

ICOM

HF/50/144/430 MHz MULTIMODE
PORTABLE TRANSCEIVER

IC-705

Be Active!

In the field with the IC-705



HF to 430 MHz Multiband and Multimode Includes “Base Station” performance and features in the palm of your hand

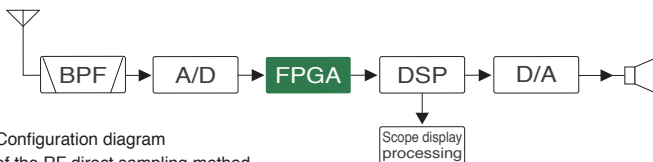
HF/50/144/430 MHz Multimode

From HF to 50/144/430 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 Colour Display

The large 4.3" colour 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.

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-51E and ID-31E handheld radios. A 13.8 V DC external power supply can be used for operation and charging of the BP-272.



Adding 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.

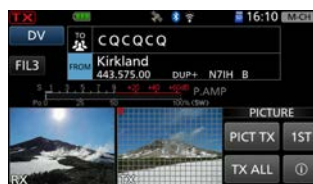
microSD Card Slot

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 uses with an IC-705 and IC-9700.

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.

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.



Actual size

HF/50/144/430 MHz MULTIMODE
PORTABLE TRANSCEIVER

IC-705

■ SPECIFICATIONS

| GENERAL | | | |
|---|-----------------|---|-----------------------|
| | Receiver | 0.030–199.999*2, 400.000–470.000*2 | |
| Frequency coverage*1 (Unit: MHz) | Transmitter | 1.810–1.999 | 3.500–3.800 |
| | | 10.100–10.150 | 14.000–14.350 |
| | | 21.000–21.450 | 24.890–24.990 |
| | | 50.000–52.000 | 144.000–146.000 |
| 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 | |
| Frequency stability | | Less than ± 0.5 ppm (–10°C to +60°C) | |
| 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 (W×H×D, projections not included) | | 200 × 83.5 × 82 mm | |
| Weight (approximate) | | 1.1 kg (including BP-272) | |

*1 Showing the EUR version. Varies according to the version.

*2 Some frequency bands are not guaranteed.

■ TRANSMITTER

| | | | |
|---------------------|-------------------|--|----------------|
| Output power | SSB/CW/RTTY/FM/DV | 13.8 V DC | 7.4 V DC |
| | AM | 0.1 – 10 W | 0.1 – 5 W |
| Modulation system | SSB | 0.025 – 2.5 W | 0.025 – 1.25 W |
| | AM | | |
| Spurious emissions | | SSB : Digital PSN modulation, AM : Digital low power modulation FM : Digital reactance modulation, DV : Digital GMSK modulation | |
| Carrier suppression | | Less than –50 dB (HF), Less than –60 dB (50 MHz), Less than –60 dB (144/430 MHz) | |
| Unwanted sideband | | More than 50 dB | |

■ RECEIVER

| | | | | | |
|---|----------------------------|--|----------------|-------------|-------------|
| Receiver system | 0.030–24.999 MHz | RF Direct Sampling | | | |
| Intermediate frequencies | 25 MHz and above | Down Conversion IF Sampling | | | |
| Sensitivity (HF: Preamp-1 ON, 50 MHz: Preamp-2 ON, 144/430 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 | |
| Sensitivity for RED version (HF: Preamp-1 ON, 50 MHz: Preamp-2 ON, 144/430 MHz: Preamp ON) | SSB (BW=2.4 kHz) | 1.8–2.999 MHz | 3.0–29.995 MHz | 50 MHz | 144/430 MHz |
| | AM (4 kHz, 60% modulation) | 10 dBμV emf | 0 dBμV emf | –6 dBμV emf | –6 dBμV emf |
| | FM (7 kHz, 60% modulation) | 16 dBμV emf | 6 dBμV emf | 0 dBμV emf | 0 dBμV emf |
| | FM (7 kHz, 60% modulation) | 0 dBμV emf (28.000 to 29.700 MHz) | –6 dBμV emf | –6 dBμV emf | |
| Selectivity (Filter: SHARP) | SSB (BW=2.4 kHz) | More than | Less than | | |
| | CW (BW=500 Hz) | 2.4 kHz/–6 dB | 3.4 kHz/–40 dB | | |
| | RTTY (BW=500 Hz) | 500 Hz/–6 dB | 700 Hz/–40 dB | | |
| | AM (BW=6 kHz) | 500 Hz/–6 dB | 800 Hz/–40 dB | | |
| | FM (BW=15 kHz) | 6.0 kHz/–6 dB | 10 kHz/–40 dB | | |
| | DV (12.5 kHz spacing) | 12.0 kHz/–6 dB | 22 kHz/–40 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 | | | |
| Audio output power | Internal SP | * At intermediate frequency in 25–30 MHz or 50–54 MHz: More than 50 dB | | | |
| | External SP | More than 530 mW (12 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

- 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-MS3A Remote control software for Android™*
- RS-MS3W Remote control software for Windows®*
- 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
Stored Size: 25 × 28 × 6 cm
Antenna Weight: 860 g



* For purchasing, please contact your local Icom dealer.

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