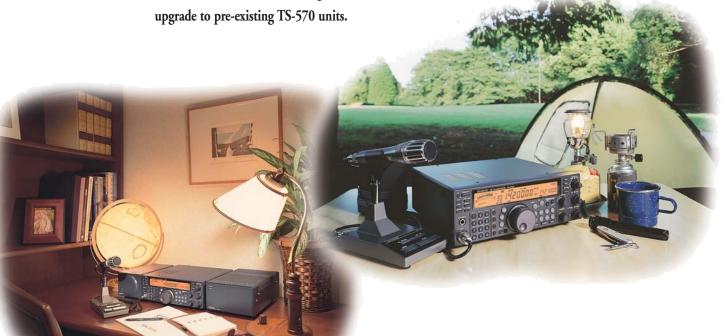
## Advanced Digital Technology for Everyone

# Affordable DSP without Compromise

DSP technology out of the clouds and into the hands of everyone with the new TS-570D(G) and TS-570S(G) (HF+6m). The G series represents the latest advancements in HF radio design from Kenwood, and is even available as an





## OPTIONAL ACCESSORIES



Not all products are available in all markets.

RECEIVER

## **SPECIFICATIONS**

	TS-570D(G)/TS-570S(G)		
GENERAL			
Transmitter Frequency Range	160, 80, 40, 30, 20, 17, 15, 12, 10, 6 [TS-570S(G) only] meter bands		
Receiver Frequency Range	500 kHz ~ 30 MHz, 50 MHz ~ 54 MHz		
Mode	A1A (CW), J3E (SSB), A3E (AM), F3E (FM), F1D (FSK)		
Power Requirement	13.8 V DC ±15%		
Current Drain (approx.)	20.5 A (transmit), 2 A (standby)		
Operating Temperature	14° F ~ +122° F (-10° C ~ +50° C)		
Frequency Stability	Within ±10 x 10 <sup>-6</sup> (±0.5 x 10 <sup>-6</sup> with SO-2)		
Antenna Impedance	50 Ω		
Microphone Impedance	600 Ω		
Dimensions, projections not included (W x H x D)	10-5/8 × 3-3/4 × 10-11/16 inch (270 × 96 × 271 mm)		
Weight (approx.)	15 lbs (6.8 kg)		
TRANSMITTER			
RF Output Power	SSB/CW/FM/FSK: 100 W; AM: 25 W		
Modulation SSB FM AM	Balanced modulation Reactance modulation Low-power modulation		
Maximum Frequency Deviation (FM)	Less than ±5 kHz (wide) Less than ±2.5 kHz (narrow)		
Spurious Radiation	Less than -50 dB		
Carrier Suppression	More than 40 dB		
Unwanted Sideband Suppression	More than 40 dB		
Transmit Frequency Response (SSB)	400 ~ 2600 Hz (within -6 dB)		
XIT Variable Range	±9.99 kHz		
Antenna Tunable Range	16.7 Ω ~ 150 Ω		

XIT Variable Range	±9.99 kHz		Less than 25.0 kHz (-50
Antenna Tunable Range	16.7 Ω ~ 150 Ω	RIT Variable Range	±9.99 kHz
		 Beat Elimination	More than 40 dB
		Audio Output Power	More than 1.5 W (8 Ω, 10% distortion, wit
		Audio Output Impedance	8 Ω
		Kenwood follows a policy of contin For this reason specifications may i	
KENWOOD CORPORATION		These specifications are guaranteed for Amateur Bands only.	

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Circuitry SSB/CW/AM/FSK FM	Double Superheterodyne Triple Superheterodyne		
Intermediate Frequency 1st IF 2nd IF 3rd IF	73.05 MHz 8.83 MHz 455 kHz (FM only)		
Sensitivity SSB/CW/FSK (S/N 10 dB)	Less than 4 μV (500 kHz ~ 1.705 MHz), Less than 0.2 μV (1.705 ~ 24.5 MHz), Less than 0.13 μV (24.5 ~ 30 MHz), Less than 0.13 μV (50 ~ 54 MHz)		
AM (S/N 10 dB)	Less than 31.6 $\mu$ V (500 kHz ~ 1.705 MHz), Less than 2 $\mu$ V (1.705 ~ 24.5 MHz), Less than 1.3 $\mu$ V (24.5 ~ 30 MHz), Less than 1.3 $\mu$ V (50 ~ 54 MHz)		
FM (12 dB SINAD)	Less than 0.25 $\mu$ V (28 ~ 30 MHz), Less than 0.25 $\mu$ V (50 ~ 54 MHz)		
Squelch Sensitivity SSB/CW/AM/FSK	Less than 20 $\mu$ V (500 kHz $\sim$ 1.705 MHz), Less than 2 $\mu$ V (1.705 $\sim$ 30 MHz), Less than 2 $\mu$ V (50 $\sim$ 54 MHz)		
FM	Less than 0.25 μV (28 ~ 30 MHz), Less than 0.25 μV (50 ~ 54 MHz)		
Spurious Response Image Ratio IF Rejection Others	More than 70 dB More than 70 dB More than 50 dB		
Selectivity SSB/CW	More than 2.2 kHz (-6 dB), Less than 4.4 kHz (-60 dB)		
AM (wide mode)	More than 4.0 kHz (-6 dB), Less than 20.0 kHz (-50 dB)		
FM	More than 12.0 kHz (-6 dB), Less than 25.0 kHz (-50 dB)		
RIT Variable Range	±9.99 kHz		
Beat Elimination	More than 40 dB		
Audio Output Power	More than 1.5 W (8 Ω, 10% distortion, with -53 dBm input)		





TS-570D(G) TS-570S(G)

**HF Transceiver HF+6m Transceiver** 





# EASY OPERATION

## Kenwood's TS-570D/S(G) with Advanced Technology Upgrade

16-bit AF-stage DSP delivers superb audio quality on both transmit and receive

Adjustable transmit sound quality and NR1 Noise Reduction System

Digital filtering with 3 new CW DSP filters give you the edge when conditions are tough

Compact enough for mobiling, yet large enough to build a station around

High-end radio technology doesn't mean a high-end budget anymore — Kenwood delivers it today with the all-new TS-570D(G) and TS-570S(G) (HF+6m). With 16-bit DSP technology, untouchable digital filtering, heavy-duty transmitter design, a Central Frequency Control System for near-perfect stability, and a large LCD display section coupled with an ergonomically-optimized human interface, the TS-570D/S(G) provides a clean and powerful operating experience. All of this wrapped up in a compact and efficient package makes the TS-570D/S(G) the perfect choice for home or mobiling in your car, RV or boat.

## **AF-stage Digital Signal Processing**

## Interference Reduction

CW/FSK). The new

Dual Selectable Beat

AF-stage digital signal processing provide extensive control over received signals by identifying and filtering interference using digital algorithms. This results in interference reduction capabilities simply not attainable with analog designs. In addition, the new NR1 system is operator-adjustable in 9-step increments, or it can be assigned to track input signal strength automatically. Both the NR1 and NR2 settings now track when changing mode groups (eg. SSB/AM/FM to

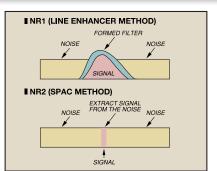
Cancel (BC) function also works against inter-■ NR1 (LINE ENHANCER METHOD) mittent beat interference (except in CW mode). In SSB/AM/FM modes you can select a Hi/Low cut DSP slope tune using up to 441

possible combinations. In CW and FSK, the DSP acts as a VBT (Variable Band Tuning) that alters passband width, for rejection of nearby signals. The super-narrow CW filter (50 Hz) enables effective filtering even during very crowded conditions, with its center frequency tied to the pitch frequency so they track together. The G model also incorporates 3 new CW DSP filters: 80 Hz, 150 Hz, 500 Hz, for a total of 11 user-selectable filters. You can now also use the "One-touch" DSP filter wide mode to instantly check band conditions when oper-

ating in narrow mode. When used in conjunction with the equalizer, the CW filter reduces ringing to

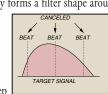
almost undetectable levels. There are also 3 optional fil-

ters that can be easily installed (one at a time) to acquire various IF filter bandwidth selections (see optional accessories). The DSP also provides 2 types of noise reduction — the Line Enhancer Method (NR1) for SSB/AM and the



SPAC (Speech Processing by Auto Correlation) Method (NR2) for CW. The Line Enhancer Method automatically forms a filter shape around

the target signal for a custom, dynamic noise reduction capability. In conditions where weak CW signals are buried deep



in the noise, the SPAC Method has the ability to pull them out with either the 20 milli-second or 7.5 milli-second correlation time settings. In addition, the DSP Beat Cancel function suppresses multiple beats on SSB, FM and AM immediately upon detection, great for 40-meter broadcast station carriers.

## On 6m too!

100 watts

# Operator-Oriented Engineering Provides You with the Highest Levels of Performance.

## TX Audio Shaping

You have 3 ways of tailoring your transmit audio with DSP: Voice Equalizer, Transmit Equalizer and Speech Processor functions, plus you can use the new 9-step TX sound quality monitor volume for precision control. On SSB and AM you can choose between 2 types of Voice Equalizer transmit frequency response settings according to your microphone and operating requirements. The Transmit Equalizer offers 4 frequency response settings on SSB, FM and AM: high boost for improved clarity, bass boost for stronger sound, formant pass to minimize extraneous sounds, and conventional mode for an 'analog' sound. The Speech Processor works across three bands (SSB, FM and AM) for high compression and minimal distortion. By combining the Speech Processor gain settings with the Transmit Equalizer, you are able to shape your voice for virtually any application, plus it is now available for RX as well, complete with its own independent settings.

## CW Auto Tune — a World first

Now you no longer have to adjust the VFO while operating on CW — the CW Auto Tune function does it for you automatically by adjusting the VFO to your preset pitch at the touch of a button. In the



auto tune mode links only with the RIT frequency without changing the

incoming traffic can be tracked even if it is slightly off frequency.

## **Operator-Engineered Features**

The TS-570D/S(G) represents the latest advancements in the human-machine interface as applied to radio transceiver design. Kenwood engineers have achieved a fine balance between size, features, display, controls and performance to deliver a transceiver that will give you outstanding results regardless of your operating style or location.

There are 46 types of menu features to assist

both the novice and expert operator. The On-

line Guide feature provides information on a

scrolling sub-display so you won't need to refer

to the manual, the click encoder and entry keys

## **New Menu and User Features**

provide a positive tactile feedback, frequencies

can be directly entered on the 10-key pad, and radio controls can be customized by assigning specific menus, features or panel switches to the Programmable Function (PF) key. And of course, Kenwood's Fine mode allows 1 Hz steps on the VFO dial for precise manual tuning.

Extensive Memory Functions You have a bank of 100 memories

available, with 90 assignable for standard memories and 10 for programmable

scan and long-

functions. The scroll function lets you browse

memory contents, memory channel copy sends

the contents of one channel to another, lock-out

memory changes the scan map to exclude certain

channels, and memory shift alters the frequency

'quick' memories to capture a current operation

on-the-fly, available in SSB, CW, FM, AM and

stored in a channel. In addition, there are 5

FSK modes — ideal for contest operation.

PROGRA

The TS-570D/S(G) has a wealth of scanning capabilities including variable speed with timebased or carrier-based resume modes, channel scan, group channel scan, all except locked out channels, or it can be programmed to scan a frequency range between two channels. The scanhold function stops the scanning for 5 seconds.

## Large LCD

The amber-colored backlight LCD frequency display is large, with a 4-stage dimmer, and is laid out in a clear and informative manner. The 7-digit alphanumeric sub-display provides menu



mode guidance, split frequency display and digital filter selection options. The accompanying analog meter provides S-readings, PWR, COMP, SWR and ALC information.

The 10-5/8 X 3-3/4 inch panel size make the TS-570D/S(G) suitable for any mobile operation, yet its large display and sophisticated user features make it a perfect candidate to build a first-class base station with. This versatility means that you only need one radio for all your home and field

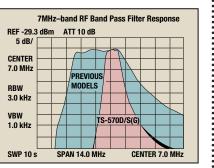
## **High Performance**

The heavy-duty transmitter makes the TS-570D/S(G) ideal for contesting, mobiling and FSK applications, delivering between 5 and 100 watts in 5 watt increments. The large heatsink and high-capacity cooling fan system designed specifically for this model enables continuous operation under a wide range of nvironmental conditions.

High frequency stability is achieved with a one-point frequency control system that uses a single crystal to control all internal oscillating frequencies (except in FM mode). Stability can even be raised to a pro-grade +/- 0.5 PPM (within 7 Hz on the 14 MHz band) with the optional SO-2 TCXO.

## **Hot Receiver Section**

The wide-band receiver covers from 500 kHz through 30 MHz continuously with high selec tivity and sensitivity. The two built-in pre-amps



(one each for high band and low band) allow you to select better sensitivity or higher IMD performance, and the dedicated 7 MHz and 14 MHz bandpass filters deliver improved SW intermodulation rejection.

During split-frequency operations you can receive your transmit frequency with a touch of the TF-Set button. The transmit frequency can be changed, even if the receive frequency is locked, as long as the button is held.

Other receiver section features include IF Shift, Noise Blanker to eliminate pulse type noise, AGC, All-Mode Squelch and RF Gain.

### **CW Features**

In addition to the CW Auto Tune function, the TS-570D/S(G) has a host of CW features often found only on larger-class models. The full/semi break-in switching and delay time settings are fully adjustable. In semi break-in the delay time between key release and active receive mode can be set for between 50 milli-seconds and 1000 milli-seconds. When using VOX operation the delay time can be set for between 150 milliseconds and 3000 milli-seconds. Other features include CW side tone monitor and volume setting, CW reverse mode and a 3 channel CW message memory.

## Built-in Kever

The Feature Packed TS-570D(G)/TS-570S(G) is

The full-featured electronic keyer provides solid and reliable keying at any speed with dual key inputs on the back — one for a paddle and one or a key. You can choose between the new Manual Weight feature where the relative length of dots and dashes can be altered in 16 steps between 1:2.5 and 1:4.0, or two types of Auto-Weight — one that adjusts to the keying speed automatically and one that works on a fixed weight percentage. The Weight Reverse function lessens the weight as the keying speed increases, allowing for easier switching between keying hands. And during CW message playback, the paddle input can be prioritized with the Insert

the Perfect Choice for Any and All Requirements.

## Packet & FSK

Keying Settings function.

The packet filter bandwidth and AF input/output levels are fully selectable. You can adjust the ACC2 (PKD) input/output and ANO output

FSK features include selectable shift frequencies between 170, 200, 425 and 850 Hz. The KEY polarity and Hi/Low tones are switchable to match your RTTY device (TU, MCP). The FSK reverse function lets you match transmission methods to the other party if necessary, for example changing the BFO frequency from LSB (normal) to USB (reverse).

### FM Features (Built-in)

The TS-570D/S(G) has built-in CTCSS functionality with 38 sub-tones settings plus a 1750 Hz tone and switchable Narrow/Wide deviation modes. The sub-tone can be set for burst or continuous, depending on the input requirements of the target repeater system, and can be assigned to any of the first 90 memory channels. FM is not necessarily included in all

### Other Features

### Automatic Antenna Tuner

The built-in Automatic Antenna Tuner is preset for immediate matching at 18 points between the 1.8 and 28 MHz Amateur bands. And dual antenna connectors on the TS-570D(G) are an added convenience. (The TS-570S(G) has one connector each for HF and 6m.)

The VS-3 option provides a synthesized voice out put to aid visually-impaired operators or as an added measure of convenience and safety for mobile operators.

## **PC Control Option**

You can integrate your TS-570 Series with a PC via a 9-pin D-SUB and RS-232C interface. The RCP-2 Radio Control Program also allows the HF operator to set-up and program multiple radios, and save the configuration data to disk.

The DRU-3A Digital Recording Unit is an available option that enhances contesting or general

## Data Transfer

Memory settings can be transferred between radios using the copy mode.

## **VOX Circuit**

In SSB, FM and AM modes the transmitter can be activated by voice, with a fully selectable delay time

### **Linear Amplifier Control**

An external Linear Amplifier can be controlled via the menu and the remote jack control relay.

Advanced Technology Upgrade is available in new production models and for pre-existing TS-570D/S; contact your dealer for details.



Download free RCP-2 control software from the Internet INTERNET http://www.kenwood.net