

Bangladesh Telecommunication Regulatory Commission (BTRC)**Application Form for Amateur Radio Station License (Individual)**

1. Name of Applicant: _____
2. Present Postal Address : _____
3. Permanent Address : _____
4. Mobile : _____ Telephone : _____
Fax : **N/A** E-mail : _____
5. Nationality: _____ National ID: _____ Passport No: _____
6. Particulars of Existing Amateur Radio user license (If any): **Class – General/ Intermediate/ Beacon/ Repeater**
License No: _____ Call Sign: _____ Date of Issue : _____ Validity : _____
7. Exact Location for Station: _____
8. If Frequency Allocated, Please Mentioned: **AMATURE RADIO BAND only (as per BTRC)**
9. Particulars of Amateur Station Operator's Examination: Date: _____ Passing Certificate No: _____
10. Equipment information, Class of station (Please tick): **Fixed/Base**/Repeater/Land
Mobile/Walki-Talki/SatellitePhone/SNG/DSNG/TerrestrialTV/VSAT/**Amateur**/Paging/Trunking/SST/ISM/Data/
Broadband /Broadcast/Radar/Telemetry/Cordless/Other (indicate).....

11. Equipment Information:

Sl	Class of Station	Type/Model of Tx/Rx with Manufacturer Name	No of Set	Frequency Range		Power output, W, mW, dbm	Class of emission	Modulation
				From	To			
1			1					

12. Equipment Information:

Sl	Simplex/Duplex	XTL/Synthesizer	Source of Power, Bat/Gen	B/W or Chl Spacing	TX/RX Separation	Type of Antenna	Antenna Polarization V/H	Antenna gain (dbi)	Height of Antenna from Sea level	Minimum code speed for Amateur
01	Simplex	Synthesized	Bat/Mains	3khz	Programmable	Wire Dipole	H	(0 dbi)	140 ft	15 WPM

13. Equipment Information: (use this page as additional if required)

Sl	Exact location of the station with postal address	Class of Station	Latitude			Longitude			Azimuth for point to point link	Remarks
			D	M	S	D	M	S		
1	Same as Present	General								

PTO

14. Terms and Conditions for use of wireless equipment in the People's Republic of Bangladesh: -

- i. A log Book for each equipment must be maintained regularly
- ii. The said equipment shall physically be inspected time to time by BTRC.
- iii. On demand of BTRC the station may be closed down at any time.
- iv. The licenses of the wireless equipment's are not transferable.
- v. On expiry of the scheduled works the license must be returned to BTRC.
- vi. Export and Import of the wireless equipment is strictly prohibited without prior permission of the authority.
- vii. Government's levy isn't chargeable for unserviceable wireless set if sealed by BTRC.
- viii. Telecommunication facilities will be disconnected for non-payment of Govt. dues.
- ix. Charges on frequency, power output, station & License fees to be paid as per rate list in favor of BTRC.

15. Note: -

- a) Two passport size photographs signed and named on back to be submitted.
- b) One copy of Personal Details.
- c) Copy of Amateur Radio Examination Passing Certificate.
- d) One copy of License if applicant already has a license without equipment.
- e) Technical Catalogue to be submitted
- f) Period for which license is required (for foreigner) should be mentioned.
- g) Amateur Radio License (Local): Police verification report or Passport to be submitted. Passport Holder need not submit Police verification report.
- h) Amateur Radio License (Foreigner): Photocopy of existing Amateur License, Passport & Visa to be submitted.
- i) Name of wireless equipment if installed earlier; please state frequency, power output & number of sets.

16. Declaration: I undertake to observe the conditions of license & here by certify that the apparatus herein described and will be worked in accordance with provision of license, I further declare that all information's mentioned are true and correct. If any statement kept concealed, the Bangladesh Telecommunication Regulatory Commission (BRTC) reserves the right to seize the wireless.

Signature of the applicant with seal and date

For Official Use

Analyzed by
(seal)

Checked & Corrected by
(seal)

Countersigned by
(seal)



HF/50MHz 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	5 kHz–1000 kHz
Resolution*	1 pixel minimum (approximately)
Waveform display area (vertical axis)	80 dB
Reference level adjustment	–20 dB to +20 dB
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 80 dB 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



HF/50MHz TRANSCEIVER

IC-7300

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

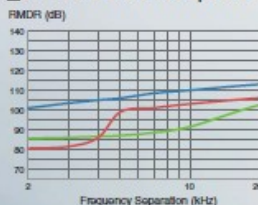
The new "IP+" function improves 3rd order intercept point (IP3) performance. When a weak signal is received adjacent to strong interference, the AD converter is optimized against signal distortion.

Class Leading RMDR and Phase Noise Characteristics

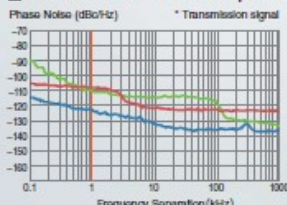
The IC-7300's RMDR is improved to about 100 dB* (typical value) and Phase Noise characteristics are improved about 20 dB (at 2 kHz frequency separation) compared to the IC-7200. The superior Phase Noise characteristics reduce noise components in both receive and transmit signals.

* At 2 kHz frequency separation (received frequency: 14.2 MHz, MODE: CW, IF BW: 500 Hz)

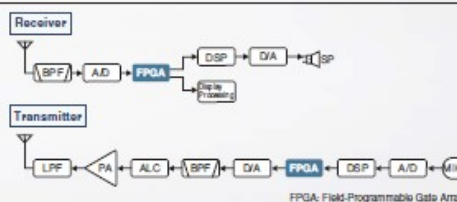
■ RMDR Characteristics Comparison



■ Phase Noise Characteristics Comparison*

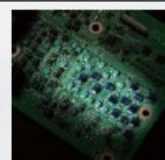


— IC-7300 — IC-7200 — IC-7100



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 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 Color TFT LCD

The large 4.3 inch color 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



Band stacking register 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.



Multi-dial Knob

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 content on an 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 on the SD card for easy setting.

Actual size

Other features

- New HM-219 hand microphone supplied
- A large and effective 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

RF Direct Sampling System

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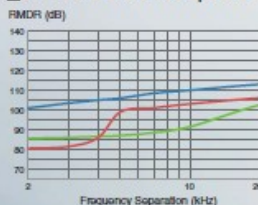
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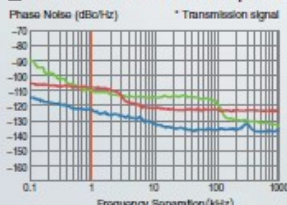
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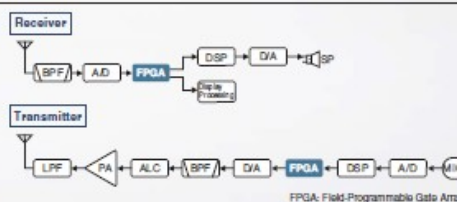
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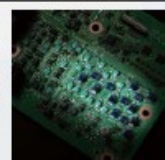


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HF/50MHz TRANSCEIVER

IC-7300

SPECIFICATIONS

GENERAL	
Frequency coverage	(Unit: MHz)
Receiver**	0.030–74.800**
Transmitter**	1.800–1.999, 3.500–3.999, 5.255–5.405***, 7.000–7.300, 10.100–10.150, 14.000–14.350, 18.068–18.168, 21.000–21.450, 24.890–24.990, 28.000–29.700, 50.000–54.000
** USA version. Varies according to version. *** Some frequency bands are not guaranteed.	
** Guaranteed range: 0.500–29.999, 50.000–54.000 MHz.	
Mode	SSB, CW, RTTY, AM, FM
Number of channels	101 (89 regular, 2 scan edges)
Antenna connector	SO-239 (50 Ω)
Power supply requirement	13.8 V DC ±15%
Power consumption	Tx: 21 A (at 100 W output power) Rx: 0.8 A typical (Standby), 1.25 A (Maximum audio)
Operating temperature range	–10 °C to +60 °C, 14 °F to 140 °F
Frequency stability	Less than ±0.5 ppm (–30°C to +60°C, 14°F to 140°F)
Frequency resolution	1 Hz
Dimensions (approximate)	240 × 94 × 238 mm, 9.4 × 3.7 × 9.4 in (W × H × D)
Weight (approximate)	4.2 kg, 9.3 lb

TRANSMITTER	
Output power (HF/50 MHz)	SSB/CW/FM/RTTY: 2–100 W, AM: 1–25 W
Modulation system	SSB: Digital P.S.N. modulation AM: Digital Low power modulation FM: Digital Reactance modulation
Spurious emissions	HF bands: Less than –50 dB 50 MHz band: Less than –63 dB
Carrier suppression	More than 50 dB
Unwanted sideband	More than 50 dB
Microphone impedance	600 Ω

RECEIVER						
Receiver system		Direct Sampling Superheterodyne				
Intermediate frequency		36 kHz				
Sensitivity**		0.5 - 1.8 MHz: 1.8 - 29.999 MHz: 28.0 - 29.7 MHz: 50 MHz band:				
SSB/CW (BW: 2.4 kHz at 10 dB SIN)		-		0.16 µV	-	0.13 µV
AM (BW: 6 kHz at 10 dB SIN)		17.6 µV		2.0 µV	-	1.0 µV
FM (BW: 15 kHz at 12 dB SINAD)		-		-	0.5 µV	0.25 µV
Speech sensitivity** (Threshold)		SSB: Less than 5.6 µV, FM: Less than 0.3 µV				
** HF: Preamp 1 ON, 50 MHz: Preamp 2 ON						
Selectivity (3 dB BW filter shape)		More than		Less than		
SSB (BW: 2.4 kHz)		2.4 kHz/-6 dB		3.4 kHz/-40 dB		
CW (BW: 500 Hz)		500 Hz/-6 dB		700 Hz/-40 dB		
RTTY (BW: 500 Hz)		500 Hz/-6 dB		800 Hz/-40 dB		
AM (BW: 6 kHz)		6.0 kHz/-6 dB		10 kHz/-40 dB		
FM (BW: 15 kHz)		12.0 kHz/-6 dB		22 kHz/-40 dB		
Spurious and image rejection ratio		HF bands: More than 70 dB 50 MHz band: More than 70 dB (Faced by ATC AT system)				
Audio output power		More than 2.5 W (at 10% distortion with an 8 Ω load, 1 kHz)				

TUNER	
Frequency range	1.9–50 MHz bands
Matching impedance range	16.7 Ω–150 Ω unbalanced (VSWR better than 1:3)
Tuning accuracy	±0.5 Hz or less
Tuning time	2–3 seconds (Maximum 15 seconds)

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 dealer for details.

PS-126
DC POWER SUPPLY

13.8 V DC, 25 A max. output.

AH-4
HF+50 MHz AUTOMATIC ANTENNA TUNER

Covers 3.5–54 MHz with a 7 m (23 ft) or longer wire antenna.

AH-2B
ANTENNA ELEMENT

Covers 7–54 MHz. Use with AH-4.

AH-740
AUTOMATIC TUNING ANTENNA

Covers 2.5–30 MHz (amateur band). OPC-2321 is required.

HM-219
HAND MICROPHONE

Same as supplied.

AH-710
FOLDED DIPOLE ANTENNA

Covers 1.9–30 MHz bands.

AH-SNV
NVIS KIT

Fiberless mobile mounting antenna element for use with AH-740. Covers 2.2–30 MHz (amateur band) with AH-740.

EXTERNAL SPEAKERS

SP-38
High quality audio and matching height. Max. input: 7 W.

SP-23
4 audio filters, headphone jack. Max. input: 5 W.

SP-33
Wooden box speaker. Max. input: 5 W.

SP-34
4 audio filters, headphone jack. Max. input: 5 W.

SP-35
(2 m, 6.6 ft cable)
SP-35L
(6 m, 19.7 ft cable)
Compact mobile external speaker. Max. input: 7 W.

DESKTOP MICROPHONES

SM-50
Dynamic desktop microphone includes (UP/DOWN) switches and a low cut function.

SM-30
Compact, lightweight electret desktop microphone.

IC-PW1
HF+50 MHz 1 kW HF LINEAR AMPLIFIER

OPC-599 is required.

MB-118
MOBILE MOUNTING BRACKET

For mounting the radio in a vehicle.

CT-17
CI-V LEVEL CONVERTER

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

RS-BA1
IP REMOTE CONTROL SOFTWARE

For use with RS-BA1.

RC-28
USB REMOTE ENCODER

For use with RS-BA1.

- MB-123 CARRYING HANDLE
- OPC-420 CONTROL CABLE for connection with AH-4 (10 m)
- OPC-2321 CONTROL CABLE for connection with AH-740 (6 m)
- 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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