

 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 Includes “Base Station” performance and features in the palm of your hand

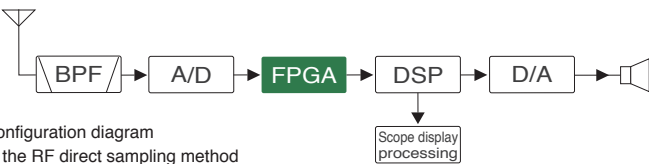
## HF/50/144/440 MHz Multimode

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.





# Linking the D-STAR DV and.



\* Antenna and antenna connector are not included.

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## 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 Bluetooth®

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

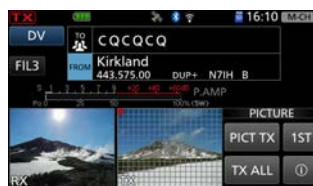
The microSD card slot enables the storage of user profiles, QSO recording, TX voice memory keyer, RTTY logging, GPS data, screen capture, firmware upgrades, and programming.

## 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.

## Programmable Speaker Microphone



Speaker microphone <HM-243>

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.

## Optional Backpack, LC-192, Ideal for Field Operations



LC-192 Multi-function backpack

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.

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# IC-705

Actual size



**SPECIFICATIONS**

GENERAL			
	Receiver	0.030–199.999*2, 400.000–470.000*2	
Frequency coverage*1 (Unit: MHz)	Transmitter	1.800–1.999	3.500–3.999
		7.000–7.300	10.100–10.150
	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 x 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	
Current drain		13.8 V DC	7.4 V DC
	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 (WxHxD, projections not included)		200 x 83.5 x 82 mm; 7.9 x 3.3 x 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			
Output power		13.8 V DC	7.4 V DC
	SSB/CW/RTTY/FM/DV	0.5 – 10 W	0.5 – 5 W
	AM	0.25 – 2.5 W	0.25 – 1.5 W
Modulation system		SSB : Digital P.S.N. modulation, AM : Digital low power modulation FM : Digital phase modulation, DV : GMSK digital phase 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			
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	0.18 μV
	DV (1% BER)(PN9)	1.0 μV (28.000–29.700 MHz)	0.63 μV	0.35 μV	0.35 μV
Selectivity (Filter: SHARP)		0.500–1.799 MHz	1.800–29.999 MHz	50 MHz	144/430/440 MHz
		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		20 kHz/–40 dB	
DV (12.5 kHz spacing)	Less than –50 dB				
Spurious and image rejection ratio		More than 70 dB (HF/50 MHz)			
		More than 54 dB (144/440 MHz) (Except for ADC Aliasing)			
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.

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**Supplied Accessories**

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

**Side Panel View**



**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)
- LC-192 Multi-function backpack

\* Download free software

**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 x 28 x 6 cm; 10 x 11 x 2.5 in  
Antenna Weight: 860 g; 1.9 lb

\* For purchasing, please contact your local Icom dealer.



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