

KENWOOD

...pacesetter in amateur radio

TS-520S

AND DG-5 DIGITAL FREQUENCY DISPLAY



The TS-520S combines all of the fine, field-proven characteristics of the original TS-520 together with many of the ideas and suggestions for improvement from amateurs worldwide.

FULL COVERAGE TRANSCEIVER

The TS-520S provides full coverage on all amateur bands from 1.8 to 29.7 MHz. Kenwood gives you 160 meter capability, WWV on 15.000 MHz., and an auxiliary band position for maximum flexibility. And with the addition of the TV-506 transverter, your TS-520S can cover 160 meters to 6 meters on SSB and CW.

DIGITAL DISPLAY DG-5 (option)

The Kenwood DG-5 provides easy, accurate readout of your operating frequency while transmitting and receiving.

OUTSTANDING RECEIVER SENSITIVITY AND MINIMUM CROSS MODULATION

The TS-520S incorporates a 3SK35 dual gate MOSFET for outstanding cross modulation and spurious response characteristics. The 3SK35 has a low noise figure (3.5 dB typ.) and high gain (18 dB typ.) for excellent sensitivity.

NEW IMPROVED SPEECH PROCESSOR

An audio compression amplifier gives you extra punch in the pile

ups and when the going gets rough.

VERNIER TUNING FOR FINAL PLATE CONTROL

A vernier tuning mechanism allows easy and accurate adjustment of the plate control during tune-up.

FINAL AMPLIFIER

The TS-520S is completely solid state except for the driver (12B-Y7A) and the final tubes. Rather than substitute TV sweep tubes as final amplifier tubes in a state of the art amateur transceiver,

Kenwood has employed two husky S-2001A (equivalent to 6146B) tubes. These rugged, time-proven tubes are known for their long life and superb linearity.

HIGHLY EFFECTIVE NOISE BLANKER

An effective noise blanking circuit developed by Kenwood that virtually eliminates ignition noise is built into the TS-520S.

RF ATTENUATOR

The TS-520S has a built-in 20 dB attenuator that can be activated by a push button switch conveniently located on the front panel.

PROVISION FOR EXTERNAL RECEIVER

A special jack on the rear panel of the TS-520S provides receiver signals to an external receiver for increased station versatility. A switch on the rear panel determines the signal path... the receiver in the TS-820 or any external receiver.

The VFO-520 remote VFO matches the styling of the TS-520S and provides maximum operating flexibility on the band selected on your TS-520S.

The TS-520S is completely self-contained with a rugged AC power supply built-in. The addition of the DS-1A DC-DC converter (optional) allows for mobile operation of the TS-520S.

The TS-520S has 2 convenient RCA phono jacks on the rear panel for PHONE PATCH IN and PHONE PATCH OUT.

CW FILTER (OPTION)

The CW-520-500 Hz filter can be easily installed and will provide improved operation on CW.

AGC CIRCUIT (OPTION)

The AGC circuit has 3 positions (OFF, FAST, SLOW) to enable the TS-520S to be operated in the optimum condition at all times whether operating CW or SSB.

The TS-520S retains all of the features of the original TS-520 that made it tops in its class: RIT control • 8-pole crystal filter • Built-in 25 KHz calibrator • Front panel carrier level control • Semi-break-in CW with sidetone • VOX/PTT/MOX • TUNE position for low power tune up • Built-in speaker • Built-in Cooling Fan • Provisions for 4 fixed frequency channels • Heater switch.

TS-520 Specifications

Amateur Bands: 160-10 meters

plus WWV (receive only)

Modes: USB, LSB, CW

Antenna Impedance: 50-75 Ohms

Frequency Stability: Within ± 1

kHz during one hour after one minute of warm-up, and within 100 Hz during any 30 minute period thereafter

Tubes & Semiconductors:

Tubes 3

(S2001A x 2, 12BY7A)

Transistors 52

FETs 19

Diodes 101

Power Requirements: 120/220 V

AC, 50/60 Hz, 13.8 V DC

(with optional DS-1A)

Power Consumption: Transmit:

280 Watts Receive: 26 Watts

(with heater off)

Dimension: 333(13 1/4) W x 153 (6-0)

H x 335(13. (13-3/16) D mm(inch)

Weight: 16.0 kg(35.2 lbs)

TRANSMITTER

RF Input Power: SSB: 200 Watts

PEP CW: 160 Watts DC

Carrier Suppression: Better than

-40 dB

Sideband Suppression: Better than

-50 dB

Spurious Radiation: Better than

-40 dB

Microphone Impedance: 50k Ohms

AF Response: 400 to 2,600 Hz

RECEIVER

Sensitivity: 0.25 μ V for 10 dB

(S+N)/N

Selectivity: SSB: 2.4 kHz/-6 dB,

4.4 kHz/-60 dB

Selectivity: CW: 0.5 kHz/-6 dB,

1.5 kHz/-60 dB (with optional

CW 520 filter)

Image Ratio: Better than 50 dB

IF Rejection: Better than 50 dB

AF Output Power: 1.0 Watt (8

Ohm load, with less than 10% distortion)

AF Output Impedance: 4 to 16

Ohms

DG-5

SPECIFICATIONS

Measuring Range: 100 Hz to

40 MHz

Input Impedance: 5 k Ohms

Gate Time: 0.1 Sec.

Input Sensitivity: 100 Hz to 40

MHz... 200 mV rms or over, 10

kHz to 10 MHz... 50 mV or over

Measuring Accuracy: Internal time

base accuracy ± 0.1 count

Time Base: 10 MHz

Operating Temperature: -10° to

50° C/14° 122° F

Power Requirement: Supplied

from TS-520S or 12 to 16 VDC

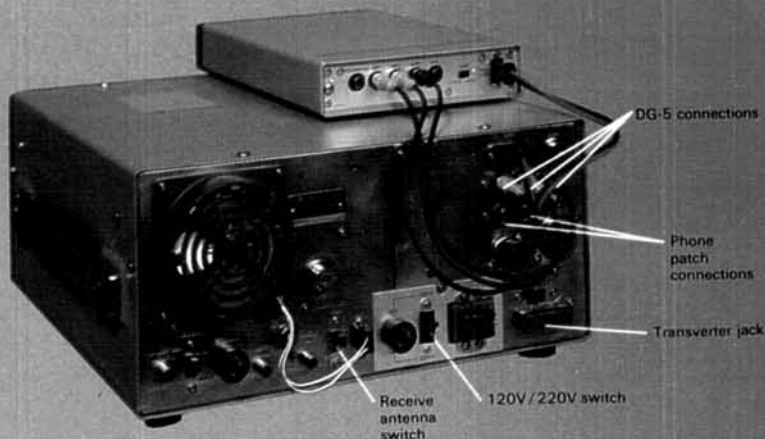
(nominal 13.8 VDC)

Dimensions: 167(6-9/16) W x

43(1-11/16) H x 268(10-9/16) D

mm(inch)

Weight: 1.3 kg(2.9 lbs)



DG-5

The luxury of digital readout is available on the TS-520S by connecting the DG-5 readout (option) to the average readout circuit. This counter reads the carrier, VFO, and heterodyne frequencies to give you your exact frequency. This handsome, styled accessory can be set almost anywhere in your shack for easy-to-read operation... or set it on the dashboard during mobile operation for safety and convenience. Six bold digits display your operating frequency while you transmit and receive. Complete with DH (display hold) switch for frequency memory and 2 position intensity selector. The DG-5 can also be used as a normal frequency counter up to 40 MHz at the touch of a switch. (Input cable provided.) NOTE: TS-520 owners can use the DG-5 with a DK-520 adapter kit.

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TS-820S

WITH DIGITAL FREQUENCY DISPLAY

We told you that the TS-820 would be best. In little more than a year our promise has become a fact. Now, in response to hundreds of requests from amateurs, Kenwood offers the TS-820S*... the same superb transceiver, but with the digital readout factory installed. As an owner of this beautiful rig, you will have at your fingertips the combination of controls and features that even under the toughest operating conditions make the TS-820S the Pacesetter that it is.

Following are a few of the TS-820S' many exciting features.

PLL • The TS-820S employs the latest phase lock loop circuitry. The single conversion receiver section performance offers superb protection against unwanted cross-modulation. And now PLL allows the frequency to remain the same when switching sidebands (USB, LSB, CW) and eliminates having to recalibrate each time.

DIGITAL READOUT • The digital counter display is employed as an integral part of the VFO readout system. Counter mixes the carrier VFO, and first heterodyne frequencies to give exact frequency. Figures the frequency down to 10 Hz and digital display

reads out to 100 Hz. Both receive and transmit frequencies are displayed in easy to read, Kenwood Blue digits.

SPEECH PROCESSOR • An RF circuit provides quick time constant compression using a true RF compressor as opposed to an AF clipper. Amount of compression is adjustable to the desired level by a convenient front panel control.

IF SHIFT • The IF SHIFT control varies the IF passband without changing the receive frequency. Enables the operator to eliminate unwanted signals by moving them out of the passband of the receiver. This feature alone makes the TS-820S a pacesetter.

*The TS-820 and DG-1 are still available separately.

TS-600



Experience the excitement of 6 meters. The TS-600 all mode transceiver lets you experience the fun of 6 meter band openings. This 10 watt, solid state rig covers 50.0-54.0 MHz. The VFO tunes the band in 1 MHz segments. It also

has provisions for fixed frequency operation on NETS or to listen for beacons. State of the art features such as an effective noise blanker and the RIT (Receiver Incremental Tuning) circuit make the TS-600 another Kenwood "Pacesetter".



TV-506

An easy way to get on the 6 meter band with your TS-520/520S, TS-820/820S and most other transceivers. Simply plug it in and you're on... full band coverage with 10 watts output on SSB and CW.



TR-8300

Experience the luxury of 450 MHz at an economical price. The TR-8300 offers high quality and superb performance as a result of many years of improving VHF/UHF design techniques. The trans-

ceiver is capable of F₃ emission on 23 crystal-controlled channels (3 supplied). The transmitter output is 10 watts.

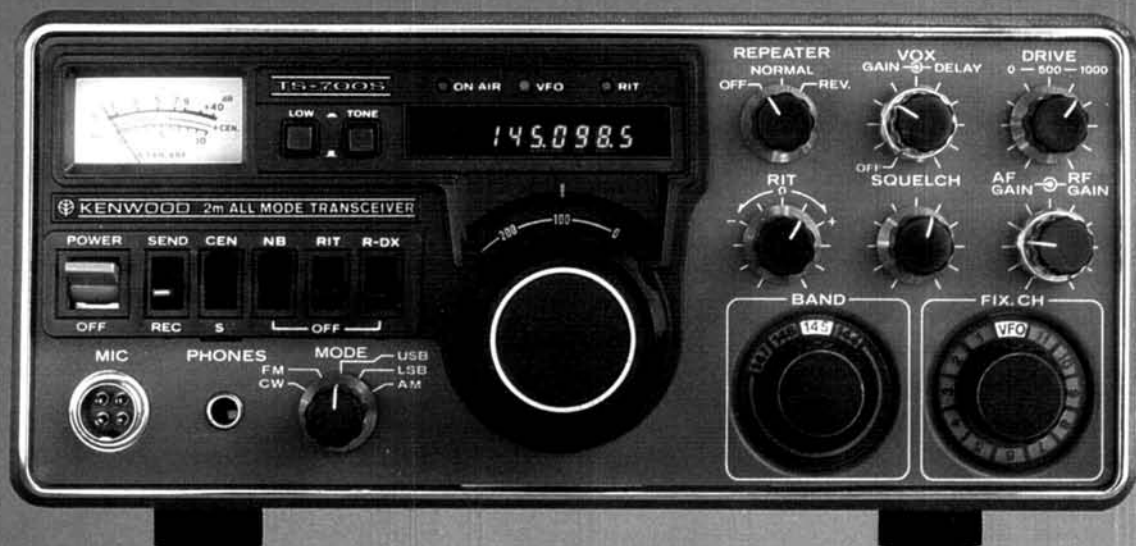
The TR-8300 incorporates a 5 section helical resonator and a

two-pole crystal filter in the IF section of the receiver for improved intermodulation characteristics. Receiver sensitivity, spurious response, and temperature characteristics are excellent.

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TS-700S

WITH DIGITAL FREQUENCY DISPLAY



Check out the new "built-ins": digital readout, receiver pre-amp, VOX, semi-break in, and CW sidetone! Of course, it's still all mode, 144-148 MHz and VFO controlled.

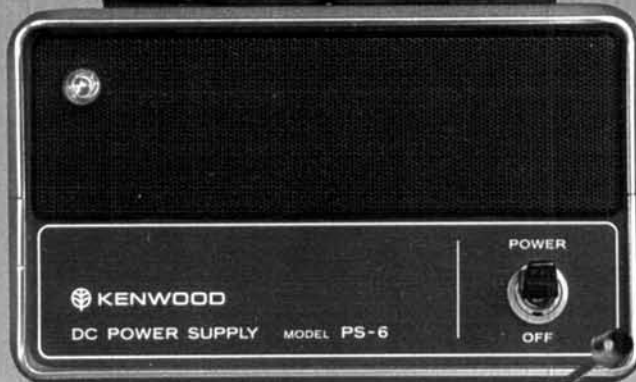
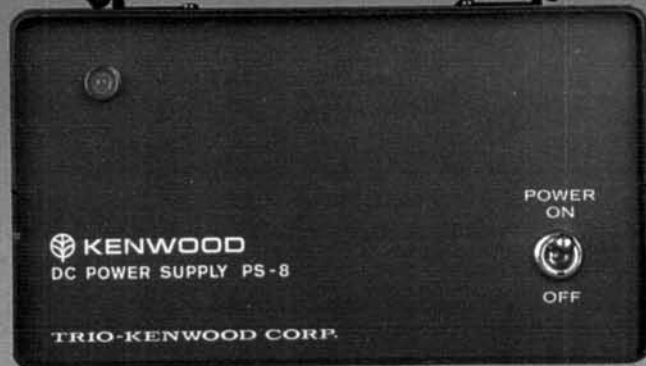
Features: Digital readout with "Kenwood Blue" digits • High gain receiver pre-amp • 1 watt lower power switch • Built in VOX • Semi-break in on CW • CW sidetone • Operates all modes: SSB (upper & lower), FM, AM and CW • Completely solid state circuitry provides stable, long lasting, trouble-free operation • AC and DC capability (operate from your car, boat, or as a base station through its built-in power supply) • 4 MHz band coverage (144 to 148 MHz) • Automatically switches transmit frequency 600 KHz for repeater operation. Simply dial in your receive frequency and the radio does the rest... simplex, repeater, reverse • Or accomplish the same by plugging a single crystal into one of the 11 crystal positions for your favorite channel • Transmit/Receive capability on 44 channels with 11 crystals.



VFO-700S

Handsomely styled and a perfect companion to the TS-700S. This unit provides you with the extra versatility and the luxury of having a second VFO in your shack. Great for split frequency operation and for tuning off frequency to check the band. The function switch

on the VFO-700S selects the VFO in use and the appropriate frequency is displayed on the digital readout in the TS-700S. In addition a momentary contact "frequency check" switch allows you to spot check the frequency of the VFO not in use.



TR-7400A

Features Kenwood's unique Continuous Tone Coded Squelch system, 4 MHz band coverage, 25 watt output and fully synthesized 800 channel operation. This compact package gives you the kind of performance specifications you've always wanted in a 2-meter amateur rig.

Outstanding sensitivity, large-sized helical resonators with High Q to minimize undesirable out-of-band interference, and give a 2-pole 10.7 MHz monolithic crystal filter combine to give your TR-7400A outstanding receiver performance. Intermodulation characteristics (Better than 66dB), spurious (Better than -60dB), image rejection (Better than -70dB), and a versatile squelch system make the TR-7400A tops in its class.

Shown with the PS-8 power supply

(Active filters and Tone Burst Modules optional)

TR-7500

This 100 channel PLL synthesized 146-148 MHz transceiver comes with 88 pre-programmed channels for use on all standard repeater frequencies (as per ARRL Band Plan) and most simplex channels. For added flexibility, there are 6 diode-programmable switch positions. The 15 KHz shift function makes these 6 positions into 12 channels. 10 watt output, ± 600 KHz offset and LED digital frequency display are just a few of the many fine features of the TR-7500. The PS-6 is the handsomely styled, matching power supply for the TR-7500. Its 3.5 amp current capacity and built-in speaker make it the perfect companion for home use of the TR-7500.

TR-2200A

The high performance portable 2-meter FM transceiver. 146-148 MHz, 12 channels (6 supplied), 2 watts or 400 mW RF output. Everything you need is included: Ni-Cad battery pack, charger, carrying case and microphone.



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Kenwood developed the T-599D transmitter and R-599D receiver for the most discriminating amateur.

The R-599D is the most complete receiver ever offered. It is entirely solid-state, superbly reliable and compact. It covers the full amateur band, 10 through 160 meters, CW, LSB, USB, AM and FM.

The T-599D is solid-state with the exception of only three tubes, has built-in power supply and full metering. It operates CW, LSB, USB and AM and, of course, is a perfect match to the R-599D receiver.

If you have never considered the advantages of operating a receiver/transmitter combination... maybe you should.

Because of the larger number of controls and dual VFOs the combination offers flexibility impossible to duplicate with a transceiver.

Compare the specs of the R-599D and the T-599D with any other brand. Remember, the R-599D is all solid state (and includes four filters). Your choice will obviously be the Kenwood.



R-599D

T-599D

R-300

Dependable operation, superior specifications and excellent features make the R-300 an unexcelled value for the shortwave listener. It offers full band coverage with a frequency range of 170 KHz to 30.0 MHz • Receives AM, SSB and CW • Features large, easy to read drum dials with fast smooth dial action • Band spread is calibrated for the 10 foreign broadcast bands, easily tuned with the use of a built-in 500 KHz calibrator • Automatic noise limiter • 3-way power supply system (AC/Batteries/External DC) ... take it anywhere • Automatically switches to battery power in the event of AC power failure.





Fine equipment that belongs in every well equipped station

HF LINES

820 Series

- TS-820S... TS-820 with Digital Installed
- TS-820... 10-160 M Deluxe Transceiver
- DG-1... Digital Frequency Display for TS-820
- VFO-820... Deluxe Remote VFO for TS-820/820S
- CW-820... 500 Hz CW Filter for TS-820/820S
- DS-1A... DC-DC Converter for 520/820 Series

520 Series

- TS-520S... 160-10 M Transceiver
- DG-5... Digital Frequency Display for TS-520 Series
- VFO-520... Remote VFO for TS-520 and TS-520S
- SP-520... External Speaker for 520/820 Series
- CW-520... 500 Hz CW Filter for TS-520/520S
- DK-520... Digital Adaptor Kit for TS-520

599D Series

- R-599D... 160-10 M Solid State Receiver
- T-599D... 80-10 M Matching Transmitter
- S-599... External Speaker for 599D Series

- CC-29A... 2 Meter Converter for R-599D

- CC-69... 6 Meter Converter for R-599D

- FM-599A... FM Filter for R-599D

SHORT WAVE LISTENING

- R-300 General Coverage SWL Receiver

VHF LINES

- TS-600... 6 M All Mode Transceiver

- TS-700S... 2 M All Mode Digital Transceiver

- VFO-700S... Remote VFO for TS-700S

- SP-70... Matching Speaker for TS-600/700 Series

- TR-2200A... 2 M Portable FM Transceiver

- TR-7400A... 2 M Synthesized Deluxe FM Transceiver

- TR-7500... 100 Channel Synthesized 2 M FM Transceiver

- TR-8300... 70 CM FM Transceiver (450 MHz)

- TV-506... 6 M Transverter for 520/820/599 Series

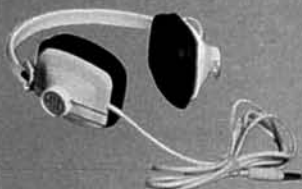
POPULAR STATION ACCESSORIES

- HS-4... Headphone Set
- MB-1A... Mounting Bracket for TR-2200A
- MC-50... Desk Microphone
- PS-5... Power Supply for TR-8300
- PS-6... Power Supply for TR-7500
- PS-8... Power Supply for TR-7400A
- VOX-3... VOX for TS-600/700A

Trio-Kenwood stocks a complete line of replacement parts, accessories, and manuals for all Kenwood models.

MORE ACCESSORIES:

Description	Model #	For use with
Rubber Helical Antenna	RA-1	TR-2200A
Telescoping Whip Antenna	T90-0082-05	TR-2200A
Ni-Cad Battery Pack (set)	PB-15	TR-2200A
4 Pin Mic. Connector	E07-0403-05	All Models
Active Filter Elements	See Service Manual	TR-7400A
Tone Burst Modules	See Service Manual	TS-700A; TR-7400A
AC Cables	Specify Model	All Models
DC Cables	Specify Model	All Models



The Kenwood HS-4 headphone set adds versatility to any Kenwood station. For extended periods of wear, the HS-4 is comfortably padded and is completely adjustable. The frequency response of the HS-4 is tailored specifically for amateur communication use. (300 to 3000 Hz, 8 ohms).



The MC-50 dynamic microphone has been designed expressly for amateur radio operation as a splendid addition to any Kenwood shack. Complete with PTT and LOCK switches, and a microphone plug for instant hook-up to any Kenwood rig. Easily converted to high or low impedance. (600 or 50k ohm)

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