IC-7300

SPECIFICATIONS

GENERAL	_	(Limite Mille)			
Frequency coverage		(Unit: MHz)			
Receiver*1		0.030-74.800*2 1.800-1.999, 3.500-3.800, 7.000-7.200, 10.100-10.150,			
	Transmitter*1			21.000–21.450,	
	Hansiillei			, 70.000–21.430,	
1 70 MHz band is		on. Each freque	ency range is di	ffer according t	
Mode		999, 50.000-54.000, 70.000-70.500MHz. 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 TX 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			
FRANSMITTER					
Output SSB, CW, FM, RTTY		2-100W (HF/50MHz), 2-50W (70MHz)			
oower AM		1-25W (HF/50	MHz), 1-12.5V	V (70MHz)	
	SSB	Digital P.S.N. modulation			
Modulation system	AM	Digital Low power modulation			
	FM	Digital Reactance modulation			
	HF bands	Less than -50dB			
Spurious emissions	50MHz band	Less than -63dB			
70MHz band		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			
Sensitivit <u>y*3</u>		0.5- 1.8MHz	i		70MHz band
	(at 10dB S/N)	-	0.16µV	0.13µV	0.16µV
AM (at 10	dB 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 O					
Squelch sensitivity			n 5.6μV, FM: L	ess than 0.3µV	
*3 HF: Preamp 1 ON, 50/70MHz:					
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) Spurious and image rejection ratio		12.0kHz/–6dB			
		50/70MHz: More than 70dB (Except for ADC Aliasing) More than 2.5W (at 10% distortion with an 8Ω load, 1kHz)			
Audio output power		More than 2.5	w (at 10% disto	ortion with an 8	Ω load, 1kHz)
TUNER		4.0. 701411			
requency range		1.9–70MHz ba			1.0)
Matching impedance range				WR better than	11:3)
Tuning accuracy		VSWR 1: 1.5 o	ir iess		

All stated specifications are subject to change without notice or obligation

Rear Panel View



2-3 seconds (Maximum 15 seconds)

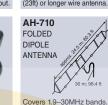
HM-219

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













ANTENNA

Covers 2.5-30MHz OPC-2321 is required

EXTERNAL SPEAKERS



headphone jack



headphone jack

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

DESKTOP MICROPHONES Dynamic desktop microphone Includes [UP/DOWN] switches Compact, lightweight electret desktop

SP-33

Max. input power: 5W











- 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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HF/50/70MHz TRANSCEIVER IC-7300

Revolutionary

The Real HF Fun Starts Here



The SD card shown in the photo is not included.

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-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 function 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.

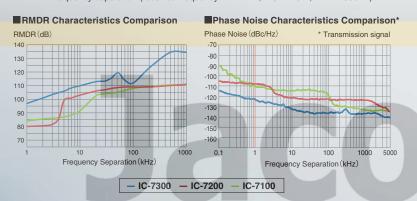
New "IP+" Function

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)



DSP D/A PI SP | BPF | A/D | FPGA | DSP | A/D | MI | Comparison | Com

FPGA: Field-Programmable Gate Arra

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.







Band stacking register 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.



nu screen

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

Superior Sound Quality





inum die-cast chassis Newly designed speaker

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

-7300

Actual size