

KENWOOD

HF TRANSCEIVER TS-50S

Enjoy high-performance communications plus go-anywhere convenience with the world's smallest HF transceiver



Kenwood's TS-50S is going places. As the smallest HF transceiver in the world, it opens up a whole new world for the Amateur Radio enthusiast. It can be mounted in a vehicle, taken on a DX-pedition, or even permanently installed as a base

Compact Milestone

station transceiver. Yet despite its compact dimensions, the TS-50S packs a hefty punch. Maximum output is 100W, and there's a powerful cooling fan with heat sink to



ensure stable operation. Sophisticated features include DDS with innovative "fuzzy" control, and Kenwood's own AIP. For user-friendly operation on the move, there's also a multi-function microphone, a handy menu system, and an optional antenna tuner. All this and more, for the TS-50S is equipped with dual VFOs for split-frequency operations.





160m to 10m Amateur band operation with 500kHz to 30MHz general coverage receiver

Despite its small size (179mm wide, 60mm high, 233mm deep), the TS-50S offers transmit/receive performance equivalent with most of the large HF transceivers on the market. Naturally, it supports LSB, USB, CW, AM and FM.

DDS (Direct Digital Synthesizer) with fuzzy control

For the first time, Kenwood has introduced 'fuzzy' logic control circuitry to enable the main encoder to tune smoothly from 5Hz steps to fast forward mode.

AIP (Advanced Intercept Point)

Kenwood's AIP system—an exclusive circuit design—capable of raising dynamic range to 105dB—ensures first-class receiver performance with a significantly reduced noise floor level.

100 memory channels

The TS-50S is equipped with 100 channels for independent storage of transmit and receive parameters such as frequency, mode, and filter setting. Memory shift facilitates transfer of data to the VFOs.

Easy-to-use scan functions

Convenience is further improved with the provision of a carrier-operated scan stop mode, a first for HF rigs.

RF output power control (100W, 50W, 10W)

Comprehensive interference reduction

- **CW reverse mode**
The pitch of interference competing with the CW signal is reversed so the operator can approach the signal from either side.
- **All-mode squelch**
The squelch circuit effectively suppresses undesirable background noise when there is no signal present.
- **Switchable AGC circuit (SLOW/FAST)**
AGC (automatic gain control) can be changed via the menu system. This ensures optimum receiver operation in SSB, AM and CW modes under all signal strength conditions.
- **IF shift**
- **20dB attenuator**
- **Noise blanker [pulse]**

Powerful menu system

First featured on the top-of-the-line TS-950SDX, Kenwood's versatile menu system is provided on the TS-50S—to select CW full or semi break-in, change repeater sub-tone, adjust microphone UP/DOWN step size, and perform many other operations using just a few keys. The menus are also accessible via the supplied microphone.

Dual VFOs (A and B)

Since VFO data is stored independently for each band, even after switching bands the previously used frequency will still be available.

TF-SET

TF-SET is provided so the TS-50S can be used for split operations and DX applications. This function is available when the receive frequency is locked, so the operator can avoid losing a targeted DX station.



Multi-function microphone supplied

Like other Kenwood VHF mobile transceivers, the TS-50S is compatible with remote-control microphones featuring 4 programmable function keys.

Auto-mode capability Full break-in and semi break-in General coverage receiver



Optional Equipment



AT-50

Automatic antenna tuner
Useful for both mobile and fixed installations, this ensures good performance even at band edges. Accurate tuning is initiated simply by pressing the AT TUNE key on the TS-50S. And since band data is transferred to the tuner, there is no need to operate the AT-50 directly—it can be installed in a car's trunk. The AT-50 can also be used with other 100W HF transceivers.

AT-300
Automatic antenna tuner



MB-13
Mobile mount



YK-107C
500Hz CW filter



SO-2
Temperature-compensated crystal oscillator



PG-4M
Control cable for AT-50 (6m)

This cable links the TS-50S with the AT-50 and is used when the antenna tuner is installed in a car's trunk. It is 6m long.

PG-2Y
DC cable (4m)



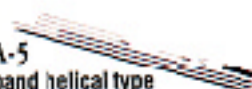
LF-30A
Low-pass filter



IF-10D
Interface unit



MA-5
5-band helical type HF mobile antenna



YP-1
Eumper mount for MA-5



SW-2100
SWR/Power meter (1.3 - 30MHz)



PS-53
Heavy-duty power supply (22.5A)



PS-33
Power supply (20.5A)



TL-922A
HF linear amplifier



MC-85
Multi-function desktop microphone



MC-80
Desktop microphone



MC-60A
Deluxe desktop microphone



MC-47
Multi-function microphone (8-pin)



MC-43S
Hand microphone



SP-50B
Mobile speaker (8Ω)



SP-41
Compact mobile speaker (4Ω)



Specifications

General	
Mode	AM (2W), CW (SSB), A3E (AM), F3E (FM)
Memory channels	100
Antenna impedance	50Ω
Power requirement	100W DC ± 10%
Power consumption	
Receive (no signal)	1.6A
Transmit (Max.)	20.5A
Temperature range	-20 - +50°C
Frequency stability	less than ± 10 × 10 ⁻⁶ (-0°C - +50°C) less than ± 0.5 × 10 ⁻⁶ (-0°C - +50°C) with SO-2
Dimensions (W × H × L) (Projections not included)	7.4" (18 × 2.35 × 9.378 inches) (179 × 60 × 239mm)
Weight	6.4 lbs (2.9 kg)
Transmitter	
Frequency range	
160m band	1.1 - 2.0MHz
40m band	3.1 - 4.0MHz
30m band	7.1 - 7.3MHz
20m band	10.1 - 15.0MHz
17m band	14.0 - 14.35MHz
15m band	18.060 - 18.360MHz
12m band	21.0 - 21.45MHz
10m band	24.80 - 24.99MHz
80m band	28.0 - 29.7MHz
Output power	
500 CW, PEP, AM	100W
AM	25W
Modulation	
SSB	Balanced modulation
FM	Maximum modulation
AM	Low level modulation
Spectrum radiation	less than -50dB
Carrier suppressor	more than 40dB
Unwanted emissions suppression	more than 40dB
Maximum frequency deviation (FM)	±5kHz
Frequency response (SSB)	40 - 2600Hz (less than -10dB)
Microphone impedance	600Ω



Receiver	
Modulation	SSB, CW, AM, FM
Frequency range	500kHz - 30MHz
Intermediate frequency	1st: 7125kHz, 2nd: 13.825kHz, 3rd: 455kHz (FM only)
Sensitivity	
SSB, CW (at 10dB S+N) 500kHz - 30MHz	less than 0.25µV
AM (at 10dB S+N) 500kHz - 30MHz	less than 2.5µV
FM (at 10dB SINAD) 28MHz - 30MHz	less than 0.5µV
Selectivity	
SSB, CW	more than 2.2kHz (-60dB) less than 4.0kHz (-50dB)
AM	more than 5kHz (-50dB) less than 40kHz (-30dB)
FM	more than 12kHz (-30dB) less than 25kHz (-50dB)
Image ratio	more than 40dB
F rejection	more than 60dB
BT variable range	more than ± 1.5kHz
Squelch sensitivity	
SSB, CW, AM 500kHz - 30MHz	less than 3µV
FM 28MHz - 30MHz	less than 0.25µV
Audio output power	2W (8Ω at 5% distortion)
Audio input impedance	600Ω

The equipment meets or exceeds published specifications. Specifications are subject to change without notice due to advances in technology. KENWOOD reserves the right to add or delete models or products without notice without obligation to compensate in the market. Products included in this catalog are products that were a part of KENWOOD's product line as of the date of this printing.

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