

ID-31E PLUS



Digital Communication The Fun Starts Here!



Easy Operation

Just select the destination repeater in "To" and a nearby repeater in "From", and you are ready to call other D-STAR stations. Minimum action required with the simple user interface and DR (D-STAR Repeater) function.

Worldwide Digital Communication Wherever You Are

Terminal and Access Point modes enhance the access to D-Star's worldwide network. Communicate long-distance regardless of your location or repeater location.



Share Pictures and Text Messages

Pictures and text messages on an Android™ device can be transmitted over D-STAR network using the RS-MS1A application. Data can be sent quicker in the DV Fast Data mode.

IPX7 Waterproof, Compact, Lightweight and Tough

With Icom's pioneering IPX7 waterproofing and pro-grade construction, the ID-31E PLUS is perfect for your shack or playing in harsh outdoor environments.

D-STAR DV Mode (Digital Voice + Data)

The D-STAR (Digital Smart Technologies for Amateur Radio) DV mode is the world's leading amateur radio digital format. The ID-31E PLUS makes D-STAR calls with digital clarity through a worldwide connected repeater network, or over an Internet gateway, as well as conventional FM calls.

DV/FM 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. This function searches for nearby repeaters using the repeater memories with GPS position information.

* To use the near repeater search function, the exact position data of the repeater is required. The ID-31E PLUS will be shipped with D-STAR repeater memories preprogrammed, but the position data of some D-STAR repeaters may not be entered or exact.

Integrated GPS Receiver

Shows your current location and altitude on the display, and offers location reporting and automatic reply functions in the DV mode. GPS log can be saved in a microSD card.

Access Point Mode

The Access Point mode enables another D-STAR transceiver to make D-STAR gateway calls through a ID-31E PLUS connected to the Internet.



Terminal Mode

By connecting the ID-31E PLUS to the Internet through a Windows® PC or Android™ device, the Terminal mode enables you to use a D-STAR repeater to make D-STAR gateway calls.



Other Features

- All functions of the RS-MS1A are usable
- Voice Recorder function
- Transmit and repeat voice memory (60 sec. x 1 memory.)
- 200 GPS memory channels (including altitude data)
- CI-V commands added, such as the GPS TX mode, DV data TX and GPS ON/OFF settings
- GPS transmitting mode and low-speed data communication can be used at the same time (DV mode)
- GPS data output
- Call sign, repeater list and GPS memory import and export in the CSV format
- Enhanced D-PRS functions
- Skip settings for scanning
- Direct transmission of DTMF code
- 5 W maximum output power and five selectable transmit power levels
- A total of 1302 memory channels, including 750 D-STAR repeater memories
- Speech function announces frequency, mode and call sign
- microSD card slot
- Compact UHF antenna supplied

Supplied accessories:

- FA-S70B antenna
- BC-167SD* battery charger
- BP-271 rechargeable Li-ion battery pack
- MB-127 belt clip
- Hand strap
- * Depending on the transceiver version.

SPECIFICATIONS

GENERAL		
Frequency coverage	EUR (#12, 22, 32) UK (#13, 23, 33)	TX/RX: 430.000–440.000 MHz TX: 430.000–440.000 MHz, RX: 400.000–479.000 MHz*
Type of emission	F2D, F3E, F7W (DV, FM, FM-N)	
Number of memory channels	1302 channels (including 500 regular channels, 750 D-STAR repeater, 50 program scan edges and 2 call)	
Operating temperature range	–20°C to +60°C	
Frequency stability	±2.5 ppm (–20°C to +60°C on the basis of 25°C)	
Antenna impedance	50 Ω (SMA)	
Power supply requirements	7.4 V DC (with BP-271/BP-272), 5.5 V DC (with BP-273) 10.0–16.0 V DC (External DC power)	
Current drain (at 7.4 V DC)	TX High	Less than 2.5 A
	RX Internal SP (16 Ω)	Less than 450 mA (DV), Less than 350 mA (FM, FM-N)
	External SP (8 Ω)	Less than 300 mA (DV), Less than 200 mA (FM, FM-N)
Dimensions (WxHxD projections not included)	58 x 95 x 25.4 mm	
Weight (approximately)	220 g (including BP-271 and antenna)	

* Guaranteed range: 430.000–440.000 MHz

OPTIONS

■ BATTERY PACKS & BATTERY CASE

- **BP-271**: 7.4 V/1150 mAh (min.), 1200 mAh (typ.)
Li-ion battery. Operating time: 4.5 hours (approx.)*
- **BP-272**: 7.4 V/1880 mAh (min.), 2000 mAh (typ.)
Li-ion battery. Operating time: 7.5 hours (approx.)*
- **BP-273**: AA (LR6)x3 battery case.

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

■ BATTERY CHARGERS

- **BC-167SD**: Wall charger. 12 V/500 mA output.
- **BC-202**: Rapid desktop charger.
Charges the BP-271/272 in 2/3.5 hours (approx.).
- **BC-123SA/SE/SV**: AC adapter.

* SA for USA plug, SE/SD for Europe plug, SV for Australia plug.

■ CIGARETTE LIGHTER CABLE & DC POWER CABLES

- **CP-12L**: Cigarette lighter cable with noise filter.
- **OPC-254L/LR**: DC power cable.

■ SPEAKER-MICROPHONES & EARPHONE

- **HM-75LS**: Remote control speaker microphone.
- **HM-183LS**: Waterproof speaker microphone.
- **HM-186LS**: Compact type speaker microphone.
- **HM-153LS**: Durable type earphone microphone.
- **HM-166LS**: Light type earphone microphone.
- **SP-40**: Earphone microphone. (OPC-2144 required.)
- **OPC-2144**: Slim L-type plug adapter cable.

TRANSMITTER

Modulation system	DV FM, FM-N	GMSK reactance modulation FM reactance modulation
Output power (at 7.4 V DC)	5 W, 2.5 W, 1 W, 0.5 W, 0.1 W (High, Mid, Low2, Low1, S-low)	
Spurious emissions	Less than –60 dBc (High, Mid), Less than –13 dBm (Low2, Low1, S-low)	
Max. frequency deviation	±5.0 kHz (FM), ±2.5 kHz (FM-N)	

RECEIVER

Intermediate frequency	46.35 MHz (1st), 450 kHz (2nd)	
Sensitivity	DV	Less than –11 dBμ (at BER 1%)
	FM, FM-N	Less than –15 dBμ (at 12 dB SINAD)
Squelch sensitivity	Less than –15 dBμ (Threshold)	
Selectivity	More than 55 dB (FM), More than 50 dB (DV, FM-N)	
Spurious rejection	More than 60 dB	
Audio output power	Internal SP	More than 400 mW (16 Ω load at 10% distortion)
	External SP	More than 200 mW (8 Ω load at 10% distortion)

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

■ HEADSETS

- **HS-94**: Earphone-headset. (OPC-2006LS required.)
- **HS-95**: Behind-the-head headset. (OPC-2006LS required.)
- **HS-97**: Throat microphone. (OPC-2006LS required.)
- **OPC-2006LS**: VOX plug adapter cable.

■ APPLICATION & SOFTWARE

- **RS-MS1A***1: Remote control application for Android™.
- **RS-MS3A***1: Terminal/Access point mode app. for Android™.
- **RS-MS3W***2: Terminal/Access point mode app. for Windows® PC.
- **CS-31PLUS***2: PC Programming software for Windows® PC.

*1 Download free from Google Play™.
*2 Download free from the Icom website.

■ DATA CABLE

- **OPC-2350LU**: USB cable (Type-A, microB) to connect to an Android™ device or a PC.

■ OTHER OPTIONS

- **AD-92SMA**: BNC-type antenna connector adapter.
- **LC-178**: Carrying case.
- **MB-127**: Alligator type belt clip.
- **FA-S70B**: UHF antenna.

Note for the Terminal mode and Access point mode:

• Before operating in the Terminal mode or the Access Point mode, BE SURE to check your local regulations or laws. • An optional free download software, RS-MS3W is required to be installed in a PC. An optional free download application, RS-MS3A is required to be installed in the Android™ device. • 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. • 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.

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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 (Europe) GmbH

Communication Equipment
Aul 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 France s.a.s.

Zac de la Plaine,
1 Rue Brindejone des Moulinais, 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>

Your local distributor/dealer:

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 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 (Australia) Pty. Ltd.

Unit 17 / 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>

Icom Brazil

Rua Ilororó, 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 (UK) Ltd.

Blacksole House, Altira Park,
Herne 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>

Shanghai Icom Ltd.

No.101, Building 9, Caifuxingyuan Park,
No.188 Maoting Road, Chedun Town,
Songjiang District, Shanghai, 201611, China
Phone: +86 (021) 6153 2769
Fax: +86 (021) 5765 9987
E-mail: bjcom@bjicom.com
URL: <http://www.bjicom.com>