

 ICOM

HF/50/144/440 MHz MULTIMODE
PORTABLE TRANSCEIVER

IC-705

Be Active!

In the field with the IC-705



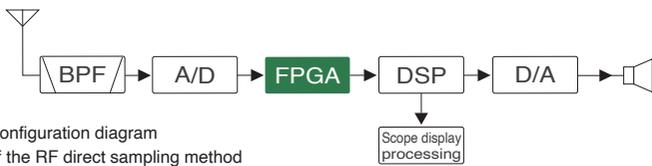
HF to 440 MHz Multiband and Multimode Includes “Base Station” performance and features in the palm of your hand

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-52A and ID-51A handheld radios. A 13.8 V DC external power supply can be used for operation and charging of the battery.



Linking the D-STAR DV Band.



* Antenna and antenna connector are not included.

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One-Touch FT8 Mode Preset



Preset memory offers smooth FT8 mode operation. You can start FT8 mode operation only by selecting [FT8] from PRESET menu. Up to five preset memories can be stored.

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®.

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

Micro USB Connector

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.

Optional Automatic Antenna Tuner, AH-705



AH-705
Optional automatic antenna tuner

The optional AH-705 covers 1.8 MHz to 50 MHz bands with a 30 m or longer wire antenna*. It has a SO-239 antenna connector for use with a 50 antenna such as dipole or Yagi. The AH-705 is a compact design with 190 x 105 x 40 mm, 7.5 x 4.1 x 1.6 in and can be neatly fit into the LC-192 backpack. Working with two alkaline batteries and IP54 dust-protection and water resistance are useful for field operation.

* 7 m or longer antenna for 3.5 – 54 MHz

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.



HF/50/144/440 MHz MULTIMODE
PORTABLE TRANSCEIVER

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 | 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 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/7.2 V DC (With specified Icom's battery pack) | | |
| 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

| | | | |
|---------------------|-------------------|---|--------------|
| | | 13.8 V DC | 7.4 V DC |
| Output power | 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

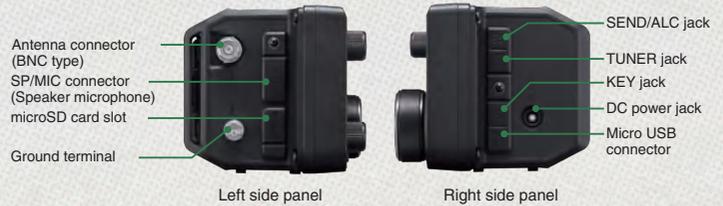
| | | | | | |
|--|------------------------------------|---|------------------|----------------|-----------------|
| Receiver system | 0.030–24.999 MHz | RF Direct Sampling | | | |
| | 25 MHz and above | Down Conversion IF Sampling | | | |
| Intermediate frequencies | | 25 MHz and above: 38.85 MHz±0.5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

Supplied Accessories

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

Side Panel View



Optional Accessories

- AH-705 Automatic antenna tuner
 - BC-202IP2 Rapid charger (AC adapter BC-123S is supplied with the BC-202IP2 depending on the versions.)
 - BC-123S AC adapter for BC-202IP2
 - BP-272 Li-ion battery pack 7.4 V, 2000 mAh (typ.)
 - BP-307 Li-ion battery pack 7.2 V, 3150 mAh (typ.)
 - CP-22 Cigarette lighter cable for BC-202IP2, 12 V/24 V DC
 - CP-23L Cigarette lighter cable for BC-202IP2, 12 V DC
 - 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)
 - OPC-2474 Control cable (5 m) for AH-705
 - OPC-2475 Coaxial cable (5 m) for AH-705 (BNC connectors)
 - RS-BA1 Version 2 IP remote control software
 - RS-MS1A Remote control software for Android™*
 - RS-MS11 Remote control software for iOS™*
 - RS-MS3W Remote control software for Windows*
 - RS-MS3A Remote control software for Android™*
 - ST-4001A Picture utility software for Android™*
 - ST-40011 Picture utility software for iOS™*
 - ST-4001W Picture utility software for Windows**
 - ST-4003A Time Adjustment Software for Android™**
 - ST-4003W Time Adjustment Software for Windows**
 - VS-3 Bluetooth® headset
- * Download free software



MBF-705 installation image



• MBF-705 Desktop Stand



• 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 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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