

October 2, 2014

## New TS-590SG HF/50MHz Transceiver Carrying on the Tradition of KENWOOD Radio to be launched next month

JVCKENWOOD Corporation has announced the launch of the new TS-590SG of HF/50MHz transceiver<sup>\*1</sup>, the latest KENWOOD spread-class model, in Japan and the rest of the world in November 2014.

<sup>\*1</sup>: An Amateur Radio license is required to operate.

Product name	Model	Launch
HF/50MHz Transceiver (100W)	TS-590SG	Nov. 2014



「TS-590SG」

### Product background and outline

TS-590S has been put on the HF amateur radio market in October 2010, and has been enjoying a good reputation by its high reception, high performance and reasonable pricing.

HF/50MHz transceiver "TS-590SG" to be launched in the market as a successor of TS-590S, has brushed up its basic performance and functions to meet customers' demands.

By adopting the technology developed for our flagship model TS-990S, the transmission and reception performance has been greatly improved. TS-590SG evolves for more comfortable operation from the beginner to DX'er.

## **TS-590SG Incremental changes help performance and function to evolve**

### **1. Equipped with 500 Hz/ 2.7 kHz Roofing Filter as standard**

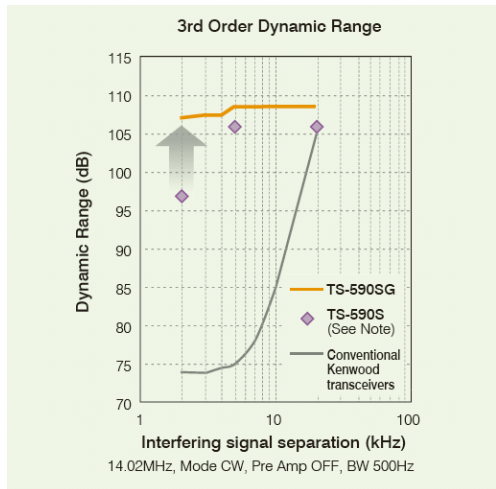
1st IF frequency (11.374 MHz) down conversion<sup>\*2</sup> is employed when receiving on 15, 20, 40, 80 or 160 meter bands. Included as standard directly after the 1st Mixer and Post Amp that compensates for conversion loss is a BW 500 Hz and 2.7 kHz 6-pole MCF, which determines adjacent receptivity realizing superb dynamic range performance that was not possible using up conversion. Even when an interfering signal approaches the reception frequency, a virtually flat dynamic range is maintained. You can capture a clear signal even in reception conditions where strong adjacent interfering signals become problematic.

<sup>\*2</sup>: Down conversion is selected automatically when receiving in CW/ FSK/ SSB modes if the final passband is 2.7 kHz or less.

This graph shows what happens when the frequencies of two interference signals for measuring the dynamic range are converted from +2kHz to +20kHz from the reception frequency. For example, at the point where separation is 10kHz, the interference signals are 14.03MHz and 14.04MHz. It can be seen that the TS-590SG achieves virtually flat characteristics even in the 3rd Order Dynamic Range measurement method implemented by ARRL<sup>\*3</sup>.

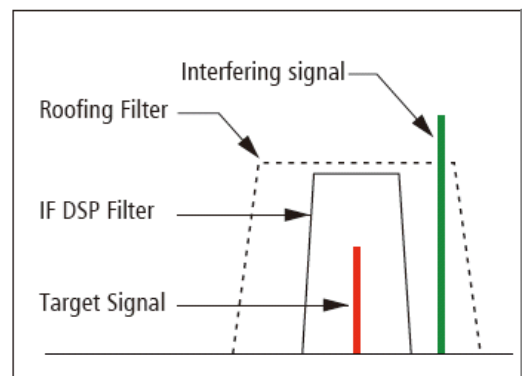
Note: TS-590S measurement values from QST® May 2011 PRODUCT REVIEW Kenwood TS-590S HF and 6 Meter Transceiver published by ARRL (reprinted with permission of ARRL)

<sup>\*3</sup>: The American Radio Relay League (ARRL) is the national association for amateur radio.



### **2. Advanced AGC control through digital signal processing from the IF stage onward**

It would be no exaggeration to say that Kenwood's receive audio, which enjoys a reputation for being non-tiring even in long contests, is determined by IF AGC control based on unique DSP algorithms. This series features all of the IF DSP AGC technology developed with the TS-990S. A remodeling of the AGC circuitry has realized superb AGC performance covering from small to large inputs. Even if interference signals slip between the Roofing Filter and the IF DSP filter that determines the final selection, level optimized AGC control enables operation without the need for awareness of Roofing Filter bandwidth.



### **3. Morse code decoder function**

Received morse code displayable<sup>\*4</sup> by scrolling on 13-segment display unit. Moreover, characters are shown<sup>\*4</sup> in a dedicated window on the ARCP-590G (freeware).

<sup>\*4</sup>: Proper decoding may not be available due to reception conditions, etc.

### **4. Programmable functions**

Frequently used and special functions can be assigned to the programmable function (PF) keys. With the TS-590SG, in addition to the PF keys, functions can also be assigned to the MULTI/CH knob's Push SW. Quick settings are made possible by assigning level setting functions such as keying speed. The RIT/XIT/CL keys can also be used as programmable function keys.

### **5. New Split function enabling quick setting**

In addition to conventional split frequency setting methods, the TS-990's proven split setting functionality has been included. A long press of the SPLIT key, when making a 2 kHz upsetting, will enable quick setting by pressing "2" on the keypad. Furthermore, in simplex operation with just XIT on, the XIT frequency can be changed with TF-SET. The keypad keys are band-direct keys. Each band has 3 memories, enabling quick call-up of usually-used frequencies.

## 6. Other features

- Antenna output function (shared with DRV connector)
- LED backlight with selectable color tone
- FIL A/B configurable independently with VFO A/B (convenient during Split operation)
- Front or rear PTT selectable for Data PTT
- Switching from HI CUT/LO CUT to WIDTH/SHIFT possible for reception bandwidth changing in SSB mode
- Interference/noise removal features
- Heavy-duty design is capable of withstanding grueling conditions typical of contests or long hours of hard operation with two of 60mm fan cooling system
- Built-in preset-type high speed operation automatic antenna tuner

## Specification TS-590SG

Specification		
Frequency range (Transmitter)	160m band	1.8 ~ 2.0 MHz(K), 1.81 ~ 2.0 MHz(E)
	80m band	3.5 ~ 4.0 MHz(K), 3.5 ~ 3.8 MHz(E)
	60m band	5.1675 MHz, 5.25 ~ 5.45 MHz(K), 5.25 ~ 5.45 MHz(E)
	40m band	7.0 ~ 7.3 MHz(K), 7.0 ~ 7.2 MHz(E)
	30m band	10.1 ~ 10.15 MHz
	20m band	14.0 ~ 14.35 MHz
	17m band	18.068 ~ 18.168 MHz
	15m band	21.0 ~ 21.45 MHz
	12m band	24.89 ~ 24.99 MHz
	10m band	28.0 ~ 29.7 MHz
	6m band	50.0 ~ 54.0 MHz
Frequency range (Receiver)		0.13 ~ 30 MHz, 50 ~ 54 MHz VFO: Continuous 30 kHz ~ 60 MHz
Mode		A1A(CW), A3E(AM), J3E(SSB), F3E(FM), F1B(FSK)
Frequency stability		±5 ppm, -10 °C ~ +50 °C, with SO-3: ±0.5 ppm, -10 °C ~ +50 °C
Antenna impedance		50 Ω
Antenna tuner load range		16.7 Ω ~ 150 Ω
Supply voltage		DC 13.8 V ±15 %
Ground		Negative ground
Current Drain	TX	20.5 A or less
	RX (No signal)	1.5 A or less
Operating Temperature		-10 °C ~ +50 °C
Dimensions	Without projections	W270 x H96 x D291 mm
	With projections	W280 x H107 x D335 mm
Weight		Approx. 7.4 kg
TX Output Power (AM)		Max 100 W / Min 5 W, (Max 25 W / Min 5 W)
Modulation		SSB: Balanced, AM: Low Power, FM: Reactance

### Firmware update

\* We are to offer some of the new TS-590SG's functions to owners of our current TS-590S models via a free firmware download as "TS-590S Ver.2.0 update".(Please see here for details. [http://www.kenwood.com/i/products/info/amateur/ts\\_590/ts590v2\\_e.html](http://www.kenwood.com/i/products/info/amateur/ts_590/ts590v2_e.html) )

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### The inquiry about this product for each country

Please contact to our local sales company after choosing your country from "Contact Kenwood" on following site.

<http://www.kenwood.com/>

*The above announcement is that initially released to the press, and it may not reflect the latest information.*

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Kenwood Corporation (KENWOOD), and J&K Car Electronics Corporation (J&K Car Electronics)  
merged to form a new company on October 1st, 2011.