



Mobile
Transceivers



Multi-Band
Transceivers



Handheld
Transceivers



Base Station
Transceivers

RMDR (Reciprocal Mixing Dynamic Range) of 110 dB* (at 1 kHz)

High-Speed, High-Resolution Spectrum Waterfall Scope

Crystal Clean, High-Purity Local Oscillator

Dual Scope for Viewing Both Receivers Separately

1.2 kHz Optimum Roofing Filter Greatly Improves In-band Adjacent Signal Performance

Audio Scope and Oscilloscope for Watching Receive and Transmit Audio

* At a 1 kHz offset frequency. Receiving frequency: 14.2 MHz Mode: CW, IF BW: 500 Hz, Roofing Filter: 1.2 kHz

Experience in video

http://www.icom.co.jp/r/ic-7851_me/



HF/50MHz TRANSCEIVER IC-7851

RMDR: 110 dB Raising the Bar

The IC-7851 has set a new benchmark for amateur radio receivers with Icom HF engineers having advanced the design for the Local Oscillator (LO). The goal was to dramatically reduce the phase noise that degrades the target signal due to the sum of the entire signal present. The result was a RMDR of 110 dB*. Below is a comparison of the improvement over the IC-7800.

* At a 1 kHz offset frequency

Receiving frequency: 14.2 MHz Mode: CW, IF BW: 500 Hz
Roofing Filter IC-7800 = 3 kHz, IC-7851 = 1.2 kHz

RMDR Comparison

	RMDR(dB)			
	1 kHz	2 kHz	10 kHz	20 kHz
IC-7851	110	116	121	124
IC-7800	78	87	106	112

RMDR

RMDR (Reciprocal Mixing Dynamic Range) is the relative level of an undesired signal, offset "n" kHz from the RX passband, which will raise noise floor by 3 dB. The local oscillator phase noise will mix with strong unwanted signals and unavoidably generate noise which masks a wanted signal.

1.2 kHz Optimum Roofing Filter

Despite the trend to switch to a down conversion or a hybrid conversion receive design, Icom believes in the solid performance of the up-conversion design. The IC-7851 introduces a new 1.2 kHz Optimum Roofing Filter, greatly improving the in-band adjacent signal performance. This newly developed filter overcomes the gap of a narrower roofing filter in an up-conversion receiver.



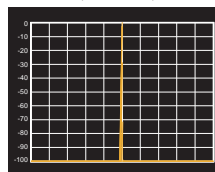
Optimum Roofing Filter

Crystal Clear LO Design

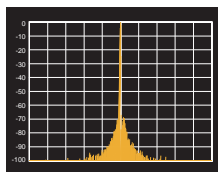
Breaking the boundaries of traditional designs, the IC-7851 employs a Direct Digital Synthesizer (DDS) along with a Phase Locked Oscillator for the LO (Local Oscillator). The C/N ratio excels beyond the IC-7800 and other similar class HF transceivers. This design significantly reduces noise components in both receive and transmit signals.

LO C/N Characteristics Comparisons

Receiving Frequency: 14.2 MHz Mode: CW 1st LO frequency: 78.655 MHz
SPAN = 20 kHz, RBW = 30 Hz, VBW = 10 Hz



IC-7851



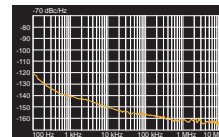
IC-7800

Improved Phase Noise Characteristics

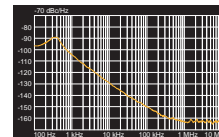
Phase noise is coherent in radio circuit design and the new LO design introduced in the IC-7851 makes some major breakthroughs while utilizing the 64 MHz, up-conversion receiver design introduced in the IC-7800. An impressive 20 dB improvement is seen with the IC-7851's 10 kHz measurement and more than 30 dB improvement at a 1 kHz measurement in comparison to the IC-7800.

Phase Noise Characteristics Comparisons

Receiving Frequency: 14.2 MHz Mode: CW 1st LO frequency: 78.655 MHz



IC-7851



IC-7800

Improved Spectrum Scope

Following the design lineage of the IC-7800, the IC-7851 uses a dedicated DSP unit for the Fast Fourier Transform (FFT) spectrum. The 2250 MFLOPS DSP processor enables a new dual scope function and significantly faster sweep speeds and better accuracy than in the IC-7800.

Scope Comparison

	IC-7851	IC-7800
Span Width	5 kHz-1000 kHz	5 kHz-500 kHz
Resolution **	1 pixel minimum **	20 pixels minimum **
Sweep Speed	29.3 frames/Sec **	4 frames/Sec **
Display Dynamic Range	100 dB	80 dB
Noise Floor Level	-30 dBμ	-19 dBμ

** Number of dots shown at the 60 dB level, when receiving a signal.

** SPAN = More than 20 kHz, SPEED = Slow

** SPAN = Less than 20 kHz, SPEED = Fast

** SPAN = 500 kHz, SPEED = Slow

Base Station Transceivers

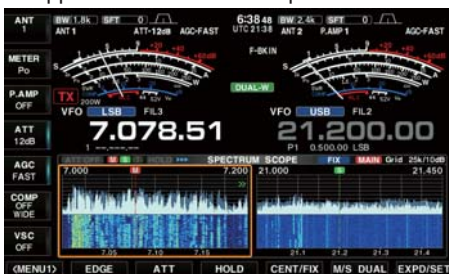


+40 dBm IP3 (Third-order Intercept Point)

The IC-7851 continues the +40 dBm, third order intercept point and 110 dB receiver dynamic range benchmark set by the IC-7800. To achieve this superb receiver performance, the entire analog circuitry and components have been re-engineered to match the DSP units. A newly designed LO amplifier generates high output while keeping flat frequency characteristics over a 60 MHz wide range.

Dual Spectrum Scope with Waterfall Function

The IC-7851 introduces the new dual scope – the ability of watching both receivers in separate spectrum scopes. The dual scope function is vital for watching for multipliers or band openings in contests, or working all bands/modes on a DXpedition. The waterfall display captures signal strengths over time. This enables you to see signals that may not be apparent on a normal scope.



Dual scope example (Horizontally aligned)

Full Duty 200 W Output Power

The push-pull power amplifiers using power MOS-FETs work on 48 V DC. They provide a powerful 200 W output power at full duty cycle. An effective cooling system maintains internal temperatures within a safe range and prevents thermal runaway.

Digital IF Filter

Icom's digital IF filters enhance that performance, which is not possible with crystal or mechanical filters. They enable the operator to adjust filter shape (sharp or soft), filter bandwidth, and center frequency characteristics, without missing the action.

Other Outstanding Features

[Antenna and receiver] • Two completely independent receivers • 15 kHz, 6 kHz, 3 kHz and 1.2 kHz four first IF roofing filters • Four antenna connectors with automatic antenna

selector • Automatic antenna tuner • 50 MHz special preamp and mixer circuit • Digital manual notch • Digital twin PBT eliminates interference from adjacent signals • New auto digital noise blanker • ± 0.05 ppm High Stability OCXO Unit

[CW mode] • DSP-controlled CW keying waveform shaping • Multi-function electronic keyer with adjustable keying speed, dot-dash ratio and paddle polarity • Audio Peak Filter selection (soft/sharp)

[Operation] • High-quality digital voice recorder memory • Built-in RTTY, PSK31 and PSK63 without the use of a computer • Message memory for CW, RTTY and PSK31/63 • Digital video interface (DVI-I) • SD memory card slot • Audio scope function • Click control spectrum scope • AGC control • Microphone equalizer and adjustable transmit bandwidth • FFT scope averaging function for PSK and RTTY decode • Screen saver function



**RMDR (Reciprocal Mixing
Dynamic Range) of 110 dB* (at 2 kHz)**

**Independent Dual Receiver Receives
Two Bands Simultaneously**

**Superior Transmit Phase Noise
Characteristics**

**DIGI-SEL Preselector for MAIN and
SUB Bands**

**High-Speed, High-Resolution
Real-Time Spectrum Scope**

**Touch Screen and Multi-Dial Knob
for Smooth Operation**

**DVI-D Digital Connector
for External Display Connection**



* At a 2 kHz offset frequency. Receiving frequency:
14.2 MHz Mode: CW, IF BW: 500 Hz

HF/50MHz TRANSCEIVER IC-7610

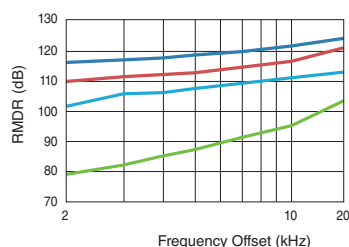
Innovative RF Direct Sampling System Achieves 110 dB* (typ.) RMDR

The RF direct sampling system converts the analog signals to digital signals, and collectively puts the data through FPGA (Field-Programmable Gate Array) processing. The master clock uses a high precision VCXO (Voltage Controlled Crystal Oscillator), which excels in low-noise characteristics. This makes it possible to provide superior receive and transmit performance, extremely low phase noise as well as high RMDR (Reciprocal Mixing Dynamic Range).

* At 2 kHz frequency separation.

■ RMDR Characteristics

* Received frequency: 14.2 MHz, MODE: CW, IF BW: 500 Hz



Independent Dual Receiver Receives Two Bands Simultaneously

The dual receivers are ideal for simultaneous monitoring of two bands and two modes. The sub receiver works independently of the main receiver. The optional RC-28 enables you to add an external Sub dial.

Superior Transmit Phase Noise Characteristics

Breaking with the tradition of mixing a carrier signal with a local oscillator, a Digital-Up-Conversion (DUC) is used to generate the required frequencies by sampling the signals from the Digital to Analog Converter (DAC). The superior Phase Noise characteristics provide high purity transmit signals.

DIGI-SEL Units for MAIN and SUB Bands

Both MAIN and SUB receivers are equipped with DIGI-SEL (digital preselector) units. The DIGI-SEL has steeper skirt characteristics than normal band-pass filters, so it rejects out of band strong interference such as broadcast stations, and prevents cross modulation.



High-Speed, High-Resolution Dual Spectrum Scope

The dual spectrum scope of the IC-7610 shows both receivers in separate spectrum scopes, with the waterfall screen. It provides class-leading performance in resolution, sweep speed and a 100 dB dynamic range. The waterfall screen enables you to find weak signals by showing the spectrum change over time. Connecting a PC mouse to the USB port aids in flexible use of the spectrum scope.

FFT Scope and Oscilloscope for Audio Observation

The audio scope function shows the FFT scope with waterfall and the oscilloscope of either transmit or receive audio. This function can be used to observe various AF characteristics, such as microphone compressor level, filter width, notch filter and receive keying waveform in the CW mode.

Touch Screen and Multi-Dial Knob for Smooth Operation

The combination of the touch screen and the multi-dial knob 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 by touching the screen and can adjust the levels by turning the multi-dial knob.

Base Station Transceivers



DVI-D Connector for External Display Connection

The IC-7610 has a DVI-D digital connector for an external display. Operating frequency, setting information and spectrum scope can be observed on a large external display.

High Quality Speaker Sound

The IC-7610's speaker offers comfortable sound quality with a clear, natural sounding audio to listen to the high-purity received signals. Insulators are placed between the speaker and chassis to prevent vibration noise.

SD Card Slot and USB ports for Saving Data

For multi-operators using one rig, personal settings such as filter settings, memory channels, and antenna settings, can be loaded using the SD card/USB flash drive. TX Voice memories and RTTY/CW memories on the SD card/USB flash drive can be sent with a touch of a button.

I/Q Signal Output

The IC-7610 enables you to output I/Q signals from the USB connector. They can be used to analyze a spectrum range or to decode signals by a decoder software on a PC.

* This function will be provided with in a future firmware update.

Other Outstanding Features

[Antenna and receiver] • BNC type RX IN/OUT connectors • Built-in automatic antenna tuner • Two types of preamplifiers • 3 dB – 45 dB attenuator • IP+ function improves 3rd order intercept point performance • RTTY/PSK demodulator and decoder • Digital twin PBT eliminates interference from adjacent signals

[Transmitter] • TX monitor function • All mode power control • VOX (Voice Operated transmission) capability • Microphone equalizer and adjustable transmit bandwidth • 50 CTCSS tones

[CW mode] • FPGA-controlled CW keying waveform shaping • Multi-function electronic keyer • CW pitch control from 300 Hz to 900 Hz • Auto repeat function • Contest serial number counter • Normal or short morse

number style • Double key jack system • Full break-in and semi break-in • CW auto tuning • APF (Audio Peak Filter) function adjustable filter shape, width and AF level

[Operation] • 7-inch wide color TFT LCD • Simplified IP remote control capability with the optional RS-BA1 • Memo pad stores up to 10 operating frequencies and modes • Quick split function • Quick Dualwatch function • RF gain and squelch control with a knob • RIT and Δ TX variable up to 9.999 kHz • UTC/local clock and timer function • 1 Hz pitch tuning and display • 101 memory channels • Dial lock function • Adjustable main dial brake • External speaker jacks for MAIN and SUB receivers • Multi-function meter • Auto tuning step function • AGC control for fine tuning of the AGC time constant • Screen saver function





HF/50MHz TRANSCEIVER

IC-7700

+40 dBm Third-Order Intercept Point (in the HF Bands)

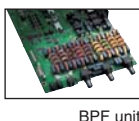
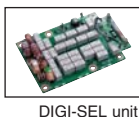
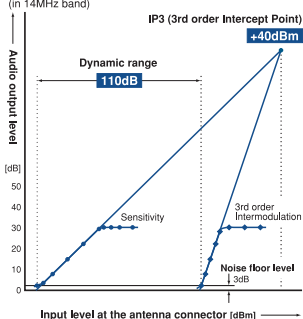
Spectrum Scope with Waterfall Function

200 W Output Power and High-Stability Transmitter

+40 dBm IP3 (Third-order Intercept Point) and 110 dB Dynamic Range

The IC-7700 employs mechanical relay BPF switching, a digitally tuned pre-selector, and three hi-spec first IF filters (roofing filters) in a clean and simple double conversion superheterodyne design. By balancing the analog and DSP functions, the IC-7700 provides superior sensitivity simultaneously with a superb dynamic range of 110 dB, and +40 dBm IP3 (even in USB mode with 2.4 kHz filter bandwidth).

Dynamic range characteristics
(in 14MHz band)



More than +110 dBm IP2 (Second-order Intercept Point)

An IP2 point of more than +110 dBm* means second order distortion from strong broadcast stations will be completely eliminated.

* The IP2 figure is a typical value.

** Measurements were made using custom equipment, due to the limits of normal signal generators (SG) and duplexers to +85 dBm.

High Specification Inband IMD

All (second, third or even higher) orders of IMD performance are superior in the IC-7700. You will notice the difference as you copy weak signals without internal distortion or noise, especially evident in CW mode.

Spectrum Waterfall Display

The spectrum waterfall function can show the changing amplitude of frequency spectrum over time. A weak signal, which cannot be recognized with the spectrum scope, may be found in the waterfall screen. With the high performance receiver, the IC-7700 increases your chances of making QSOs.



Spectrum scope with waterfall (wide screen setting)

Mouse Operation for Spectrum Scope

By connecting a PC mouse to the USB port, the spectrum scope operation is possible with a mouse.

Audio Scope Function for AF Observation

The audio scope function can be used for observing various AF characteristics such as microphone compressor level, filter width, notch filter and CW keying waveform.

200 W Full Duty Operation

The IC-7700 uses a STAC2942 power amplifier in push-pull configuration. The digital PSN modulator consistently reproduces an outstanding signal-to-noise ratio, providing clean and low IMD transmission on all bands.

Other Outstanding Features

- Simplified remote control operation with optional RS-BA1
- QSO recording function into USB flash drive
- 15 kHz, 6 kHz, and 3 kHz Hi-spec first IF filters (roofing filter)
- Image rejection mixer is used for the second mixer
- Low distortion bandpass filter and mechanical relays
- DIGI-SEL automatic preselector rejects out of band strong interference
- High Intercept point and low noise preamplifier
- Two AGC loop lines improve dynamic range and blocking from strong interference
- ± 0.05 ppm high stability OCXO unit
- RTTY and PSK 31 operation without PC connection
- USB connectors on the front panel
- Four antenna connectors with automatic antenna selector
- Digital twin PBT eliminates interference from adjacent signals
- Flexible digital IF filter setting
- Manual and auto notch filter
- Microphone equalizer and adjustable transmit bandwidth
- VGA connector for an external display connection

Firmware Update Available (Free Download)
<http://www.icom.co.jp/world/support/index.html>

Base Station Transceivers



Spectrum scope + Waterfall



FFT scope/Oscilloscope



Touch screen interface

HF/50MHz TRANSCEIVER IC-7300

Class Leading Real-Time Spectrum Scope with Waterfall Function

RF Direct Sampling System

Class Leading RMDR and Phase Noise Characteristics

Class Leading Real-time Spectrum Scope with Waterfall Function

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.

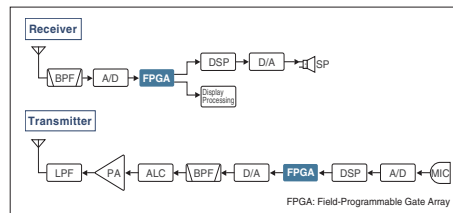
Real-time Spectrum Scope Specifications

	IC-7300
Scope system	FFT (Fast Fourier Transform)
Span width	5 kHz-1000 kHz
Resolution *	1 pixel minimum (approximately)
Sweep speed	Max. 30 frames/second (approximately)
Waveform display area (vertical axis)	80 dB
Other functions	Waterfall function, Audio scope function

* Number of pixels shown at the 60dB level, when receiving a signal.

RF Direct Sampling System

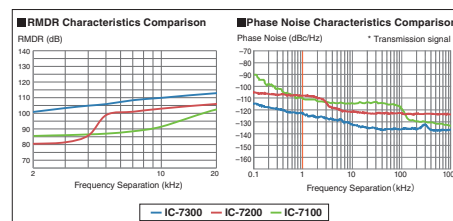
The IC-7300 employs an RF direct sampling system. RF signals are directly converted to digital data and processed in the FPGA (Field-Programmable Gate Array), making it possible to simplify the circuit construction. This system's leading technology has created an epoch in amateur radio.



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)



New "IP+" Function

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

15 Discrete Band-pass Filters

The IC-7300 has 15 discrete RF bandpass filters. The RF signal is only passed through one of the bandpass 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.

Superior Signal Quality

The RF direct sampling system is naturally superior at signal linearity and noise immunity by digitally processing the signal from RF to AF. Mathematical frequency conversions within the FPGA drastically improve the signal purity. Thanks to these features, though it is a compact radio, the IC-7300 enjoys exceptionally clear and rich sound which normally can only be expected for a higher class radio.

4.3-inch Touch Screen Color Display

The 4.3-inch touch screen TFT color LCD offers intuitive operation. Using the software keypad of the touch screen, you can easily set various functions and edit memory contents.

Other Features

- Built-in automatic antenna tuner
- Multi-dial knob for smooth operation
- SD memory card slot for saving data
- New incorporated speaker unit
- HM-219 hand microphone supplied
- A large and effective cooling fan system
- A multi-function meter
- 101 memory channels (99 regular, two 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

Base Station Transceivers



HF/50MHz TRANSCEIVER IC-7410

**Faster DSP Unit and
In-house DSP Expertise**

Double-Conversion Superheterodyne

**+30 dBm Class Third-Order
Intercept Point (IP3)**

Faster DSP Unit and In-house DSP Expertise

Icom brings out the best DSP performance, combining more than 10 years of DSP tech-

nical know-how and much faster DSP processors. Icom's in-house DSP experts have developed an IC-746PRO series replacement that every operator will be proud to own. In addition to the higher speed DSP, the AD/DA converter, AK4620, provides a higher dynamic range and superior S/N ratio.



<DSP unit> ADSP-21369
Internal clock speed: 333 MHz
32-bit floating point DSP
Max. performance: 2000 MFLOPS



AD/DA converter
ADC Signal/(Noise+Distortion): 10 dB
ADC Dynamic range, S/N: 133 dB
DAC Signal/(Noise+Distortion): 97 dB
DAC Dynamic range, S/N: 115 dB

Double-conversion Superheterodyne

Introduced with our top-of-the-line transceiver, this double-conversion superheterodyne

design comes with an image rejection mixer for the second mixer stage in the IC-7410. This receiver design not only reduces the electronic complexity, it greatly reduces the number of internal distortion points from older triple and quadruple conversion receivers.

+30 dBm Class Third-order Intercept Point (IP3)

In Icom's continuing efforts to create the best receiver, the design of the IC-7410 incorporates the latest in DSP software technology and Icom's analog RF circuit experience for a +30 dBm* (typ.) IP3. The end result; clear reception of weak signals surrounded by QRM from broadcast and neighboring ham stations.

* Typical in 14 MHz band. Spacing=100 kHz

Other Features

- Three first IF filters (3/6/15 kHz)
- Digital twin PBT
- AGC loop management with programmable AGC time constant
- Auto/manual notch filter provide more than 70 dB attenuation
- Noise reduction
- RF speech compressor
- User programmable tone control
- Built-in voice synthesizer
- User programmable band edge beep
- VSC (Voice Squelch Control) function
- Two preamplifier types: Preamp 1: Improving IMD characteristics, Preamp 2: High gain preamplifier
- 20 dB built-in attenuator
- Built-in automatic antenna tuner
- CTCSS tone encoder and decoder



HF TRANSCEIVER IC-718



**Simple, Straightforward Operation
with Keypad**

Front Mount Loud Speaker

Optional DSP Capability, UT-106

Simple, Straightforward Operation with Keypad

The IC-718 is equipped with a minimum number of buttons and controls for simple feature selection. The 10-key pad on the front panel enables direct entry of an operating frequency or a memory channel number. The auto tuning step function is activated when quickly turning the dial, which helps speed up tuning as well. The band stacking register is convenient when changing operating bands.

Front Mount Loud Speaker

The IC-718 has the speaker mounted on the front panel. With the speaker facing the opera-

tor, audio will be heard clearly and directly while operating.

Optional DSP Capability, UT-106

The optional DSP unit* gives you noise reduction and auto notch filter functions for extra receiver performance.

* Already built-in to USA version.



Optional UT-106

General Coverage Receiver

The IC-718 has 0.03–29.999999 MHz* general coverage receive capability.

* Guaranteed range: 0.5–29.999999 MHz

Other Features

- Front mounted loud speaker
- Built-in electronic keyer
- Built-in microphone compressor
- Combined squelch and RF gain control
- Preamplifier and attenuator
- 101 memory channels
- CW full break-in
- IF shift interference rejection
- 1 Hz tuning
- VOX function for hands-free operation
- Optional automatic antenna tuner
- Digital S/R meter

Multi-Band Transceivers

D-STAR



DR (D-STAR Repeater) mode operation



Near repeater function



SD memory card slot for saving data

HF/VHF/UHF TRANSCEIVER IC-7100

Intuitive Touch Screen Interface

Controls at Your Fingertips
with an Angled Display

HF, 50, 144, 440 MHz Multi-Band

Intuitive Touch Screen Interface

The innovative touch screen interface provides quick and smooth operation for setting and editing various functions and memories.

One Touch Selection

For example, if you want to change the operating band, tap the frequency on the display. The band keys will appear to select the operating band. Touching the multi-function meter indicator for one second will quickly change the transmit meter functions.



Straightforward Operation

Just tap the mode, filter, function etc., you need to change. The touch screen responds naturally changing your settings.

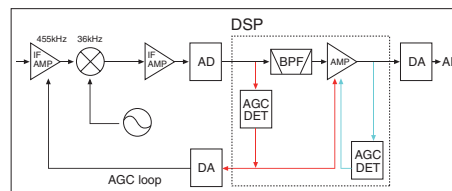


HF, 50, 144, 440 MHz Multi-band

The IC-7100 fully covers the HF, 50, 144, 430/440 MHz amateur bands in multiple modes, providing 100 W on HF/50 MHz bands, 50 W on 144 MHz band and 35 W on 430/440 MHz band.

Digital Features Controlled by the IF DSP

A high-performance 32-bit floating point IF DSP delivers rich digital signal processing features, including digital IF filter, digital twin PBT, noise reduction, CW auto tune, etc. Those digital features work on all bands from HF to VHF/UHF bands.



AGC function loop

Built-in RTTY Functions

The built-in RTTY decoder enables you to instantly read an RTTY message on the display. Your RTTY operating log, both TX and RX, is recorded on an SD card. The eight RTTY memories can memorize and transmit often used RTTY sentences.

D-STAR DV Mode (Digital Voice + Data)

The IC-7100 provides D-STAR DV mode digital voice and low-speed data communication.

IDR (D-STAR Repeater) Function Operation

The DR function operation makes the D-STAR operation simple and straightforward, even if you are new to D-STAR operation.

Repeater Search Function

With an external GPS receiver*, this function searches the nearby D-STAR repeaters from the internal database based on your location.
* External GPS receiver or manual position data input required.

Controller Mounted Speaker and Jacks

The unique remote head design is perfect for providing loud, clear audio, as well as jacks for an external speaker/headphones, key and microphone.

Controller Rear Panel View



SD Memory Card Slot for Saving Data

When used with an SD card, content including voice memory, memory channels, D-STAR repeater memory and other personal settings can be saved and loaded to the transceiver.

Other Features

- DSP controlled AGC function loop
- Easy vehicle mounting with optional MBF-1
- RS-MS1A remote control software for an Android™ device (Send and receive pictures)
- Optional RS-BA1 IP remote control software
- Full break-in, CW receive reverse, auto tuning
- Optional multi-function microphone, HM-151
- Band scope and SWR graphic display
- RF speech compressor controlled by the DSP
- Voice memory function
- Multi-function meter
- 495 regular, four call, six scan edge and 900 DR mode repeater channels
- Four channels TX voice memories
- ± 0.5 ppm frequency stability
- Auto reply function*
- Digital callsign squelch (DSQL) and digital code squelch (CSQL)*
- 12.5 kHz IF output for DRM (Digital Radio Mondiale) receive
- * D-STAR DV mode only

Firmware Update Available (Free Download)
<http://www.icom.co.jp/world/support/index.html>

Multi-Band Transceivers

D-STAR (With optional UT-121)



HF/VHF/UHF TRANSCEIVER IC-9100

**HF to 1200 MHz Multi-Band,
Dual Independent Receiver**

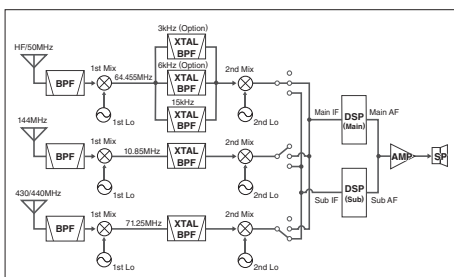
**+30 dBm Class Third-Order
Intercept Point (IP3)**

Satellite Mode Operation

HF to 1200 MHz Multi-band, Dual Independent Receiver

The IC-9100 covers 100 W on HF, 50 MHz and 144 MHz, 75 W on 430/440 MHz bands and 10 W on the 1200 MHz band.* The radio has three independent receiver circuits from the antenna connector to the second IF mixer (image rejection mixer) and simultaneously receives two different bands (1. HF/50 MHz + 144/430/440/1200 MHz, 2. 144 MHz + 430/ 440/1200 MHz, 3. 430/440 MHz + 1200 MHz) at a time.

* Optional UX-9100 1200 MHz band unit required.



+30 dBm Class IP3

Using receiver design techniques introduced in Icom's highest grade HF transceivers, the IC-9100 has an IP3 of +30 dBm* in the HF band. Even a weak signal adjacent to strong signals is clearly received by the IC-9100.

* Typical in 14 MHz band. Spacing=100 kHz

Satellite Mode Operation

The IC-9100 has a top class receiver performance in the VHF/UHF bands, which is indispensable for obtaining weak signals in the satellite communication. The satellite mode synchronizes the uplink (transmitting) and downlink (receiving) frequencies, and tracks the frequencies in the same tuning step. Twenty satellite memory channels store frequencies, mode and tone settings for quick setup.

Optional 1200 MHz Band Unit

By installing the optional UX-9100 1200 MHz band unit, the IC-9100 extends the coverage to the 1200 MHz band. You can also enjoy L/V or L/U mode satellite operation.



UX-9100, 1200 MHz band unit

Optional D-STAR DV Mode

The optional UT-121 provides D-STAR DV mode digital voice and low speed data communication. Linking of D-STAR repeaters over



▲Optional UT-121

the internet enables you to communicate virtually anywhere. The D-STAR repeater (DR) function makes it easy to access D-STAR repeaters.

Three First IF Filters (3/6/15 kHz) for HF/50 MHz Band

The IC-9100 comes with a built-in 15 kHz first IF filter and can accept up to two optional filters (3 kHz FL-431 and 6 kHz FL-430). By changing the first IF filter width according to the operating mode, the desired signal is protected from adjacent inband signals for better receiver performance.



First IF filters (6 kHz, 3 kHz)

USB Connector for PC Control

The IC-9100 has a standard type B USB connector and can be connected to a PC. Modulation input, audio output, RTTY demodulator output and CI-V command can be controlled via the USB cable.

Other Features

- 32-bit DSP and double conversion superheterodyne system
- AGC loop management
- Digital IF filter
- Digital twin PBT and IF shift
- Noise reduction
- Noise blanker
- RF speech compressor
- Adjustable transmit bandwidth
- RTTY demodulator and decoder
- Ample CW functions
- Built-in antenna tuner for HF/50 MHz band
- Digital notch filter
- Large, multi-function LCD
- Optional CS-9100 programming software
- Optional RS-BA1 IP remote control software

Handheld Transceivers

D-STAR



Terminal Mode*

Connect the ID-51A PLUS2 or ID-31A PLUS to the Internet through a PC or Android™ device, and send your voice and/or data through the Internet gateway to a destination repeater.



Access Point Mode*

Use an ID-51A PLUS2 or ID-31A PLUS radio connected to the internet through a PC or Android™ device, as an access point. You can use another D-STAR radio to send your voice and/or data through the access point radio, and communicate with D-STAR stations all over the world.



* The optional free download software, RS-MS3W or RS-MS3A is required to be installed in the PC/ Android™ device for terminal mode and access point mode operation. The optional data cable OPC-2350LU is required.

V/V, U/U, V/U Dualwatch (ID-51A PLUS2 only)

The dualwatch function monitors VHF/VHF, UHF/UHF and VHF/UHF bands simultaneously.* The audio and squelch levels can be set separately for the main and sub-bands.



V/U, V/V Dualwatch example

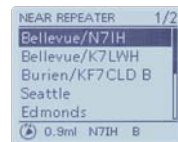
* DV/DV, AM/AM, FM-N/FM-N and DV/FM-N modes dualwatch not available.

Independent AM/FM Receiver (ID-51A PLUS2 only)

FM and AM broadcast and VHF airband stations can be listened to while using the dualwatch function to monitor the ham bands.

DV/FM Repeater Search Function

The repeater search function searches for up to 20 nearby DV/FM repeaters using the repeater memories and the integrated GPS*.



Repeater list example

* To use the repeater search function, the position data of the repeater is required.

DV Fast Data Mode*

By using data in place of voice frames, the ID-51A PLUS2 or ID-31A PLUS transfers data 3.5 times faster (3480 bps) than in the conventional DV mode (with voice). Pictures taken by an Android™ device can be transmitted in the DV Fast Data mode faster.

* The DV Fast Data mode is not compatible with the DV mode low-speed data communication.

Integrated GPS Receiver

The integrated GPS receiver provides fast start-up time and accurate position. When receiving a call addressed to your callsign, the radio can automatically reply your current position information. 200 GPS memory channels are available.

microSD Card Slot

When used with a microSD card, various contents including communication contents, voice audio, communication log, RX history log and GPS log data can be stored. Memory channels and other settings can be saved and loaded into the transceiver.

IPX7 Waterproof Construction

Both radios have superior IPX7 waterproof protection (one meter depth for 30 minutes). They can be used in harsh outdoor environments, or when hiking, mountain biking, touring and doing various outdoor sports.

RS-MS1A Remote Control Software (Free download Android™ application from Google Play™)

The RS-MS1A enables you to connect to the radio with an Android device and remotely set DR functions, link with a map application and send/receive messages over the DV mode.

* Optional OPC-2350LU USB cable is required.

Red, Gold and Silver Color Versions (ID-31A PLUS only)

The ID-31A PLUS has red, gold and silver color choices for your preference.



Other Features

- 5 W output power
- Three hours rapid charging with supplied wall charger (BP-271)
- Long lasting battery pack
- CS-51PLUS2 or CS-31PLUS programming software supplied
- Dplus Reflector link commands
- Enhanced D-PRS functions



ID-51A PLUS2

ID-31A PLUS

VHF/UHF DIGITAL TRANSCEIVER

ID-51A PLUS2

UHF DIGITAL TRANSCEIVER

ID-31A PLUS

Lightweight and Compact Design

Terminal Mode and Access Point Mode

VHF/VHF, UHF/UHF, VHF/UHF Dualwatch (ID-51A PLUS2 only)

Lightweight & Compact Design

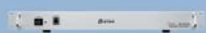
The ID-51A PLUS2 is a 5 W VHF/UHF dual bander, and the ID-31A PLUS is a 5 W UHF single bander, both with D-STAR and integrated GPS receiver.



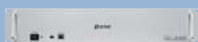
ID-51A PLUS2

ID-31A PLUS

D-STAR Repeaters



ID-RP2C
Repeater controller



ID-RP2D
1.2 GHz DD mode module



ID-RP2V
1.2 GHz DV mode module



ID-RP2000V
144 MHz DV mode module



ID-RP4000V
430/440 MHz DV mode module



RS-RP3C
Internet gateway software

D-STAR



VHF/UHF DIGITAL TRANSCEIVER

ID-5100A

Intuitive Touch Screen Operation

DV/DV Dualwatch

Integrated GPS Receiver

Intuitive Touch Screen Operation

The intuitive touch screen interface provides quick and smooth operation. The large 5.5-inch display (320 × 128 pixels) responds naturally to the touch, enabling you to change settings, enter frequencies and edit memory channels with ease.



Vehicle installation example
(Using optional MBF-1 mount base and MBA-2 controller bracket)

DV/DV Dualwatch

The ID-5100A can receive both FM/FM and FM/DV mode signals simultaneously. Two DV mode signals can be monitored for receive on either channel. You can check other repeaters or other channel activities while waiting for the main repeater.

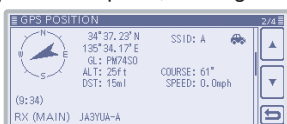


DV/DV dualwatch (DR function) example

* Main band audio has priority if two DV signals come in at the same time.

Integrated GPS Receiver

The ID-5100A has an integrated GPS receiver in the controller and shows own position, course, speed and altitude on the display. The GPS position information can be used for exchanging position reports, tracing the GPS log and searching for nearby repeater sites.



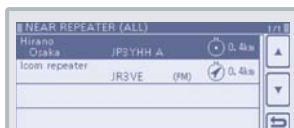
Received position information example



DV/FM Repeater Search Function

The DV/FM repeater search function assists you in accessing nearby repeaters, even in areas you are visiting for the first time. The function searches for a nearby repeater using the repeater memories with the GPS position information.

* To use the repeater search function, the position data of the repeater is required.



Repeater list example

DV Fast Data Mode*

By using data in place of voice frames, the ID-5100A can transfer data 3.5 times faster (3480 bps) than in the conventional DV mode (with voice).

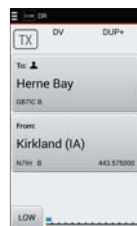
* The DV Fast Data mode is not compatible with the DV mode low-speed data communication.

RS-MS1A Remote Control Software (Free download Android™ application from Google Play™)

The RS-MS1A enables you to wirelessly connect to the ID-5100A and remotely set DR functions, link with a map application and send/receive messages over the DV mode. In addition, pictures taken by the Android™ device can be transmitted in the DV Fast Data mode or DV mode.

* Optional UT-133A Bluetooth® unit must be installed in the ID-5100A.

* Some functions may not work properly, depending on Android™ phones and devices used.



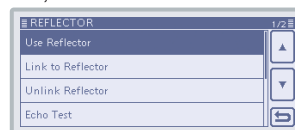
DR function setting example



Repeater map example © Google

Dplus Reflector Linking

Dplus reflector link commands are added to the DR function for easy reflector operation. Use reflector, link/unlink to reflector, echo test and repeater information commands are selectable.



Reflector commands example

SD Card Slot for Saving Data

When used with an SD card, various contents including communication contents, voice audio for the auto reply function, communication log, RX history log and GPS log data can be stored. Memory channels, repeater memories and other personal settings can also be saved and loaded to the transceiver.



SD card slot

VS-3 Bluetooth® Headset

The optional Bluetooth® headset, VS-3, provides wireless communication and can remotely control the ID-5100A with three programmable buttons. This provides convenient communication in a vehicle.

* Optional UT-133A Bluetooth® unit must be installed in the ID-5100A.

Bluetooth® application image



Other Features

- 50 W output power
- Repeater memory channels increased to 1500
- CTCSS and DTCS with split tone function
- Sub band mute auto
- D-PRS functions
- Convenient memory contents management using CSV format
- Speech function announces operating frequency, mode and received call sign (DV mode)
- Independent main, volume and squelch knobs for A/B bands
- AM airband dualwatch
- CS-5100, cloning software supplied
- Weather channel with weather alert function (USA version only)
- Auto repeater function (USA version only)

Firmware Update Available (Free Download)
<http://www.icom.co.jp/world/support/index.html>

Steps to send a picture over the DV mode (Use with the RS-MS1A)



Take a picture using an Android™ device



Transfer the photo to the ID-5100A via Bluetooth®



ID-5100A

Transmit the photo over the DV Fast Data mode



ID-5100A

Receive the photo at the ID-5100A



View the photo on an Android™ device

D-STAR



VHF/UHF DIGITAL TRANSCEIVER

ID-4100A

**Terminal Mode and
Access Point Mode**

**Compact, Detachable Controller
for Flexible Installation**

**DR Function with
the Latest Icom User Interface**

Terminal and Access Point Modes*

The Terminal and Access Point modes* enable you to enjoy long-distance D-STAR communication through the Internet. You can access the D-STAR repeater network through the internet, regardless of locations and conditions of nearby repeaters.

* An optional free download software, RS-MS3W/RS-MS3A is required to be installed in the PC/Android™ device. Please see p.10 for function details.

Compact, Detachable Controller for Flexible Installation

The controller can be attached or detached from the main unit for flexible installation. By using the supplied OPC-837 controller cable, you can install the controller up to 3.5 meters (11.5 ft) away from the main unit.

DR (D-STAR Repeater) Function

The DR function makes D-STAR communications simple. By simply selecting a destination call sign in "To," and your access repeater in "From," you can talk with other D-STAR users. In addition, using the reflector function, you can talk through several repeaters at once.

Easy-to-Read Full Dot-Matrix Display

To increase the amount of display information, a full dot-matrix display is used in the ID-4100A. For example, repeater list or GPS position information are clearly arranged and easy to read.



GPS position information

Repeater list

DV/FM Near Repeater Search Function

The DV/FM near repeater search function assists you in accessing nearby repeaters, even in areas you are visiting for the first time. The function searches for nearby repeaters using the repeater memories with the GPS position information.

* To use the repeater search function, the position data of the repeater is required.

DV Fast Data Mode*

By using the data place in voice frames, the ID-4100A transfers data 3.5 times faster (3480 bps) than in the conventional DV mode (with voice).

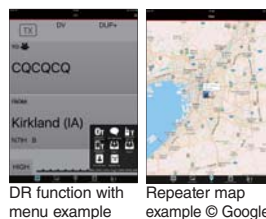
* The DV Fast Data mode is not compatible with the DV mode low-speed data communication.

Applications for iOS™ and Android™ Devices*

The RS-MS1I (for iOS™ devices) and RS-MS1A (for Android™ devices) enable you to wirelessly connect to the ID-4100A and remotely set the DR functions, link with a map application and send/receive messages over the DV mode. In addition, pictures taken by a iOS™/Android™ device can be transmitted via the DV Fast Data mode or DV mode.

* Optional UT-137 Bluetooth® unit must be installed in the ID-4100A.

* Some functions may not work properly, depending on your devices used.



DR function with menu example

Repeater map example © Google

VS-3 Bluetooth® Headset

The optional VS-3 Bluetooth® headset provides convenient wireless communication away from the transceiver. The VS-3 remotely controls the ID-4100A with three programmable buttons.

* Optional UT-137 Bluetooth® unit must be installed in the ID-4100A.

microSD Card Slot for Saving Data*

When used with a microSD card, you can store various contents including communication contents, voice audio, communication log, RX history log and GPS log data. Memory channels and other settings can be saved and loaded into the transceiver.

* A microSD card is required separately.



microSD card slot

Integrated GPS Receiver

The integrated GPS receiver shows your own position, course, speed and altitude on the display and can be used for exchanging position reports, D-PRS and searching for nearby repeaters.

Wideband Receiver

The ID-4100A receives 118–174 and 230–550 MHz*. You can listen to air band, marine, weather channels* and other VHF and UHF utility communications.

* Receiver range differs depending on version. Weather channel availability depends on version.

Selectable LCD and Key Backlight Color

The backlight color of the LCD and keys is selectable from white, green, amber or blue. Using the backlight night time setting function, the display backlight brightness can automatically be changed when the designated time comes.



Other Features

- 50 W output power both VHF and UHF bands
- The QUICK key enables instant access to menus listing dedicated functions
- Memory/bank scan, full scan, band scan, program scan, program link scan, duplex scan tone scan and DR scan
- 16 channels of DTMF memory (24-digit)
- CTCSS/DTCS signaling with the split tone functions (analog mode)
- 8.33 kHz air band channel reception
- Auto repeater function (USA version only)
- HM-207S remote-control microphone (supplied as standard)

Firmware Update Available (Free Download)
<http://www.icom.co.jp/world/support/index.html>

VHF/UHF DUAL BAND TRANSCEIVER

IC-2730A



**50 Watts of Output Power
on Both VHF and UHF Bands**

**VHF/VHF, UHF/UHF
Simultaneous Receive**

**Optional Wireless Remote Control
Bluetooth® Headset VS-3**

VHF/VHF, UHF/UHF Dual Receive

The IC-2730A provides VHF/VHF, UHF/UHF simultaneous receive capability as well as VHF/UHF receive. Main dials, volume, squelch knobs and primal buttons are symmetrically laid out for each band.

Optional VS-3 Bluetooth® Headset

The optional VS-3 Bluetooth® headset can wirelessly control the IC-2730A with three programmable keys and a PTT button. It also provides VOX operation for hands-free communication.

* Optional UT-133A Bluetooth® unit must be installed in the IC-2730A.



Optional VS-3 Bluetooth® headset

Wideband Receiver

The IC-2730A covers 118–174 and 375–550 MHz. You will be able to listen to aviation, marine, weather channels and other utility communications.

Mounting the Controller on a Flat Surface

The combination of the optional MBF-1 suction cup mounting base and MBA-5 controller bracket provides easy tilt and swivel adjustments. The large suction cup can be easily mounted on flat surfaces and can be removed.

Other Features

- 50 watts of output on VHF and UHF
- 50 CTCSS and 104 DTCS tones with split tone function
- HM-207 remote control microphone
- CS-2730 free download PC programming software
- Versatile scanning capability
- Squelch delay and squelch attenuator
- Sub band auto mute function
- Sub band busy beep function
- Auto repeater functions* (*Depending on the transceiver version)
- Auto power off
- Time-out-timer
- 16 DTMF auto dial memories
- Weather channel receive with weather alert* (* USA version only)
- CI-V remote control capability (through the OPC-478UC)

144MHz FM TRANSCEIVER

IC-2300H



**65 Watts of RF Output Power
with Heavy-Duty Endurance**

**Powerful 4.5 W Audio Output
Provides Loud and Clear Audio**

**Tested to the
MIL-STD 810 G Specifications**

Stable 65 W of Output Power

The IC-2300H can generate 65 W of output power. The rugged aluminum die-cast provides effective heat dissipation and keeps RF output even during high-duty cycle continuous transmission.

Built-in CTCSS and DTCS Encoder/Decoder

The CTCSS and DTCS tones are built-in for quiet stand-by and repeater access. The tone scan function detects the subaudible tone that is used for repeater access. The pocket beep function gives you an audible and visual indicator of an incoming call. The DTCS encoder function (DTCS transmit only) is also available.

A Total of 207 Memory Channels

The IC-2300H has a total of 207 memory channels, including 200 regular channels, six scan edges and one call channel. The channel name is programmable with six characters for easy recognition.

Multiple Scan Functions










The IC-2300H supports various scan types for maximum reception and ease of use. The DMS (Dynamic Memory Scan) system enables you to scan selected banks from 10 memory banks by simply adding and deleting bank links.


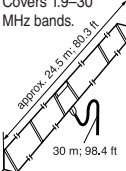







Other Features

- Tested to the MIL-STD 810 G specifications
- Simple operation
- Multiple scan functions
- Power supply voltage display
- Wide/narrow channel setting
- 4.5 W (typical) loud audio
- Reduced depth dimensions
- DTMF autodial
- Time-out timer
- Repeater lockout
- Automatic power off
- S-meter squelch
- Selectable LCD backlight color (amber, yellow and green)
- Weather channel receive and alert function (USA version only)
- Automatic repeater function (USA version only)
- Selectable squelch delay from short and long
- Squelch attenuator reduces suppression from strong signals
- PC to transceiver and transceiver to transceiver cloning capability

OPTIONS FOR BASE STATION TRANSCEIVERS








MODEL NAME	HAND MICROPHONES					DESKTOP MICROPHONES			EXTERNAL SPEAKERS
	HM-36 	HM-219 	HM-103 	HM-151 	HM-198 	SM-50 	SM-30 	SM-27 	SP-23 4 audio filters 
IC-7851	✓					✓	✓		
IC-7610	✓	✓				✓	✓		✓
IC-7700	✓	✓				✓	✓		
IC-7300	✓	✓				✓	✓		✓
IC-7410	✓	✓				✓	✓		✓
IC-718	✓	✓				✓	✓	✓	✓
IC-7100	(Use with OPC-589)	(Use with OPC-589)	✓	✓	✓	(Use with OPC-589)	(Use with OPC-589)		
IC-9100	✓	✓				✓	✓		✓







MODEL NAME	EXTERNAL SPEAKERS			DC POWER SUPPLY	ANTENNA ELEMENT	ANTENNA TUNERS		AUTO TUNING ANTENNA	NVIS KIT
	SP-33 Wooden box speaker 	SP-34 4 audio filters 	SP-35 2 m; 6.5 ft cable SP-35L 6m; 19.6 ft cable 	PS-126 13.8 V/25 A 4-pin type 	AH-2b Covers 7–54 MHz with AH-4. 	AH-4 Covers 3.5–54 MHz. 	AT-180 Covers 1.8–54 MHz. 	AH-740 Covers 2.5–30 MHz. (amateur band) OPC-2321 is required. 	AH-5NV Fiberglass antenna element for use with AH-740. Covers 2.2–30 MHz (amateur band) with AH-740. 
IC-7851	✓	✓							
IC-7610	✓	✓		✓	✓	✓		✓ (Use with OPC-2321)	✓
IC-7700	✓	✓							
IC-7300	✓	✓	✓	✓	✓	✓		✓ (Use with OPC-2321)	✓
IC-7410				✓	✓	✓		✓ (Use with OPC-2321)	✓
IC-718				✓ (Depending on version)	✓	✓	✓	✓ (Use with OPC-2321)	✓
IC-7100			✓ (Use SP-35)	✓	✓	✓	✓	✓ (Use with OPC-2321)	✓
IC-9100				✓	✓	✓		✓ (Use with OPC-2321)	✓

MODEL NAME	CONTROL CABLES	FOLDED DIPOLE ANTENNA	FILTERS			HIGH STABILITY CRYSTAL UNIT	DSP UNIT	LINEAR AMPLIFIER	CARRYING HANDLES
	OPC-2321 (6 m; 19.6 ft) For use with AH-740 OPC-420 (10 m; 32.8 ft) For use with AH-4  (Photo shows OPC-2321)	AH-710 Covers 1.9–30 MHz bands.  approx. 24.5 m; 80.3 ft 30 m; 98.4 ft	FL-430 6 kHz 1st IF FILTER (For HF/ 50 MHz band) 	FL-431 3 kHz 1st IF FILTER (For HF/ 50 MHz band) 	FL-53A 250 Hz/–6 dB FL-222 1.8 kHz/–6 dB FL-257 3.3 kHz/–6 dB 	CR-338 Frequency stability: ±0.5 ppm 	UT-106 	IC-PW1 	MB-23 MB-121 MB-123  (Photo shows MB-23)
IC-7851								✓	
IC-7610	✓	✓						✓	✓ (Use MB-121)
IC-7700								✓	
IC-7300	✓	✓						✓ (Use with OPC-599)	✓ (Use MB-123)
IC-7410	✓		✓	✓				✓ (Use with OPC-599)	✓ (Use MB-123)
IC-718	✓	✓			✓ (Accepts only one filter)	✓	✓ (Installed depending on version)	✓ (Use with OPC-599)	✓ (Use MB-23)
IC-7100	✓							✓ (Use with OPC-599)	
IC-9100	✓		✓	✓				✓ (Use with OPC-599)	✓ (Use MB-123)

☒ : Applicable
 ☐ : Not applicable

OPTIONS FOR BASE STATION TRANSCEIVERS

	MOBILE MOUNTING BRACKETS		MOUNTING BASE	CONTROLLER BRACKET	SEPARATION CABLES	MIC ADAPTER CABLE	ADAPTER CABLE	DC POWER CABLES	
MODEL NAME	MB-62	MB-118	MBF-1	MBA-1	OPC-2253 3.5 m; 11.5 ft OPC-2254 5.0 m; 16.4 ft	OPC-589 8-pin connector microphone to 8-pin modular	OPC-599 13-pin ACC socket to 7-, 8-pin ACC sockets	OPC-025A 20 A cable OPC-1457 30 A cable OPC-2361 25 A cable	
									
IC-7851									
IC-7610								(Use OPC-1457)	
IC-7700									
IC-7300		✓					✓	(Use OPC-2361)	
IC-7410							✓	(Use OPC-1457)	
IC-718		✓					✓	(Use OPC-025A)	
IC-7100	✓		(Use with MBA-1)	✓	✓	✓	✓	(Use OPC-1457)	
IC-9100							✓	(Use OPC-1457)	

	CLONING SOFTWARE		REMOTE CONTROL SOFTWARE	IP REMOTE CONTROL SOFTWARE	USB REMOTE ENCODER	D-STAR UNIT	DATA COMMUNICATION CABLES		
MODEL NAME	CS-9100 A USB cable (A-B type) is required for programming.	CS-7100	RS-MS1A ^{*1} 	RS-BA1 	RC-28 	UT-121 	OPC-1529R RS-232 cable for an external GPS or a PC 	OPC-2350LU USB cable for an Android™ device or a PC 	
IC-7851				✓	(Use with RS-BA1)				
IC-7610				✓	✓				
IC-7700				✓	(Use with RS-BA1)				
IC-7300				✓	(Use with RS-BA1)				
IC-7410				✓	(Use with RS-BA1)				
IC-718									
IC-7100		✓	(Use with OPC-2350LU)	✓	(Use with RS-BA1)		✓	✓	
IC-9100	✓			✓	(Use with RS-BA1)	✓	✓		

*1 Free download Android™ app. Download from Google Play™.

✓ : Applicable □ : Not applicable

IP REMOTE CONTROL SOFTWARE

RS-BA1

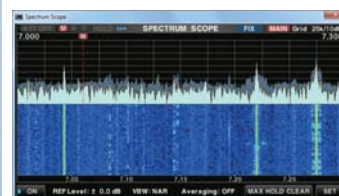


- Option for IC-7851, 7610, 7700, 7300, 7410, 7100 and 9100
- Most functions and modes of your transceiver can be remotely controlled over an IP network
- Low voice latency, high quality audio
- Waterfall spectrum scope can be observed (only for IC-7851, 7610 and 7300 single band)
- New slider control screen (e.g. RF power, CW pitch, twin PBT)
- Wake-up from standby mode via the RS-BA1 (for IC-7851, 7610, 7700, 7300 and 7100)

Software Update Available
<http://www.icom.co.jp/world/support/index.html>












USB REMOTE ENCODER
RC-28












Waterfall spectrum scope









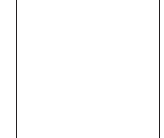
OPTIONS FOR HANDHELD TRANSCEIVERS

	BATTERY CASE	BATTERY PACKS		DESKTOP CHARGER	AC ADAPTER	WALL CHARGER	CIGARETTE LIGHTER CABLES	DC POWER CABLE	SPEAKER-MICROPHONES
MODEL NAME	BP-273 LR6 (AA) × 3 cells	BP-271 (Li-ion) 7.4 V/1150 mAh (min.), 1200 mAh (typ.)	BP-272 (Li-ion) 7.4 V/1880 mAh (min.), 2000 mAh (typ.)	BC-202 Rapid charger	BC-123S *1 12 V/1 A	BC-167S *2 12 V/500 mA	CP-12L with noise filter	OPC-254L	HM-75LS
									
ID-51A (PLUS2)	✓	✓	✓	(Use with BC-123S)	(Use with BC-202)	✓	✓	✓	✓
ID-31A PLUS	✓	✓	✓	(Use with BC-123S)	(Use with BC-202)	✓	✓	✓	✓

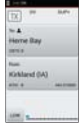


*1 BC-123SA for USA, SE for Europe and SV for Australia version available.

*2 BC-167SA for USA, SD for Europe and SV for Australia version available.

	SPEAKER-MICROPHONES		EARPHONE-MICROPHONES		HEADSETS			EARPHONE	PLUG ADAPTER CABLES
MODEL NAME	HM-183LS Waterproof	HM-186LS	HM-153LS	HM-166LS	HS-94 Earhook type with boom microphone	HS-95 Behind-the-head type	HS-97 Throat microphone type	SP-40	OPC-2006LS
									
ID-51A PLUS2	✓	✓	✓	✓	(Use with OPC-2006LS)	(Use with OPC-2006LS)	(Use with OPC-2006LS)		✓
ID-31A PLUS	✓	✓	✓	✓	(Use with OPC-2006LS)	(Use with OPC-2006LS)	(Use with OPC-2006LS)	(Use with OPC-2144)	✓

	PLUG ADAPTER CABLES	CARRYING CASES		SILICONE JACKET CASE	DATA CABLE	BELT CLIP	ANTENNAS	ANTENNA ADAPTER	PROGRAMMING SOFTWARE
MODEL NAME	OPC-2144	LC-178	LC-179	SJ-1 For use with BP-271	OPC-2350LU USB cable for an Android™ device or a PC	MB-127 Alligator type	FA-S270C VHF/UHF antenna FA-S70B UHF antenna	AD-925MA BNC type antenna connector	CS-51PLUS2 *3 CS-31PLUS *3
									
ID-51A (PLUS2)	✓	✓	✓	✓	✓	✓	(Use FA-S270C)	✓	(Use CS-51PLUS2)
ID-31A PLUS	✓	✓	✓	✓	✓	✓	(Use FA-S70B)	✓	(Use CS-31PLUS)

*3 CS-51PLUS2 and CS-31PLUS are available for free download from: <http://www.icom.co.jp/world/support/index.html>

	REMOTE CONTROL SOFTWARE	TERMINAL/ACCESS POINT MODE APP/SOFTWARE	
MODEL NAME	RS-MS1A *4	RS-MS3A *4 For Android™ device	RS-MS3W *5 For Windows® PC
			
ID-51A (PLUS2)	(Use with OPC-2350LU)	(Use with OPC-2350LU)	(Use with OPC-2350LU)
ID-31A PLUS	(Use with OPC-2350LU)	(Use with OPC-2350LU)	(Use with OPC-2350LU)

*4 Free download Android™ app. Download from Google Play™.

*5 Free download software for Windows® PC.

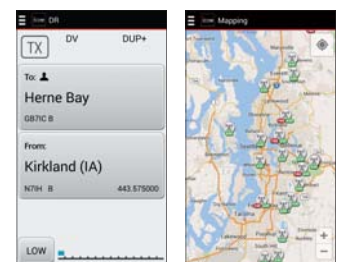
Download from the Icom website: <http://www.icom.co.jp/world/support/index.html>

☒ : Applicable ☐ : Not applicable

RS-MS1A/RS-MS1I Remote Control Software

(Free Download Android™/iOS™ Application from Google Play™ /App Store)

The RS-MS1A and RS-MS1I enable you to connect the digital transceiver with an Android™/iOS™ device and remotely control various functions and settings from the Android™/iOS™ device. You can take pictures with your iOS™ or Android™ devices, store them, and later share them over the DV mode.



DR function setting example

Repeater map example © Google

* An optional Bluetooth® unit (UT-133A or UT-137) or a data cable (OPC-2350LU) is required.










Not all functions are usable with the IC-7100.










* Some functions may not work properly, depending on Android™/iOS™ phones and devices used.

* Photo shows RS-MS1A.









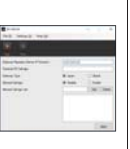
* The RS-MS1I for iOS application is available with UT-137 Bluetooth® unit installed ID-4100A only.



OPTIONS FOR MOBILE TRANSCEIVERS

	HAND MICROPHONES						BLUETOOTH® HEADSET	MOUNTING BASE	MOUNTING BRACKET
MODEL NAME	HM-198 	HM-209 Noise canceling microphone 	HM-207 HM-207S 	HM-154 	HM-232 	HM-133V 	VS-3 	MBF-1 	MBF-4 
ID-5100A	✓	✓	(Use HM-207)	✓	✓		(Use with UT-133A)	(Use with MBA-2)	✓
ID-4100A	✓	✓	(Use HM-207S)	✓	✓		(Use with UT-137)	(Use with MBA-8)	✓
IC-2730A	✓	✓	(Use HM-207)	✓	✓		(Use with UT-133A)	(Use with MBA-5)	✓
IC-2300H		✓				✓			

	CONTROLLER BRACKETS			COMBINATION BRACKET	EXTERNAL SPEAKERS		MICROPHONE CABLES	MIC ADAPTER CABLE	CONTROLLER CABLE
MODEL NAME	MBA-2 	MBA-8 	MBA-5 	MBA-4 	SP-35 2 m; 6.5 ft cable SP-35L 6 m; 19.6 ft cable 	SP-30 4 inch (102.5 mm) diameter speaker 	OPC-440A 5.0 m; 16.4 ft OPC-647 2.5 m; 8.2 ft 	OPC-589 8-pin connector microphone to 8-pin modular 	OPC-1156 3.5 m; 11.4 ft 
ID-5100A	✓*1				✓	✓	✓	✓	✓
ID-4100A		✓			✓	✓	✓	✓	✓
IC-2730A			✓	✓	✓	✓	✓	✓	✓
IC-2300H					✓		✓	✓	

*1 Supplied with the ID-5100A, depending on the ID-5100A version.

	DATA COMMUNICATION CABLES		PROGRAMMING CABLE	CLONING CABLE	BLUETOOTH® UNIT		PROGRAMMING SOFTWARES	TERMINAL/ACCESS POINT MODE APP/SOFTWARE	
MODEL NAME	OPC-1529R RS-232 cable 	OPC-2350LU USB cable for an Android™ or a PC 	OPC-478UC Transceiver to PC USB cable 	OPC-474 Between transceivers 	UT-133A 	UT-137 	CS-5100 *2 CS-4100 *2 CS-2730 *2 CS-2300H 	RS-MS3A *3 For Android™ device 	RS-MS3W *4 For windows® device 
ID-5100A	✓	✓	✓		✓		(Use CS-5100)		
ID-4100A	✓	✓	✓			✓	(Use CS-4100)	(Use with OPC-2350LU)	(Use with OPC-2350LU)
IC-2730A			✓	✓	✓		(Use CS-2730)		
IC-2300H			✓	✓			(Use CS-2300H)		

	REMOTE CONTROL SOFTWARE	REMOTE CONTROL APP
MODEL NAME	RS-MS1A*3 For Android™ device 	RS-MS11*5 For iOS™ device 
ID-5100A	✓ (Use with UT-133A)	
ID-4100A	✓ (Use with UT-137)	✓ (Use with UT-137)
IC-2730A		
IC-2300H		

*2 CS-5100, CS-4100 and CS-2730 are available for free download from Icom website:
<http://www.icom.co.jp/world/support/index.html>

*3 Free download Android™ app. Download from Google Play™.

*4 Free download software for Windows® PC. Download from the Icom website:
<http://www.icom.co.jp/world/support/index.html>

*5 Free download iOS™ app. Download from the App Store.

Note for the Terminal mode and Access point mode:

- You need an Internet connection with an IPv4 Global IP address. If you use a cellular system, you need an IPv4 Global IP address assigned to your Windows® or Android™ device.
- Before you set up the Access point, check any regulations or laws in your country.
- When operating in the Access Point mode, you need two call signs. One for the Access Point transceiver and one for the Remote D-STAR transceiver.
- For the Access point or Terminal mode operation, you must register your MY and Access point call signs with a Gateway repeater/server that has the RS-RP3C installed.

✓ : Applicable □ : Not applicable

SPECIFICATIONS FOR BASE STATION TRANSCEIVERS

		IC-7851	IC-7610	IC-7700	IC-7300
General	Frequency coverage (Differs according to version)	Tx: 1.8, 3.5, 5 ^{*1} , 7, 10, 14, 18, 21, 24, 28, 50 MHz bands Rx: 30 kHz–60 MHz ^{*2}	Tx: 1.8, 3.5, 5 ^{*1} , 7, 10, 14, 18, 21, 24, 28, 50 MHz bands Rx: 30 kHz–60 MHz ^{*2}	Tx: 1.8, 3.5, 5 ^{*1} , 7, 10, 14, 18, 21, 24, 28, 50 MHz bands Rx: 30 kHz–60 MHz ^{*2}	Tx: 1.8, 3.5, 5 ^{*1} , 7, 10, 14, 18, 21, 24, 28, 50 MHz bands Rx: 30 kHz–60 MHz ^{*2}
	Modes	USB, LSB, CW, RTTY, PSK31/63, AM, FM	USB, LSB, CW, RTTY, PSK31/63, AM, FM	USB, LSB, CW, RTTY, PSK31, AM, FM	USB, LSB, CW, RTTY, AM, FM
	Frequency stability	±0.05 ppm (0°C to +50°C; +32°F to +122°F, after warm up)	Less than ±0.5 ppm (0°C to +50°C; +32°F to +122°F)	±0.05 ppm (0°C to +50°C; +32°F to +122°F, after warm up)	Less than ±0.5 ppm (–10°C to +60°C; +14°F to +140°F)
	Maximum current drain	800 VA (85–265 V AC)	23 A at 13.8 V DC	800 VA (85–265 V AC)	21 A at 13.8 V DC
	Antenna connector	SO-239 × 4, BNC × 2 (50 Ω)	SO-239 × 2, BNC (50 Ω)	SO-239 × 4, BNC (50 Ω)	SO-239 (50 Ω)
	Dimensions (W × H × D; Projections are not included)	425 × 149 × 435 mm; 16.7 × 5.9 × 17.1 in	340 × 118 × 277 mm; 13.4 × 4.6 × 10.9 in	425×149×437 mm; 16.73×5.87×17.2 in	240 × 94 × 238 mm; 9.4 × 3.7 × 9.4 in
	Weight (approx.)	23.5 kg; 51.8 lb	8.5 kg; 18.7 lb	22.5 kg; 49.6 lb	4.2 kg; 9.3 lb
Transmitter	Output power	SSB, CW, RTTY, PSK, FM: 5–200 W AM: 5–50 W	SSB, CW, RTTY, PSK, FM: 1–100 W AM: 1–25 W	SSB, CW, RTTY, PSK31, FM: 5–200 W AM: 5–50 W	SSB, CW, RTTY, FM: 2–100 W AM: 1–25 W
Receiver	Sensitivity (typical) Preamp ON SSB, CW, RTTY, AM: at 10 dB S/N FM, WFM: at 12 dB SINAD	SSB, CW, RTTY, PSK (2.4 kHz): 0.1–1.799 MHz 0.5 μV 1.8–29.999 MHz 0.16 μV 50–54 MHz 0.13 μV AM (6 kHz): 0.1–1.799 MHz 6.3 μV 1.8–29.999 MHz 2.0 μV 50–54 MHz 1.0 μV FM (15 kHz): 28–29.999 MHz 0.5 μV 50–54 MHz 0.32 μV	SSB, CW (2.4 kHz): 1.8–29.999 MHz 0.15 μV 50 MHz band 0.12 μV AM (6 kHz): 0.1–1.799 MHz 6.3 μV 1.8–29.999 MHz 2.0 μV 50 MHz band 1.0 μV FM (15 kHz): 28–29.700 MHz 0.5 μV 50 MHz band 0.3 μV	SSB, CW, RTTY, PSK31 (2.4 kHz): 0.1–1.799 MHz 0.5 μV 1.8–29.999 MHz 0.16 μV 50–54 MHz 0.13 μV AM (6 kHz): 0.1–1.799 MHz 6.3 μV 1.8–29.999 MHz 2.0 μV 50–54 MHz 1.0 μV FM (15 kHz): 28–29.999 MHz 0.5 μV 50–54 MHz 0.32 μV	SSB, CW (2.4 kHz): 1.8–29.999 MHz 0.16 μV 50–54 MHz 0.13 μV AM (6 kHz): 0.5–1.8 MHz 12.6 μV 1.8–29.999 MHz 2.0 μV 50–54 MHz 1.0 μV FM (15 kHz): 28–29.7 MHz 0.5 μV 50–54 MHz 0.25 μV
	Selectivity	SSB: 2.4 kHz/–3 dB (2.4 kHz) 3.6 kHz/–60 dB CW: 500 Hz/–3 dB (500 Hz) 700 Hz/–60 dB RTTY: 500 Hz/–60 dB (500 Hz) 700 Hz/–60 dB AM: 6.0 kHz/–3 dB (6 kHz) 10 kHz/–60 dB FM: 12 kHz/–6 dB (15 kHz) 20 kHz/–60 dB * Variable between 50 Hz and 3.6 kHz.	SSB: 2.4 kHz/–6 dB (2.4 kHz) 3.6 kHz/–60 dB CW: 500 Hz/–6 dB (500 Hz) 700 Hz/–60 dB RTTY: 500 Hz/–6 dB (500 Hz) 700 Hz/–60 dB AM: 6.0 kHz/–6 dB (6 kHz) 15 kHz/–60 dB FM: 12 kHz/–6 dB (15 kHz) 20 kHz/–60 dB * Variable between 50 Hz and 3.6 kHz.	SSB: 2.4 kHz/–3 dB (2.4 kHz) 3.6 kHz/–60 dB CW: 500 Hz/–3 dB (500 Hz) 700 Hz/–60 dB RTTY, PSK31: 360 Hz/–6 dB (500 Hz) 650 Hz/–60 dB AM: 6.0 kHz/–3 dB (6 kHz) 15 kHz/–60 dB FM: 12 kHz/–6 dB (15 kHz) 20 kHz/–60 dB * Variable between 50 Hz and 3.6 kHz.	SSB: 2.4 kHz/–6 dB (2.4 kHz) 3.4 kHz/–40 dB CW: 500 Hz/–6 dB (500 Hz) 700 Hz/–40 dB RTTY: 500 Hz/–6 dB (500 Hz) 800 Hz/–40 dB AM: 6.0 kHz/–6 dB (6 kHz) 10 kHz/–40 dB FM: 12 kHz/–6 dB (15 kHz) 22 kHz/–40 dB * Variable between 50 Hz and 3.6 kHz.
	Spurious and image rejection	More than 70 dB	More than 70 dB* * Except for ADC aliasing on 50 MHz band.	More than 70 dB	More than 70 dB* * Except for ADC aliasing on 50 MHz band.
	Audio output power	More than 2.6 W (10% distortion, 8 Ω load)	More than 2.0 W (10% distortion, 8 Ω load)	More than 2.6 W (10% distortion, 8 Ω load)	More than 2.5 W (10% distortion, 8 Ω load)

*1 Depending on version. *2 Some frequency ranges are not guaranteed.

		IC-7410	IC-718	IC-7100	IC-9100
General	Frequency coverage (Differs according to version)	Tx: 1.8, 3.5, 5 ^{*1} , 7, 10, 14, 18, 21, 24, 28, 50 MHz bands Rx: 30 kHz–60.000 MHz ^{*2}	Tx: 1.8, 3.5, 7, 10, 14, 18, 21, 24, 28 MHz bands Rx: 30 kHz–29.999 MHz ^{*2}	Tx: 1.8, 3.5, 5 ^{*1} , 7, 10, 14, 18, 21, 24, 28, 50, 144, 430, 440 MHz bands Rx: 30 kHz–199.999 MHz, 400–480 MHz ^{*2}	Tx: 1.8, 3.5, 5 ^{*1} , 7, 10, 14, 18, 21, 24, 28, 50, 144, 430, 440, 1200 MHz bands ^{*3} Rx: 30 kHz–60 MHz ^{*2} , 136–174 MHz ^{*2} , 420–480 MHz ^{*2} , 1240–1320 MHz ^{*3}
	Modes	USB, LSB, CW, RTTY, AM, FM	USB, LSB, CW, RTTY, AM	USB, LSB, CW, RTTY, DV, AM, FM, WFM* (*Rx only)	USB, LSB, CW, RTTY (FSK), AM*, FM, DV (with UT-121) * Transmit HF/50 MHz only. Cannot receive on 1200 MHz band.
	Frequency stability	Less than ±0.5 ppm (0°C to +50°C; +32°F to +122°F)	Less than ±200 Hz (From 1 min. to 60 min. after power ON)	±0.5 ppm (0°C to +50°C @ 430 MHz)	±0.5 ppm (0°C to +50°C; +32°F to +122°F, after warm up)
	Maximum current drain	23 A at 13.8 V DC	20 A at 13.8 V DC	22 A at 13.8 V DC	24 A at 13.8 V DC
	Antenna connector	SO-239 × 2 (50 Ω)	SO-239 (50 Ω)	SO-239 × 2 (50 Ω)	SO-239 (50 Ω) × 3, Type-N (50 Ω) × 2 ^{*3}
	Dimensions (W × H × D; Projections are not included)	315 × 116 × 343 mm; 12.4 × 4.6 × 13.5 in	240 × 95 × 239 mm; 9.4 × 3.7 × 9.4 in	Main unit 167 × 58 × 225 mm; 6.6 × 2.3 × 8.9 in Controller 165 × 64 × 78.5 mm; 6.5 × 2.5 × 3.1 in	315 × 116 × 343 mm; 12.4 × 4.6 × 13.5 in
	Weight (approx.)	10.2 kg; 22.4 lb	3.8 kg; 8.4 lb	Main unit 2.3 kg; 5.1 lb Controller 0.5 kg; 1.1 lb	IC-9100: 11 kg; 24.3 lb UX-9100: 950 g; 2.1 lb
Transmitter	Output power	SSB, CW, RTTY, FM: 2–100 W AM: 2–27 W	SSB, CW, RTTY: 2–100 W AM: 2–35 W	SSB, CW, RTTY, FM, DV: 1.8–50 MHz 2–100 W 144 MHz 2–50 W 430 MHz 2–35 W AM: 1.8–50 MHz 1–30 W	SSB, CW, RTTY, FM, DV ^{*4} : HF/50/144 MHz 2–100 W 430 MHz 2–75 W 1200 MHz ^{*3} 1–10 W AM: HF/50 MHz 2–30 W
Receiver	Sensitivity (typical) Preamp ON SSB, CW, RTTY, AM: at 10dB S/N FM, WFM: at 12 dB SINAD DV: at 1% BER	SSB, CW (2.4 kHz): 1.8–29.999 MHz 0.16 μV 50–54 MHz 0.13 μV AM (6 kHz): 0.5–1.8 MHz 12.6 μV 1.8–29.999 MHz 2.0 μV 50–54 MHz 1.6 μV FM (15 kHz): 28–29.7 MHz 0.5 μV 50–54 MHz 0.32 μV	SSB, CW, RTTY: 1.8–29.999 MHz 0.16 μV AM: 0.5–1.799 MHz 13 μV 1.8–29.999 MHz 2.0 μV	SSB, CW: 1.8–29.999 MHz 0.15 μV (2.4 kHz) 50–54 MHz 0.12 μV 144/430 MHz 0.11 μV AM: 0.5–1.8 MHz 13 μV (6 kHz) 1.8–29.999 MHz 2.0 μV 50–54 MHz 1.0 μV 144/430 MHz 1.0 μV FM: 28–29.7 MHz 0.5 μV (15 kHz) 50–54 MHz 0.25 μV 144/430 MHz 0.18 μV DV: 28–29.7 MHz 1 μV 50–54 MHz 0.63 μV 144/430 MHz 0.35 μV WFM: 76–108 MHz 10 μV	SSB, CW: 1.8–29.999 MHz 0.16 μV (2.4 kHz) 50–54 MHz 0.13 μV 144/430/1200 MHz ^{*3} 0.11 μV AM: 0.5–1.8 MHz 12.6 μV (6 kHz) 1.8–29.999 MHz 2.0 μV 50–54 MHz 1.6 μV 144/440 MHz 1.4 μV FM: 28–29.7 MHz 0.5 μV (15 kHz) 50–54 MHz 0.32 μV 144/440/1200 MHz ^{*3} 0.18 μV DV ^{*4} : 28–29.7 MHz 1.0 μV 50–54 MHz 0.63 μV 144/440/1200 MHz ^{*3} 0.35 μV
	Selectivity	SSB: 2.4 kHz/–6 dB (2.4 kHz) 3.4 kHz/–40 dB CW: 500 Hz/–6 dB (500 Hz) 700 Hz/–60 dB RTTY: 500 Hz/–6 dB (350 Hz) 800 Hz/–40 dB AM: 6.0 kHz/–6 dB (6 kHz) 10 kHz/–40 dB FM: 12 kHz/–6 dB (15 kHz) 22 kHz/–40 dB	SSB, CW, RTTY: 2.1 kHz/–6 dB 4.5 kHz/–60 dB AM: 6.0 kHz/–6 dB 20 kHz/–40 dB	SSB: 2.4 kHz/–6 dB (2.4 kHz) 3.4 kHz/–40 dB CW: 500 Hz/–6 dB (500 Hz) 700 Hz/–60 dB RTTY: 500 Hz/–6 dB (500 Hz) 800 Hz/–40 dB AM: 6.0 kHz/–6 dB (6 kHz) 10 kHz/–40 dB FM: 12 kHz/–6 dB (15 kHz) 22 kHz/–40 dB DV (12.5 kHz): –50 dB	SSB: 2.4 kHz/–6 dB (2.4 kHz) 3.4 kHz/–40 dB CW: 500 Hz/–6 dB (500 Hz) 700 Hz/–40 dB RTTY: 500 Hz/–6 dB (500 Hz) 800 Hz/–40 dB AM: 6.0 kHz/–6 dB (6 kHz) 10.0 kHz/–40 dB FM: 12 kHz/–6 dB (15 kHz) 22 kHz/–40 dB DV (12.5 kHz) ^{*4} : –50 dB
	Spurious and image rejection	More than 70 dB	More than 70 dB (1.8–29.999 MHz)	More than 70 dB (HF/50 MHz)* More than 65 dB (144/430 MHz)* * Except 1/2 IF through on 50 MHz, IF through on 144 MHz	HF/50 MHz More than 70 dB* 144/430 MHz More than 60 dB 1200 MHz More than 50 dB ^{*3} * Except IF point on 50 MHz band
	Audio output power	More than 2.0 W (10% distortion, 8 Ω load)	More than 2.0 W (10% distortion, 8 Ω load)	More than 2.0 W (10% distortion, 8 Ω load)	More than 2.0 W (10% distortion, 8 Ω load)

*1 Depending on version. *2 Some frequency ranges are not guaranteed. *3 Optional UX-9100 is required for 1200 MHz frequency band operation. *4 Optional UT-121 is required for D-STAR DV mode operation.

SPECIFICATIONS FOR HANDHELD AND MOBILE TRANSCEIVERS

	ID-51A PLUS2	ID-31A PLUS	ID-5100A	ID-4100A	IC-2730A	IC-2300H
Frequency coverage (Differs according to version)	USA version: Tx 144-148, 430-450MHz*1 Rx (A) 137-174, 380-479 MHz*1 (B) 108-174, 380-479 MHz*1 Broadcast 520-1710 kHz, 88-108 MHz	USA version: Tx 430-450 MHz*3 Rx 400-479 MHz*3 EXP version: Tx/Rx 400-479 MHz*4 EXP-01 version: Tx 430-440 MHz Rx 400-479 MHz*4	USA version : Tx 144-148, 430-450 MHz*1 Rx 118-174, 375-550 MHz*1 EXP version : Tx 137-174, 400-470 MHz*2 Rx 118-174, 375-550 MHz*2	USA version : Tx 144-148, 430-450 MHz Rx 118-174, 230-550 MHz*5 EXP version : Tx 137-174, 400-470 MHz*2 Rx 118-174, 230-550 MHz*2	USA version : Tx 144-148, 430-450 MHz Rx 118-174, 375-550 MHz*5 EXP version : Tx 137-174, 400-470 MHz*2 Rx 118-174, 375-550 MHz*2	USA version: Tx 144-148 MHz Rx 136-174 MHz*6 EXP version: Tx/Rx 136-174 MHz*6
Modes	DV, FM, FM-N, AM (Rx only)	DV, FM, FM-N	DV, FM, FM-N, AM (Rx only), AM-N (Rx only)	DV, FM, FM-N, AM (Rx only), AM-N (Rx only)	FM, FM-N, AM (Rx only), AM-N (Rx only)	FM, FM-N
Max. current drain	2.5 A	2.5 A	13 A	13 A	13 A	11 A
Number of memory channels	554 (500 regular, 50 scan edges and 4 call channels) + 750 repeater memory channels	552 (500 regular, 50 scan edges and 2 call channels) + 750 repeater memory channels	1054 (1000 regular, 50 scan edges and 4 call channels) + 1500 repeater memory channels	1054 (1000 regular, 50 scan edges, 4 call channels.) + 1500 repeater memory channels	1052 (1000 regular, 50 scan edges and 2 call channels)	207 (200 regular, 6 scan edges and 1 call channel)
Dimensions (W×H×D; Projections are not included)	58 × 105.4 × 26.4 mm; 2.3 × 4.1 × 1.0 in	58 × 95 × 25.4 mm; 2.3 × 3.7 × 1.0 in	Main unit: 150 × 40 × 172.6 mm; 5.9 × 1.6 × 6.8 in Controller: 182.2 × 81.5 × 24.7 mm; 7.2 × 3.2 × 1.0 in	Main unit + Controller: 150 × 40 × 171.9 mm; 5.9 × 1.6 × 6.8 in Controller: 122 × 40 × 29.7 mm; 4.8 × 1.6 × 1.2 in	Main unit: 150 × 40 × 151 mm; 5.9 × 1.6 × 5.9 in Controller: 150 × 50 × 27.2 mm; 5.9 × 2.0 × 1.1 in	140 × 40 × 162 mm; 5.5 × 1.6 × 6.4 in
Weight (approx.)	255 g; 9.0 oz with antenna and BP-271	220g; 7.8 oz with antenna and BP-271	Main unit: 1.3 kg; 2.9 lb Controller: 260 g; 9.2 oz	Main unit: 1.1 kg; 2.4 lb Controller: 100 g; 3.5 oz	Main unit: 1.2 kg; 2.6 lb Controller: 140 g; 4.9 oz	1.1 kg; 2.4 lb
Output power (approx.) (Differs according to version)	5 W, 2.5 W, 1.0 W, 0.5 W, 0.1 W (Hi, Mid, Low1, Low2, S-Low)	5 W, 2.5 W, 1.0 W, 0.5 W, 0.1 W (Hi, Mid, Low1, Low2, S-Low)	50 W, 15 W, 5 W (Hi, Mid, Low)	50 W, 15 W, 5 W (Hi, Mid, Low)	50 W, 15 W, 5 W (Hi, Mid, Low)	65 W, 25 W, 10 W, 5 W (Hi, Mid-Hi, Mid-Lo, Low)
Sensitivity (FM: at 12 dB SINAD DV: at 1% BER Guaranteed range)	DV Less than 0.28 µV FM/FM-N Less than 0.18 µV (144, 430, 440 MHz bands)	DV Less than 0.28 µV FM/FM-N Less than 0.18 µV	DV Less than 0.28 µV FM/FM-N Less than 0.18 µV (144, 430, 440 MHz bands)	DV Less than 0.22 µV FM/FM-N Less than 0.18 µV (144, 430, 440 MHz bands)	FM/FM-N Less than 0.18 µV (144, 430, 440 MHz bands)	FM/FM-N Less than 0.18 µV
Audio output power (10 % distortion)	More than 400 mW (Internal SP, 16 Ω load) More than 200 mW (External SP, 8 Ω load)	More than 400 mW (Internal SP, 16 Ω load) More than 200 mW (External SP, 8 Ω load)	More than 2.0 W (8 Ω load)	More than 2.0 W (8 Ω load)	More than 2.0 W (8 Ω load)	4.5 W typ. (4 Ω load)

*1 Guaranteed range 144-148 and 440-450 MHz. *2 Guaranteed range 144-148 and 430-440 MHz. *3 Guaranteed range 440-450 MHz. *4 Guaranteed range 430-440 MHz.

*5 Guaranteed range 144-148 and 430-450 MHz. *6 Guaranteed range 144-148 MHz.

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



Applicable U.S. Military Specifications

Icom makes rugged products that have been tested to and passed the MIL-STD requirements and strict environmental standards for shock and vibration.

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Icom Inc.

1-1-32, Kamiminami, Hirano-Ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013

www.icom.co.jp/world

Count on us!

Icom America Inc.

12421 Willows Road NE,
Kirkland, WA 98034, U.S.A.
Phone: +1 (425) 454-8155
Fax: +1 (425) 454-1509
E-mail: sales@icomamerica.com
URL: <http://www.icomamerica.com>

Icom Canada

Glenwood Centre #150-6165
Highway 17A, Delta, B.C.,
V4K 5B8, Canada
Phone: +1 (604) 952-4266
Fax: +1 (604) 952-0090
E-mail: info@icomcanada.com
URL: <http://www.icomcanada.com>

Icom Brazil

Rua Itororó, 444 Padre Eustáquio
Belo Horizonte MG,
CEP: 30720-450, Brazil
Phone: +55 (31) 3582 8847
Fax: +55 (31) 3582 8987
E-mail: sales@icombrasil.com

Icom (Europe) GmbH

Communication Equipment
Auf der Krautweide 24
65812 Bad Soden am Taunus, Germany
Phone: +49 (6196) 76685-0
Fax: +49 (6196) 76685-50
E-mail: info@icomeurope.com
URL: <http://www.icomeurope.com>

Icom Spain S.L.

Ctra. Rubi, No. 88 "Edificio Can Castanyer"
Bajos A 08174, Sant Cugat del Valles,
Barcelona, Spain
Phone: +34 (93) 590 26 70
Fax: +34 (93) 589 04 46
E-mail: icom@icomspain.com
URL: <http://www.icomspain.com>

Icom (UK) Ltd.

Blacksole House, Altira Park,
Horne Bay, Kent, CT6 6GZ, U.K.
Phone: +44 (0) 1227 741741
Fax: +44 (0) 1227 741742
E-mail: info@icomuk.co.uk
URL: <http://www.icomuk.co.uk>

Icom France s.a.s.

Zac de la Plaine,
1 Rue Brindejonc des Moulins, BP 45804,
31505 Toulouse Cedex 5, France
Phone: +33 (5) 61 36 03 03
Fax: +33 (5) 61 36 03 00
E-mail: icom@icom-france.com
URL: <http://www.icom-france.com>

Icom (Australia) Pty. Ltd.

Unit 1 / 103 Garden Road,
Clayton, VIC 3168 Australia
Phone: +61 (03) 9549 7500
Fax: +61 (03) 9549 7505
E-mail: sales@icom.net.au
URL: <http://www.icom.net.au>

Shanghai Icom Ltd.

No.101, Building 9, Caifuxingyuan Park,
No.188 Maotang Road, Chedun Town,
Songjiang District, Shanghai, 201611, China
Phone: +86 (021) 6153 2768
Fax: +86 (021) 5765 9987
E-mail: bjicom@bjicom.com
URL: <http://www.bjicom.com>

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