The Innovative HF Transceiver

IC-7300 is Born

High Quality Real-Time Spectrum Scope
RF Direct Sampling System
Class Leading Phase Noise Characteristics
Large Touch Screen Color TFT LCD
Built-in Automatic Antenna Tuner
Easy-to-Hear Sound Quality
High Quality Real-time Spectrum Scope

Now, a serious spectrum scope is NOT a “privilege” of high-grade models. The high-resolution real-time spectrum scope comes loaded with the IC-7300. Its real-time spectrum scope with waterfall function provides top-level performance in resolution, sweep speed and dynamic range.

- **Real-time Spectrum Scope Capabilities**

<table>
<thead>
<tr>
<th>Scope system</th>
<th>FFT</th>
<th>Resolution*</th>
<th>Frequency Offset</th>
<th>RF Attenu 5 dB</th>
</tr>
</thead>
<tbody>
<tr>
<td>-150 dBc/Hz</td>
<td>+20dB</td>
<td>+30000Hz</td>
<td>–20dB to +20dB</td>
<td>–20dB to +20dB</td>
</tr>
</tbody>
</table>

  * Number of dots shown at the 60 dB level, when receiving a single carrier.

RF Direct Sampling System — A First in Amateur Radio*

Instead of the conventional superheterodyne system, the IC-7300 utilizes the RF direct sampling system — a first in an amateur radio transceiver. This technology is seen in Software Defined Radios and other radio equipment. RF signals are mostly processed through the FPGA (Field-Programmable Gate Array), making it possible to eliminate physical mixer and filter devices and offer a high performance real-time spectrum scope in a compact body.

- **RF Direct Sampling System Capabilities**

  - Top-level performance in resolution, sweep speed and dynamic range.
  - Spectrum scope FFT Reference level adjustment Yes (–20dB to +20dB)
  - Span width 5kHz–1000kHz
  - Maximum hold indication Yes
  - Touch screen operation Yes (Changing frequency)
  - VBV adjustment Yes

Class Leading Phase Noise Characteristics

Overcoming cost and performance limitations of the superheterodyne system, the RF direct sampling system pursues ideal high performance phase noise. As the result, compared to the IC-7200, the IC-7300’s phase noise characteristics are improved about 15dB (at 1kHz frequency offset). This superior phase noise reduces noise components in both receive and transmit signals.

- **Phase Noise Characteristics Comparison**

  - IC-7300
  - IC-7200

Large Touch Screen Color TFT LCD

The IC-7300 has a large color TFT LCD and it can be used as a touch screen. This user-friendly interface provides intuitive operation. Using the software keypad of the touch screen, you can easily set various functions and edit memory contents.

Multi-dial Knob for 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. This combination of the multi-dial knob and touch screen offers quick and smooth operation.

Built-in Automatic Antenna Tuner

The high-speed automatic antenna tuner is built into a compact chassis (240 (W) × 238 (D) × 95 (H) mm; 9.45 × 9.37 × 3.74 in). You can easily carry the radio and enjoy field operation.

Easy-to-Hear Sound Quality

To offer optimum sound quality, a new speaker unit is employed and is allocated sufficient space in the aluminum die-cast chassis.

Other Features

- Voice memory function
- Memory keyer functions for CW and RTTY
- RTTY decode log function
- Screen capture
- SD card slot
- USB for CI-V and audio input/output
- Large cooling fan system
- Multi-function meter
- UXO memory channels (99 regular and 2 scan edge channels)
- Multiple CW functions
- Digital noise reduction
- 100W output power on HF/50MHz bands and 50W on 70MHz band* (*Europe versions only)
- SSB, CW, RTTY, AM and FM modes

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