ICOM

HF/50/144/440 MHz MULTIMODE
PORTABLE TRANSCEIVER

IC-705

Be Active!

In the field with the IC-705

HF to 440 MHz Multiband and Multimode Inclu

"Base Station" performance and features in the palm of your hand.

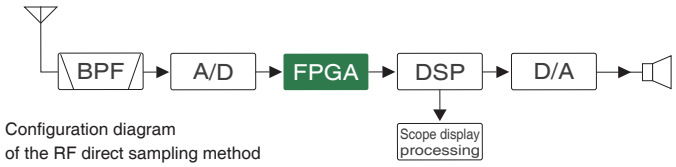
HF/50/144/440 MHz Multimode

From HF to 50/144/440 MHz, you can enjoy a variety of bands in the D-STAR DV, SSB, CW, RTTY, AM and FM modes. The IC-705 receives continuously from 30 kHz through the 144 MHz band. You can also enjoy FM broadcast and air band reception.

RF Direct Sampling System

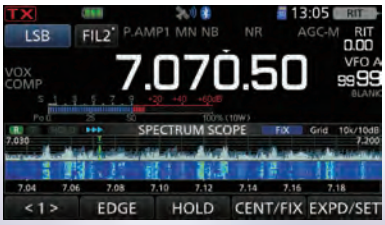
The IC-705 employs an RF direct sampling system, where RF signals are directly converted to digital data. Then processed in the FPGA (Field-Programmable Gate Array), making it possible to simplify the circuit construction as well as reducing internal noise that can mask weak signals.

* The down-conversion IF sampling method is used for 25 MHz and above.



Configuration diagram of the RF direct sampling method

Real-Time Spectrum Scope and Waterfall Display



Display example of real-time spectrum scope and waterfall

Performance seen with the IC-7300 and IC-9700 spectrum scope is at the tip of your fingers for field operation. You can quickly see band activity as well as finding a clear frequency, all in the compact radio and not as an expensive add-on.

Large Touch Screen Color Display

The large 4.3" color TFT touch LCD, same size as the IC-7300 and IC-9700, offers intuitive operation of functions, settings, and various operational visual aids, such as the band scope, waterfall, and audio scope functions.

Touch screen display

Menu screen example

Compact and Lightweight Design

"Base Station" performance in the palm of your hand! You will quickly see how this compact radio is rugged, for outdoor use, in a small, lightweight package, weighing approximately 1.1 kg (2.4 lb).

BP-272 Li-ion Battery Pack or 13.8 V DC External Power Supply

BP-272 attached (Rear panel view)

Utilizing the high capacity Li-ion battery from the ID-51A and ID-31A handheld radios.
A 13.8 V DC external power supply can be used for operation and charging of the BP-272.

ding the D-STAR DV

* Antenna and antenna connector are not included.

Be Active!

In the field with the IC-705

Maximum Output Power 5 W (BP-272), 10 W (13.8 V DC)

In portable mode, the IC-705 has the maximum output power of 5 W from the BP-272 which can last approximately 3 hours*. This is perfect for true 5 W QRP as well as the 0.5 W QRPp operations. Once you setup with a 13.8 V DC power source, you have up to 10 W.

* TX : RX : Standby = 1 : 1 : 8 (The Power Save function ON, in the FM mode)

WLAN/Bluetooth® Technologies

Utilize WLAN/Bluetooth® technologies for linking and remote control*, for a true wireless operation. The VS-3 headset (optional) enables more comfortable operation via Bluetooth®.

* Those features will be available with future firmware upgrades.

GPS Functions

An internal GPS receiver and antenna enhance your operations by providing location logging*, RX/TX locations via D-PRS, "Near Me" repeater search/scan, QSO recording with metadata*, and internal clock synchronization.

* A microSD memory card is required.

microSD Card Slot

The microSD card slot enables the storage of user profiles, QSO recording, TX voice memory keyer, RTTY logging, GPS data, screen capture, firmware upgrades, and programming.

Micro USB Connector

In addition to the two COM ports, radio control plus audio, the IC-705 can be charged via the micro USB port.

D-STAR Functions

Enjoy the latest DV mode features with the IC-705. Have direct access to the D-STAR network with Terminal/Access point modes. Additionally, the IC-705 has the Photo Share feature introduced with the IC-9700. Share photos, without the need of a computer with other users.

Speaker microphone <HM-243>

Programmable Speaker Microphone

Enjoy portable operations with the supplied HM-243, programmable speaker microphone. Perfect for operation with the IC-705 safely secured in the optional LC-192 backpack. User assignable buttons put functions like frequency and volume adjustments at the tip of your fingers, without removing your backpack.

LC-192 Multi-function backpack

Optional Backpack, LC-192, Ideal for Field Operations

Designed to be the "Ultimate", must have accessory for the IC-705, the LC-192 is the perfect utility backpack. Features like a safety strap, with a 1/4"-20 mounting lug to keep the IC-705 from accidentally falling out of the custom radio compartment, to the user adjustable internal panels for custom compartments for antennas, battery packs, or other items necessary for an afternoon SOTA activation.

Actual size

HF/50/144/440 MHz MULTIMODE PORTABLE TRANSCEIVER

IC-705

SPECIFICATIONS

GENERAL

Frequency coverage*1 (Unit: MHz)	Receiver	0.030–199.999*2, 400.000–470.000*2
	Transmitter	1.800–1.999 3.500–3.999 5.255–5.405*2 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 50.000–54.000 144.000–148.000 430.000–450.000
Mode		USB, LSB, CW, RTTY, AM, DV, FM, WFM (Rx only)
No. of memory channels		500 regular (100 groups), 25 scan edges, 4 call (2 ch × 2 bands) channels
Antenna connector		BNC connector (50 Ω)
Power supply requirement		13.8 V DC ±15% (with external power supply) 7.4 V DC (with BP-272)
Operating temperature range		–10°C to +60°C; +14°F to +140°F
Frequency stability		Less than ± 0.5 ppm (–10°C to +60°C; 14°F to 140°F)
Frequency resolution		1 Hz

		13.8 V DC	7.4 V DC
Current drain	TX (Max. power)	Less than 3 A (10 W)	Less than 2.5 A (5 W)
	RX (Max. audio)	0.5 A (typical)	0.8 A (typical)
	RX (Standby)	0.3 A (typical)	0.5 A (typical)

Dimensions (W×H×D, projections not included)	200 × 83.5 × 82 mm; 7.9 × 3.3 × 3.2 in
Weight (approximate)	1.1 kg; 2.4 lb (including BP-272)

*1 Showing the USA version. Varies according to the version.
*2 Some frequency bands are not guaranteed.

TRANSMITTER

		13.8 V DC	7.4 V DC
Output power	SSB/CW/RTTY/FM/DV	0.1 – 10 W	0.1 – 5 W
	AM	0.025 – 2.5 W	0.025 – 1.25 W

Modulation system	SSB : Digital P.S.N. modulation, AM : Digital low power modulation FM : Digital Reactance modulation, DV : Digital GMSK modulation
Spurious emissions	Less than –50 dB (HF), Less than –60 dB (50 MHz), Less than –60 dB (144/430/440 MHz)
Carrier suppression	More than 50 dB
Unwanted sideband	More than 50 dB

RECEIVER

Receiver system	0.030–24.999 MHz	RF Direct Sampling
	25 MHz and above	Down Conversion IF Sampling
Intermediate frequencies		25 MHz and above: 38.85 MHz±0.5 MHz

		0.500–1.799 MHz	1.800–29.999 MHz	50 MHz	144/430/440 MHz
Sensitivity (HF: Preamp-1 ON, 50 MHz: Preamp-2 ON, 144/430/440 MHz: Preamp ON)	SSB/CW (10 dB S/N)	–	0.20 µV	0.15 µV	0.11 µV
	AM (10 dB S/N)	13.0 µV	2.0 µV	1.0 µV	1.0 µV
	FM (12 dB SINAD)	0.5 µV (28.000–29.700 MHz)		0.25 µV	0.18 µV
	DV (1% BER)(PN9)	1.0 µV (28.000–29.700 MHz)		0.63 µV	0.35 µV

Selectivity (Filter: SHARP)	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
DV (12.5 kHz spacing)	Less than –50 dB	

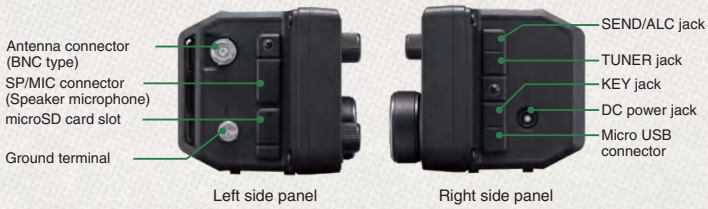
Spurious and image rejection ratio (SSB/CW/AM/FM)	HF	More than 70 dB* (except for ADC aliasing)
	50 MHz	More than 70 dB*
	144 MHz	More than 65 dB
	430 MHz	More than 54 dB
	* At Intermediate frequency in 25–30 MHz or 50–54 MHz: More than 50 dB	
Audio output power	Internal SP	More than 530 mW (12 Ω load at 10% distortion)
	External SP	More than 200 mW (8 Ω load at 10% distortion)

All stated specifications are subject to change without notice or obligation.

Supplied Accessories

• **HM-243** Speaker microphone • **BP-272** Battery pack • **OPC-2421** DC power cable

Side Panel View



Left side panel Right side panel

Optional Accessories

• **BC-202IP3L** Rapid charger (An AC adapter or CP-25H is required.)
• **BC-123S** AC adapter for BC-202IP3L single unit (Straight plug type is required)
• **BC-228** AC adapter for BC-202IP3L multiple connections (Up to 6 x BC-202IP3L)
• **BP-272** Li-ion battery pack 7.4 V, 2000 mAh (typ.)
• **BP-307** Li-ion battery pack 7.2 V, 3150 mAh (typ.) (Available at a later date)
• **CP-25H** Cigarette lighter cable for single BC-202IP3L
• **CS-705** Programming software for Windows®*
• **HM-243** Speaker microphone
• **OPC-2421** DC power cable
• **OPC-2417** Data cable (Micro USB - Micro USB)
• **OPC-2418** Data cable (USB Type C - Micro USB)
• **RS-BA1 Version 2** IP remote control software
• **RS-MS1A** Remote control software for Android™*
• **RS-MS3W** Remote control software for Windows®*
• **RS-MS3A** Remote control software for Android™*
• **ST-4001A** Picture utility software for Android™*
• **ST-4001I** Picture utility software for iOS™*
• **ST-4001W** Picture utility software for Windows®*
• **VS-3** Bluetooth® headset
• **AH-705** Antenna tuner (Available at a later date)

* Download free software

• **LC-192**
Multi-function backpack

Visit our website for more details on the LC-192

Preferred Partner Product

• **AL-705**
QRP Portable Magnetic Loop Antenna
10 – 40 meter (7.0 – 29.7 MHz)
by Alpha Antenna®
Deployed Diameter: 67 cm; 26.5 in
Stored Size: 25 × 28 × 6 cm; 10 × 11 × 2.5 in
Antenna Weight: 860 g; 1.9 lb

* For purchasing, please contact your local Icom dealer.

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