IC-7300

SPECIFICATIONS

GENERAL					
Frequency coverage	(Unit: MHz)				
Receiver*1	0.030-74.800*2				
Transmitter*	1.800-1.999, 3.500-3.800, 7.000-7.200, 10.100-10.150, 14.000-14.350, 18.068-18.168, 21.000-21.450, 24.890-24.990 28.000-29.700, 50.000-52.000, 70.000-70.500				
*1 70 MHz band is for EUR vers *2 Guaranteed range: 0.500–29	ion. Each freque	ency range is di	ffer according t		
Mode	SSB, CW, RTTY, AM, FM				
Number of channels		101 (99 regular, 2 scan edges)			
Antenna connector	SO-239 (50Ω)				
Power supply requirement	13.8V DC ±15%				
Tv	21A (at 100W output power)				
Power consumption Rx	0.9A typical (Standby), 1.25A (Maximum audio)				
Operating temperature range	-10°C to +60°C; 14°F to 140°F				
Frequency stability	Less than ±0.5ppm (-10°C to +60°C; 14°F to 140°F)				
Frequency resolution	1Hz				
	240×94×238mm; 9.45×3.7×9.37in				
Dimensions (W×H×D)		(projections not included)			
Weight (approximately)	4.2kg; 9.26lb				
TRANSMITTER					
Output SSB, CW, FM, RTTY		2-100W (HF/50MHz), 2-50W (70MHz)			
power AM		1-25W (HF/50MHz), 1-12.5W (70MHz)			
SSB					
Modulation system AM	Digital Low power modulation				
FM		Digital Reactance modulation			
HF bands	Less than -50dB				
Spurious emissions 50MHz ban					
	Less than -60dB				
Carrier suppression	More than 50dB				
Unwanted sideband	More than 50dB				
Microphone impedance	600Ω				
RECEIVER					
Receiver system		Direct Sampling Superheterodyne			
Intermediate frequency	36kHz				
Sensitivity*3	0.5- 1.8MHz		50MHz band	70MHz band	
SSB/CW (at 10dB S/N		0.16µV	0.13µV	0.16µV	
AM (at 10dB S/N)	12.6µV	2.0μV 0.5μV	1.0µV	1.0µV	
FM (at 12dB SINAD)	- D	(28.0-29.7MHz)	0.25µV	0.25μV	
*3 HF: Preamp 1 ON, 50/70MH:		m F Coll FM. La			
Squelch sensitivity*3 (Threshold *3 HF: Preamp 1 ON, 50/70MH:		11 3.0μν, FIVI: L6	200 HIAH U.3μV		
				Loos them	
Selectivity (sharp filter shape) SSB (BW: 2.4KHz)		More than		Less than	
CW (BW: 500Hz)		2.4kHz/-6dB		3.4kHz/–40dB 700Hz/–40dB	
RTTY (BW: 500Hz)		500Hz/-6dB 500Hz/-6dB		700HZ/-40dB 800Hz/-40dB	
AM (BW: 6kHz)	6.0kHz/-6dB		10kHz/-40dB		
FM (BW: 15kHz)	12.0kHz/-6dB		22kHz/–40dB		
Spurious and image rejection rati	HF: More than 70dB				
Audio output power		W (at 10% disto			
TUNER	INIOIE IIIAII 2.5	vv (at 10% disto	nuon wiin an 8	sz iodu, ikitz)	
	1.0. 70MU- 5-	ndo			
Frequency range Matching impedance range		1.9–70MHz bands 16.7Ω–150Ω unbalanced (VSWR better than 1: 3)			
Tuning accuracy	VSWR 1: 1.5 or less				
running accuracy	V U V V I I I I I I U I I I I I I I I I				

All stated specifications are subject to change without notice or obligation

Rear Panel View



2-3 seconds (Maximum 15 seconds)

OPTIONS Some options may not be available in some countries. Please ask you



HM-219

HF+50MHz AUTOMATIC Covers 3.5–54MHz with a 7m



AH-710 FOLDED

AH-5NV Fiberglass mobile mounting antenna Covers 1.9-30MHz bands 2.2-30MHz (amateur band) with AH-740.



ANTENNA

Covers 2.5-30MHz OPC-2321 is required

EXTERNAL SPEAKERS



headphone jack

SP-23 SP-33 Max. input power: 5W

SP-34

headphone jack

SP-35 (2m: 6.6ft cable) SP-35L (6m; 19.7ft cable) Compact mobile

DESKTOP MICROPHONES Compact, lightweight electret desktop





ncludes [UP/DOWN] switches







Count on us!

For mounting the radio

• MB-123 CARRYING HANDLE

control from a PC equipped with an RS-232C port.

- OPC-420 CONTROL CABLE for connection with AH-4 (10m)
- OPC-2321 CONTROL CABLE for connection with AH-740 (6m)
- OPC-599 CABLE ADAPTER Converts 13-pin ACC connector to 7-pin + 8-pin ACC connectors.

Supplied accessories: (May differ depending on version)

• Hand microphone, HM-219 • DC power cable • Fuses • Plugs

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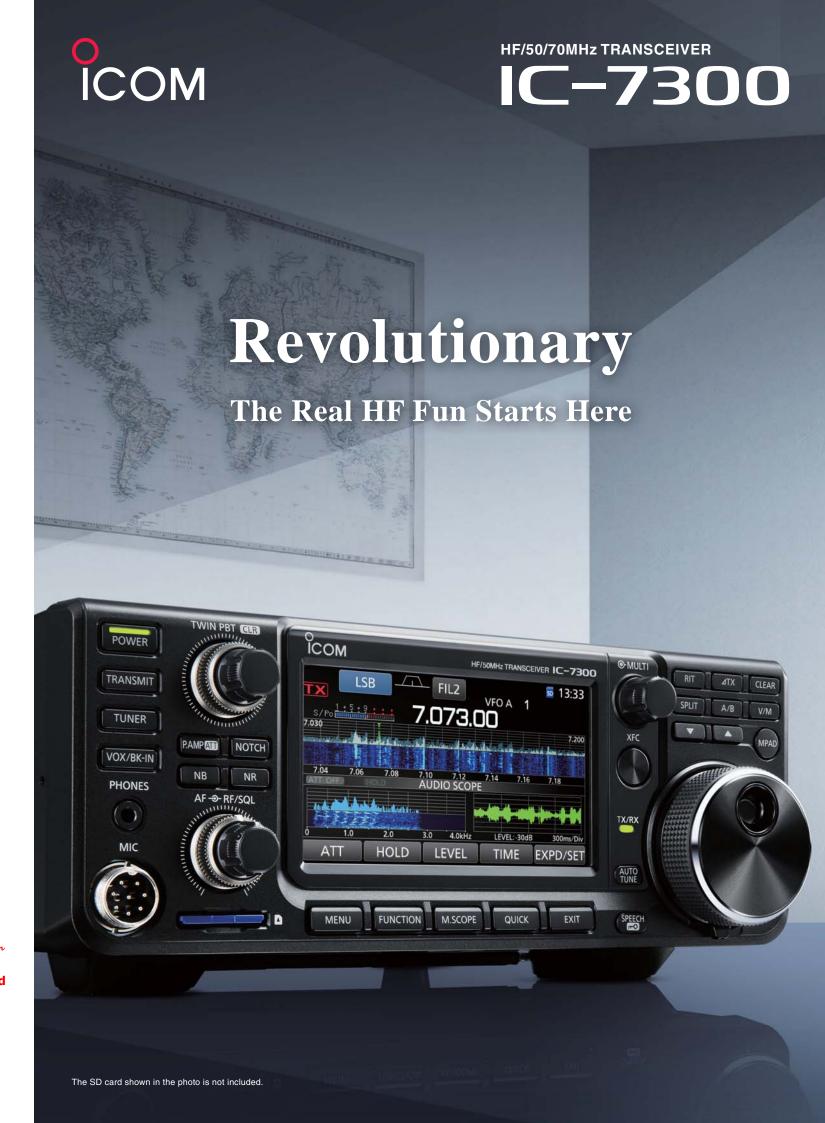


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IC-7300 – The Innovative HF Transceiver with High Performance Real-Time Spectrum Scope

■ Class Leading Real-Time Spectrum Scope

The IC-7300's real-time spectrum scope is classleading in resolution, sweep speed and dynamic range. While listening to received audio, you can check the real-time spectrum scope and guickly 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

■ 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-1000kHz		
Resolution*	1 pixel minimum (approximately)		
Waveform display area (vertical axis)	80dB		
Reference level adjustment	-20dB to +20dB		
Peak level hold function (Max. hold)	ON/OFF/last 10 seconds		
Other functions	Averaging indication Touch screen operation VBW (Video Band Width) adjustment		

^{*} Number of pixels shown at the 60dB 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.



■ 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 func- FFT scope/Oscilloscope tion and the 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.

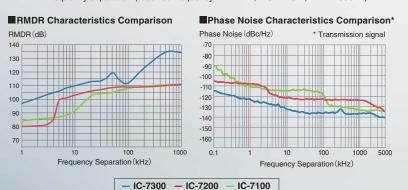
New "IP+" Function

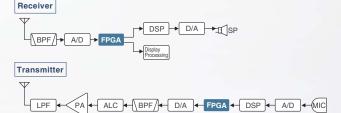
The new "IP+" function improves 3rd order intercept point (IP3) performance. When a weak signal is received adjacent to strong interference, the AD converter is optimized against signal distortion.

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.

* At 1 kHz frequency separation (received frequency: 14.2MHz, MODE: CW, IF BW: 500Hz)





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 Enforced Tuning function* allows a wide range of temporary antennas to be tuned.



* Do not use the Enforced 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.







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.



Superior Sound Quality

To offer superior sound quality, a new speaker unit has been incorporated and is allocated ded-





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-BA1 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

Actual size

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 updating data can also be stored to the SD card for easy setting.