

IC-7300 – The Innovative HF Transceiver with High Performance Real-Time Spectrum Scope

■ Class Leading Real-Time Spectrum Scope

The IC-7300's real-time spectrum scope is class-leading in resolution, sweep speed and dynamic range. While listening to received audio, you can check the real-time spectrum scope and quickly move to an intended signal. When you first touch the scope screen around the intended signal, the touched part is magnified. A second touch of the scope screen changes the operating frequency and allows you to accurately tune.

■ Real-Time Spectrum Scope Specifications

Scope system	FFT (Fast Fourier Transform)
Sweep speed	Max. 30 frames/second (approx.) Selectable from slow, mid or fast
Span width	5kHz–100kHz
Resolution*	11 pixel minimum (approximately)
Waveform display area (vertical axis)	60dB
Reference level adjustment	-20dB to +20dB
Peak level hold function (Max. hold)	ON/OFF/Last 10 seconds
Other functions	• Averaging indication • Touch screen operation • VSM (Video Band Width) adjustment

* Number of pixels shown at the 90dB level, when receiving a signal.

■ High-Resolution Waterfall Function

The combination of the waterfall function and the real-time spectrum scope assists in maximum receive performance of the IC-7300 and increases QSO opportunities without missing weak signals. The waterfall function shows a change of signal strength over a period of time and allows you to find weak signals that may not be apparent on the spectrum scope.



Spectrum scope + Waterfall

■ Audio Scope Function

The audio scope function can be used to observe various AF characteristics such as microphone compressor level, filter width, notch filter width and keying waveform in the CW mode. Either the transmit or receive audio can be displayed on the FFT scope with the waterfall function and the oscilloscope.



FFT scope/Oscilloscope

RF Direct Sampling System

The IC-7300 employs an RF direct sampling system. RF signals are directly converted to digital data and processed in the FPGA (Field-Programmable Gate Array), making it possible to simplify the circuit construction. This system is a leading technology making an epoch in amateur radio.



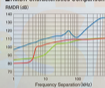
New "IP+" Function

The new "IP+" function improves 3rd order intercept point (IP3) performance. When a weak signal is received adjacent to strong interference, the AD converter is optimized against signal distortion.

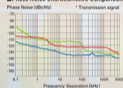
Class Leading RMDR (Reciprocal Mixing Dynamic Range) and Phase Noise Characteristics

The IC-7300's RMDR is improved to about 97dB* (typical value) and Phase Noise characteristics are improved about 15dB (at 1 kHz frequency separation) compared to the IC-7200. The superior Phase Noise characteristics reduce noise components in both receive and transmit signals.

■ RMDR Characteristics Comparison



■ Phase Noise Characteristics Comparison*



* At 1 kHz frequency separation (received frequency: 14.258 MHz, MODE: CW, IF BW: 500Hz)

— IC-7300 — IC-7200 — IC-7100

15 Discrete Band-Pass Filters

The IC-7300 has 15 discrete RF band-pass filters. The RF signal is only passed through one of the band-pass filters, while any out of range signals are rejected. High Q factor coils are used to minimize the loss in the RF band-pass filters.



Built-In Automatic Antenna Tuner

The antenna tuner memorizes its settings based on your transmit frequency, so that it can rapidly tune when you change operating bands. The Enhanced Tuning function* allows a wide range of temporary antennas to be tuned.



* Do not use the Enhanced Tuning function except in case of an emergency. Transmission power may be reduced.



Large Touch Screen Colour TFT LCD

The large 4.3 inch colour TFT touch LCD offers intuitive operation. Using the software keypad of the touch screen, you can easily set various functions and edit memory contents.



Touch screen interface



Menu screen

Memory name entry screen

Multi-Dial Knob for Smooth Operation

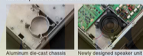
The combination of the multi-dial knob and the touch screen offers quick and smooth operation. When you push the multi-dial knob, menu items are shown on the right side of the display. You can select an item with a touch of the screen and adjust levels by turning the multi-dial knob.



Menu screen

Superior Sound Quality

To offer superior sound quality, a new speaker unit has been incorporated and is allocated dedicated space in the aluminum die-cast chassis.



Aluminum die-cast chassis

Newly designed speaker unit

SD Memory Card Slot for Saving Data

The IC-7300 can store various contents into SD card such as received and transmitted audio, voice memories, RTTY/CW memories, RTTY decode logs and captured screen images. Personal and firmware update data can also be stored to the SD card for easy setting.

Other features

- New HM-219 hand microphone supplied
- Effective large cooling fan system
- A Multi-function meter
- 101 memory channels (99 regular, 2 scan edges)
- Optional RS-BAT IP remote control software (the spectrum scope with the waterfall can be observed)
- CW functions: Full break-in, CW reverse, CW auto tuning

HF/50/70MHz TRANSCEIVER

IC-7300

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Actual size