

SPECIFICATIONS

GENERAL

• Frequency coverage

| Version | Transmit | Receiver |
|---------|---------------|---------------|
| USA | 420-450MHz *1 | 400-479MHz *1 |
| EXP | 400-479MHz *2 | 400-479MHz *2 |
| EXP-01 | 430-440MHz | 400-479MHz *2 |
| AUS | 420-450MHz *2 | 400-479MHz *2 |
| KOR | 430-440MHz | 430-440MHz |

Guaranteed range: *1 440-450MHz, *2 430-440MHz

| | |
|--|---|
| • Type of emission | F2D, F3E, F7W |
| • Mode | DV, FM, FM-N |
| • Number of memory channels | 1252 channels (including 500 regular channels, 700 D-STAR repeater, 50 program scan edges and 2 call) |
| • Frequency resolution | 5, 6.25, 10, 12.5, 15, 20, 25, 30, 50, 100, 125 and 200kHz |
| • Operating temperature range | -20°C to +60°C; -4°F to +140°F |
| • Frequency stability | ±2.5ppm |
| • Power supply requirement | 7.4V DC (with BP-271, BP-272) 5.5V DC (with BP-273) |
| • Current drain (at 7.4V DC) | Tx High Rx Internal SP (16Ω) External SP (8Ω) |
| • Antenna impedance | 50Ω (SMA) |
| • Dimensions (WxHxD, projections not included) | 58x95x25.4 mm; 2.28x3.74x1 in |
| • Weight (approx.) | 140g; 4.94oz (without battery), 225g; 7.94oz (with BP-271 & antenna) |

TRANSMITTER

| | |
|-----------------------------|--|
| • Modulation system | DV, FM, FM-N GMSK reactance modulation, FM reactance modulation |
| • Output power (at 7.4V DC) | 5W, 2.5W, 0.5W, 0.1W (High, Mid, Low, S-low) |
| • Spurious emissions | Less than -60dBc (High, Mid), Less than -13dBm (Low, S-low) |
| • Max. frequency deviation | ±5.0/2.5kHz (FM/FM-N) |
| • Ext. Mic impedance | 2.2kΩ |

RECEIVER

| | |
|----------------------|---|
| • Sensitivity | DV, FM, FM-N Less than 0.28µV (at 1% BER) Less than 0.18µV (at 12dB SINAD) |
| • Selectivity | DV FM FM-N More than 50dB More than 55dB More than 50dB |
| • Spurious rejection | More than 60dB |
| • Audio output power | Internal SP (16Ω load) External SP (8Ω load) More than 400mW More than 200mW |

Supplied accessories (*Depending on version)

- Battery pack, BP-271 • Wall charger, BC-167SA/SD/SV*
- Antenna, FA-S270C • Belt clip, MB-127
- Hand strap • Cloning software, CS-31

OPTIONS Some options may not be available in some countries. Please ask your dealer for details.

BATTERY PACKS AND CASE

| Battery packs | Type | Capacity | Operating time* (Approx.) |
|---------------|----------------------|--------------------------------|--------------------------------|
| BP-271 | Li-ion, 7.4V | 1150mAh (min.), 1200mAh (typ.) | 4.5hours (DV) 4.5hours (FM) |
| BP-272 | Li-ion, 7.4V | 1880mAh (min.), 2000mAh (typ.) | 7.5hours (DV) 8hours (FM) |
| BP-273 | LR6 (AA) batteries×3 | - | - |

* Tx: Rx: standby = 1:1.8. Power save function ON, GPS OFF.

WALL CHARGER



RAPID CHARGER



DC POWER CABLE



CIGARETTE LIGHTER CABLE



SPEAKER-MICROPHONES



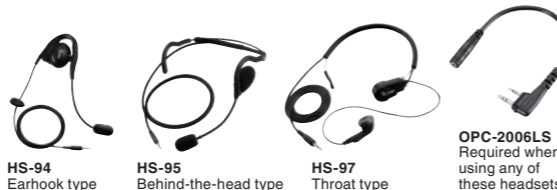
EARPHONE-MICROPHONES



SLIM L-TYPE PLUG ADAPTER CABLE



HEADSETS and PLUG ADAPTER CABLE



DATA CABLE



CI-V LEVEL CONVERTER



CARRYING CASE



BELT CLIP



- FA-S270C UHF ANTENNA**
Same as supplied.
- AD-92SMA ANTENNA ADAPTER**
SMA-BNC antenna adapter.
- SP-13 EARPHONE**
OPC-2144 is required.
- CS-31 CLONING SOFTWARE**
Same as supplied.

All stated specifications are subject to change without notice or obligation.
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Your local distributor/dealer:

ICOM

UHF DIGITAL TRANSCEIVER
ID-31A

Further Pushing Evolutionary Boundaries!

Compact
& Lightweight

IPX7
Submersible

GPS
Receiver



D-STAR

Compact & Lightweight



IPX7 Submersible



GPS Receiver



A New Generation of Multi-Function, Easy-to-Use Digital Transceiver

Lightweight & Compact Body

The ID-31A has a compact 58x95x25.4mm (2.28x3.74x1 in) body, and weighs only 225g (7.94oz) with battery pack and antenna (approx.). It's easy for carrying around all the time, anywhere.

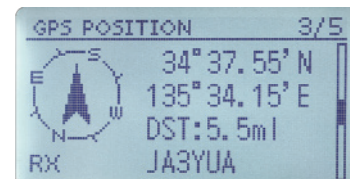
IPX7 Submersible Construction

The ID-31A provides superior waterproof protection equivalent to IPX7 (1m depth of water for 30 minutes). Ideal for use in harsh outdoor environments.

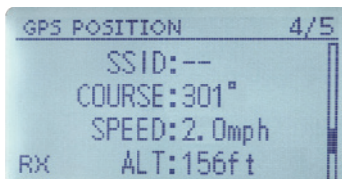


Built-in GPS Receiver

The built-in GPS receiver shows your current position and altitude on the display and offers a position reporting function in DV mode. The GPS log function logs your position information at regular intervals (1 second–60 seconds, depending on the setting) and memorizes this in the microSD card to export to your PC. In addition, the GPS-A mode assists in easy D-PRS mode operation.



RX (Received station) position information example



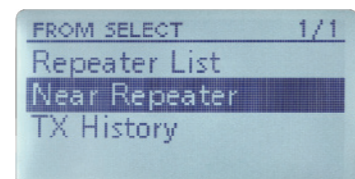
D-STAR DV (Digital Voice) Mode

The D-STAR DV mode has lots of advantages over the analog FM mode: digitally modulated clear voice, 950 bps (approx.) data, individual calling using a call sign and access to the world wide repeater network linked with the Internet.

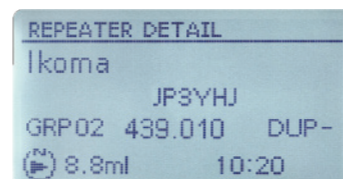
Automatic Repeater List-up Function

The ID-31A will be shipped with D-STAR repeater memories pre-programmed*. Using the GPS position information, the automatic repeater list-up function shows the list of nearby D-STAR repeaters from the memory.

* To use the automatic repeater list-up function, the position data of the repeater is required. The position data of some D-STAR repeaters may not be available.



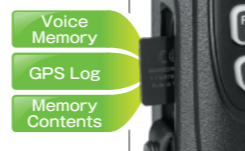
Near Repeater Function



Repeater Detail

microSD Card Slot

When used with a microSD card (up to 32GB), various contents including voice memories, GPS log, memory channels, D-STAR repeater memories and other personal settings can be stored on the microSD card and can be transferred to a PC. The voice memory function records incoming and outgoing calls in "WAV" format and allows you to play them on the radio or on a PC.



Other Digital Features

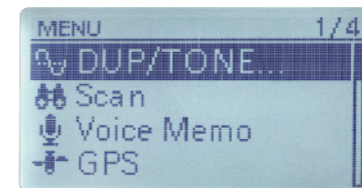
- Automatic speech function announces the received call sign
- Digital code squelch
- Digital call sign squelch
- One touch reply function
- DR (D-STAR Repeater) mode
- Automatic reply function

Full Dot-matrix Display & Directional Keypad

The directional keypad and quick menu button help you with quick and intuitive access to many settings and speeds up the operation. The large full dot-matrix display with easy-to-read characters offers better visibility. The LCD and keypad backlighting is handy for night time operation.



Directional keypad



Easy-to-see menu icons

5W Output Power

Using a highly-efficient PA amplifier, the ID-31A generates 5W of RF output power from this compact body. The supplied BP-271 provides up to 4.5 hours* of operating time, and the optional large capacity battery pack, BP-272 provides up to 7.5 hours* of operating time.

* Typical operation with 1:1.8 duty cycle in DV mode. (Power save ON, GPS OFF)

External DC Power Jack

An external DC power jack allows for operation with an external DC power supply (10–16V DC*). When used with the CP-19R, CP-12L or OPC-254L/LR, simultaneous operation during charging is possible.

* When more than 14V volts is applied, the output power is reduced to Mid level (2.5W)

CS-31 Cloning Software Supplied

The CS-31 cloning software* is supplied with the ID-31A (supplied with the application CD). Used with this software, various settings including the memory channels, D-STAR repeater memories and other settings can be made from a PC. The latest version of the CS-31 will be available from the Icom web site.

* Either optional OPC-2218LU USB cloning cable or a microSD card is required for transferring the data.

Total 1,252 Memory Channels

The ID-31A has a total 1,252 memory channels, including 500 regular channels, 700 D-STAR repeater (DR) memories, 50 scan edges and 2 call channels with 26 memory banks. All memory channels, program scan can edges and memory banks can be named with 16-character channel comments.

Multiple Scan Functions

The ID-31A supports various scan types for maximum reception and ease of use.

- Full scan
- Programmed scan
- Duplex scan
- Memory scan
- Mode memory scan
- All bank scan
- Selected bank scan
- Tone scan
- Bank link scan (DMS)
- Program scan link
- Skip scan

Other Features

- Analog FM mode (Wide/Narrow)
- Built-in CTCSS/DTCS encoder and decoder (for analog FM)
- 16 DTMF memory channels (24 digits)
- Squelch release function to monitor a weak signal
- Automatic repeater function* (* Depending on version)
- Optional CT-17, CI-V level converter for remote radio control
- Auto power save
- Auto power off
- Clock function
- Priority watch
- Key lock function



UHF DIGITAL TRANSCEIVER **5W**
ID-31A