IC-7300

SPECIFICATIONS

Frequency covera		(Unit: MHz)			
Receiver*1 Transmitter*1		0.030-74.800*2			
		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 on. Each frequency range is differ according to versions.			
					o versions.
		999, 50.000–54.000, 70.000–70.500MHz.			
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%			
Power consumption Tx		21A (at 100W output power)			
' HX		0.9A typical (Standby), 1.25A (Maximum audio)			
Operating temperature range		-10°C to +60°C; 14°F to 140°F			
Frequency stabilit		Less than ±0.5ppm (–10°C to +60°C; 14°F to 140°F)			
Frequency resolution		1Hz			
Dimensions (WxHxD)		240×94×238mm; 9.45×3.7×9.37in			
		(projections not included) 4.2kg; 9.26lb			
Weight (approximate)		4.2kg; 9.26lb			
TRANSMITTER		0. 40004 (115/5	01411-) 0 50144	(70MLL-)	
Output SSB, CV	I, FM, RITY		0MHz), 2-50W		
power AM	000		MHz), 1–12.5W	(70MHZ)	
Modulation system	SSB	Digital P.S.N. modulation			
		Digital Low power modulation			
	FM	Digital Reactance modulation			
Spurious emissions 50MHz band 70MHz band		Less than -50dB			
Carrier suppression		More than 50dB			
Unwanted sideband		More than 50dB			
Microphone imped	dance	600Ω			
RECEIVER		-		<u> </u>	
Receiver system		Direct Sampling Superheterodyne			
Intermediate frequ	ency	36kHz			
Sensitivity*3		0.5- 1.8MHz	1.8-29.995MHz	50MHz band	
SSB/CW (at 10dB S/N)			0.16µV	0.13µV	0.16µV
AM (at 10dB S/N)		12.6µV	2.0µV	1.0µV	1.0µV
FM (at 12dB SINAD)			0.5µV (28.0–29.7MHz)	0.25μV	0.25μV
*3 HF: Preamp 1 C					
Squelch sensitivity			n 5.6μV, FM: Le	ess than 0.3µV	
*3 HF: Preamp 1 C					
Selectivity (sharp filter shape)		More than		Less than	
SSB (BW: 2.4KHz)		2.4kHz/–6dB		3.4kHz/-40dB	
CW (BW: 500Hz)		500Hz/-6dB		700Hz/-40dB	
RTTY (BW: 500Hz)		500Hz/-6dB		800Hz/-40dB	
AM (BW: 6kHz)		6.0kHz/-6dB		10kHz/-40dB	
FM (BW: 15kHz)		12.0kHz/-6dB 22kHz/-40dB			
Spurious and image rejection ratio		50/70MHZ: More than 70db (Except for ADC Aliasing)			
Audio output powe	er	More than 2.5	W (at 10% disto	rtion with an 8	Ω load, 1kHz)
TUNER					
Frequency range		1.9-70MHz bands			
Matching impedance range		16.7Ω–150Ω unbalanced (VSWR better than 1: 3)			
Tuning accuracy		VSWR 1: 1.5 o	rless		
Tuning time		0 0 0000000 /	Maximum 15 se	oconde)	

All stated specifications are subject to change without notice or obligation

Rear Panel View



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



HM-219



AH-710 FOLDED

Covers 3.5–54MHz with a 7m



AH-5NV Fiberglass mobile mounting antenna ment for use with AH-740. Covers 2.2-30MHz (amateur band) with AH-740.

Covers 2.5-30MHz

ANTENNA

OPC-2321 is required

EXTERNAL SPEAKERS



SP-23 headphone jack



Max. input power: 5W

Covers 1.9-30MHz bands

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









www.icom.co.jp/world



CARRYING HANDLE

- 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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Icom America Inc. Icom (Europe) GmbH 12421 Willows Road NE.

Kirkland WA 98034 LLS A Phone: +1 (425) 454-8155
Fax: +1 (425) 454-1509
E-mail: sales@icomamerica.com
URL: http://www.icomamerica.co

Icom Canada

Glenwood Centre #150-6165 Highway 17A, Delta, B.C., V4K 5B8, Canada Phone: +1 (604) 952-4266 Fax: +1 (604) 952-0090 E-mail: info@icomcanada.com URL: http://www.icomcanada.com

Icom Brazil

Rua Itororó, 444 Padre Eustáquio Belo Horizonte MG. CEP: 30720-450, Brazil Phone: +55 (31) 3582 8847 Fax: +55 (31) 3582 8987 E-mail: sales@icombrazil.co

ICOM Inc. 1-1-32, Kami-minami, Hirano-Ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013

Aut der Krautweide 24 65812 Bad Soden am Taunus, Germany Phone: +49 (6196) 76685-0 Fax: +49 (6196) 76685-50 E-mail: info@icomeurope.com URL: http://www.icomeurope.com

Icom Spain S.L.

Ctra. Rubi, No. 88 "Edificio Can Castanyo Bajos A 08174, Sant Cugat del Valles, Phone: +34 (93) 590 26 70 Fax: +34 (93) 589 04 46 URL: http://www.icomspain.com

Icom (UK) Ltd.

Blacksole House, Altira Park, Herne Bay, Kent, CT6 6GZ, U.K. Phone: +44 (0) 1227 741741 Fax: +44 (0) 1227 741742 E-mail: info@icomuk.co.uk URL: http://www.icomuk.co.uk

Icom France s.a.s.

Zac de la Plaine. 1 Rue Brindejonc des Moulinais, BP 45804 Phone: +33 (5) 61 36 03 03 Fax: +33 (5) 61 36 03 00 E-mail: icom@icom-france.com URL: http://www.icom-france.com

Icom (Australia) Pty. Ltd.

Unit 1 / 103 Garden Road, Clayton, VIC 3168 Australia Phone: +61 (03) 9549 7500 Fax: +61 (03) 9549 7505 E-mail: sales@icom.net.au

Icom New Zealand

39C Rennie Drive, Airport Oaks, Auckland, New Zealand Phone: +64 (09) 274 4062 Fax: +64 (09) 274 4708 E-mail: inquiries@icom.co.nz URL: http://www.icom.co.nz

Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road, Taipei, Taiwan, R.O.C. Phone: +886 (02) 2559 1899
Fax: +886 (02) 2559 1874
E-mail: sales@asia-icom.com
URL: http://www.asia-icom.com

Shanghai Icom Ltd. No.101, Building 9, Caifuxingyuan Park, No.188 Maoting Road, Chedun Town, Songjiang Distric, Shanghai, 201611, China Phone: +86 (021) 6153 2768 Fax: +86 (021) 5765 9987 E-mail: bjicom@bjicom.com URL: http://www.bjicom.com

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Printed in Japan



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.

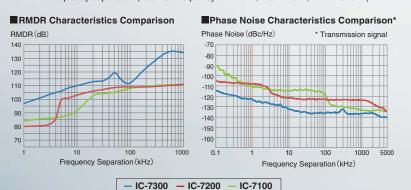
New "IP+" Function

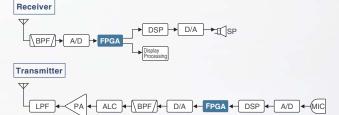
The new "IP+" function improves 3rd order intercept point (IP3) performance. When a weak signal is received adjacent to strong interference, the AD converter is optimized against signal distortion.

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-





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.

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