	
RF Power Output	4.5±0.5W
Modulation	16kφF3E / 8k5φF3E
Spurious and Harmonics	70dB
FM Noise	40/35dB
Audio Distortion	≤5%

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

Receiver

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

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

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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

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.

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

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 separetion 4-15MHz)
DT02 External duplexer (Frequency 336-370MHz; Tx-Rx separetion 5-20MHz)
DT03 External duplexer (Frequency 380-470MHz; Tx-Rx separetion 5-20MHz)
DT04 External duplexer (Frequency 136-174MHz; Tx-Rx separetion 5.2-8MHz)
DT05 Internal duplexer (Frequency 400-480MHz; Tx-Rx separetion 8-15MHz)
Mobile Antenna
Omni-directional Antenna