ICOM

VHF/UHF DUAL BAND DIGITAL TRANSCEIVER

ID-50E

Your Perfect Travelling Companion!

GPS

SPEAKER OUTPUT 750mW

IPX7

VHF AIRBAND
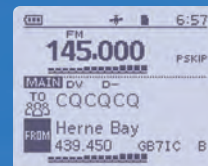
USB (Type-C)

MicroSD

DIGITAL

QSO Anytime, Anywhere, with Easy

Global Communication with the D-STAR

The ID-50E is a compact VHF/UHF dual bander with both D-STAR (Digital Smart Technologies for Amateur Radio) and FM dual modes. Connecting to the Digital network, you can call a friend in another city, or other regions around the world with the ID-50E. Smart functions such as Band Scope and Picture Sharing function enhance your QSO experience. Enjoy worldwide communications through the D-STAR network.

Easy D-STAR Settings for Beginners

The DR function makes communications using D-STAR repeaters easier and simple. Just selecting "FROM"(access repeater) and "TO" (destination), you can make QSO calls including Local Area call, Gateway call, and Simplex call. Combined with the GPS function, you can make selection of a local repeater available based on your location. In addition, the DR function supports reflector linking controls.
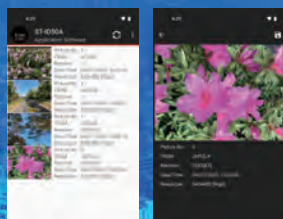
DR function

Share Picture Function*
to Expand the Fun of QSOs

You can share pictures with each other in the DV mode. Enjoy sharing pictures together with voice messages.

* Share picture function requires the optional picture utility software ST-ID50A (on Google Play™) or ST-ID50W (Download from Icom website) and user supplied USB Type-C to Type-C cable.

Build Your Own Internet Gateway

Even in the area with no D-STAR repeaters, build your own internet gateway (using Terminal mode and Access Point mode*) to access the D-STAR network virtually anywhere. Building an Access Point is easy, by connecting your ID-50E to a PC or an Android™ device connected to the internet, you will be able to make another D-STAR radio user to communicate through the D-STAR network over the air.

* The RS-MS3W optional software (Download from Icom website) and user supplied USB Type-C/USB Type-C cable are required for Access Point mode. The RS-MS3A optional application software (Download on Google Play™) and user supplied USB Type-C/USB Type-C cable are required for Terminal mode. Terminal and Access Point modes are compatible with the Icom RS-RP3 Gateway Software. If your D-STAR repeater is running G1 or G2 software, ask the repeater administrator to contact the local Icom Distributor to upgrade the software.
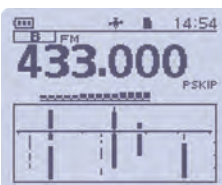• You need an Internet connection with an IPv4 Global IP address. If you use a cellular system, you need an IPv4 Global IP address assigned to your Android™ device.

Smart Functions and Operations

Easily Find Active Channels by Sight

The Band Scope with Waterfall display helps you to see band conditions in more detail and find active channels or an open frequency. The Waterfall display shows presence or absence of signals and even the signal level. The Band Scope mode is usable in the Center mode, Fixed mode, and Fixed scroll mode. You can enjoy efficient and smart operations with it.

Waterfall display example

Enjoy D-STAR Text Message Communication

By installing RS-MS1A App on your Android™ device, you can easily send text messages using your device's keyboard to enter text. Also the RS-MS1A can remotely control the transceiver operation and set various functions from your Android™ device.

DR setting display example Text transmission display example

Reliable To Use in Rainy or Humid Environments

The ID-50E features superior IPX7* waterproofing and pro-grade construction. Perfect to take outdoors, even in harsh environments.
*1 m depth of water for 30 minutes.

Double QSO Opportunities with Dualwatch

The Dualwatch function* enables monitoring VHF/VHF, VHF/UHF and UHF/UHF bands at the same time. You can quickly respond to a call from the Main and Sub bands.
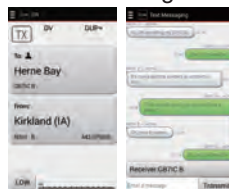* DV/DV mode cannot be listened at the same time.

VHF/VHF   VHF/UHF   UHF/UHF
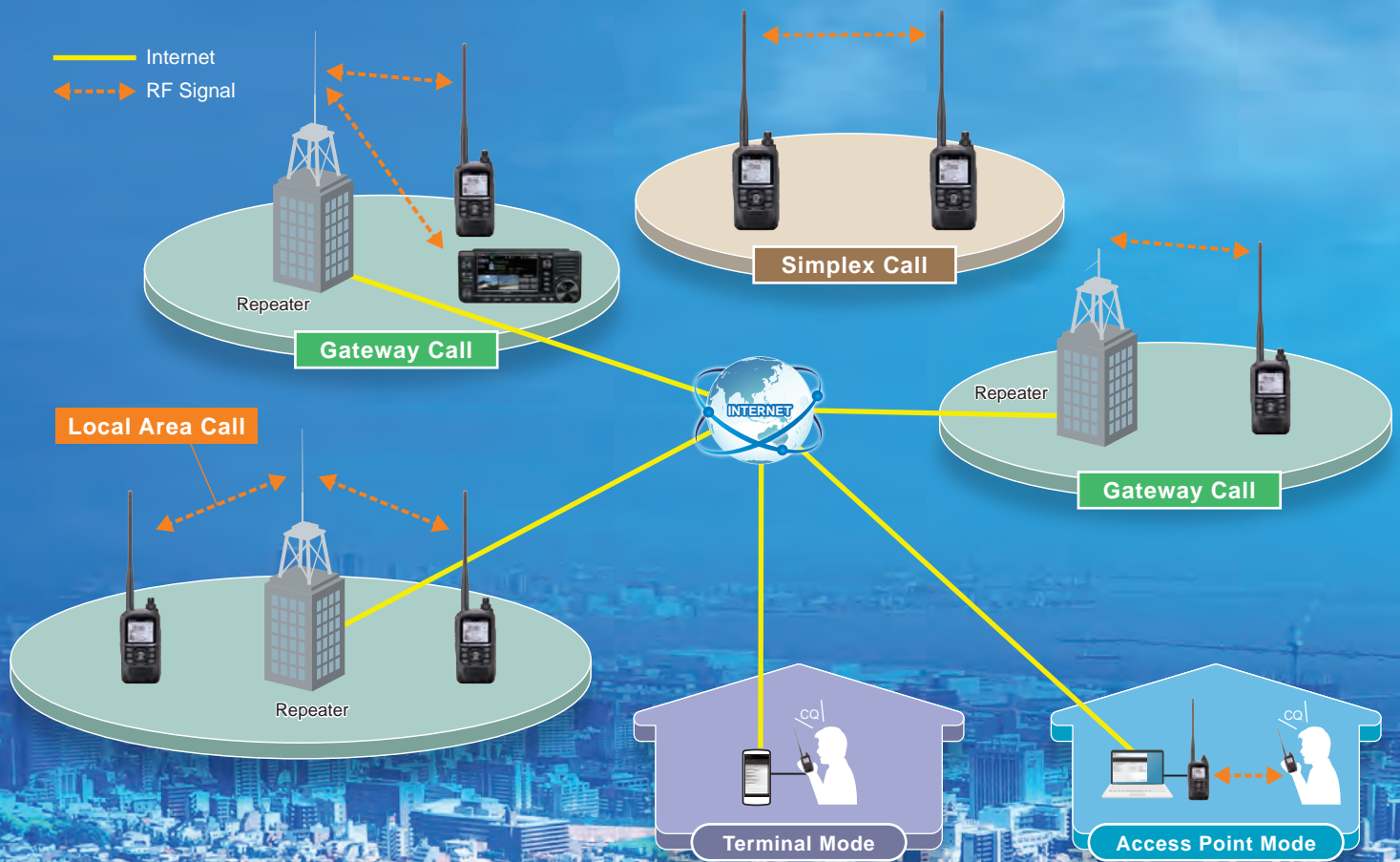
Various Data Saving on a MicroSD Card

A microSD card (up to 32 GB) can store QSO Recording, TX Voice Memory, pictures, QSOs and GPS log data. Moreover, Firmware upgrades, Repeater lists, and other personal settings can be saved and uploaded into the ID-50E radio.
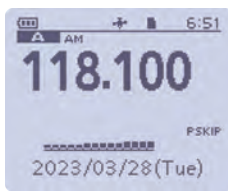
VHF/UHF DUAL BAND DIGITAL TRANSCEIVER

ID-50E

Functions and Smart Features

Network

Internet
RF Signal

Repeater
Gateway Call

Simplex Call

Repeater
Gateway Call

Local Area Call

Repeater

INTERNET

Terminal Mode

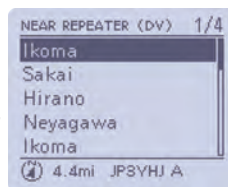Access Point Mode

VHF Airband and FM Broadcast Receiver

FM broadcast and Airband can be listened to. You can enjoy receiving variety of channels.

VHF Airband receiver

Find Nearby Repeaters at a New Location

With the built-in GPS, your location and current Grid Square information can be checked by other stations. You can check the distance to the other stations as well. Various GPS functions are usable with the GPS location data, such as Position Auto Reply, Near Repeater Search, and GPS log functions.

Repeater list

Charging with a USB Type-C™ Connector

The ID-50E has a USB type-C port which is widely used in the industry. It is a multi-function USB port for charging as well as PC programming, read/write contents to the microSD card, Terminal/Access Point mode support, and CI-V control.

Use a third-party USB cable for charging. USB PD is not supported.

Same Optional Accessories can be shared with the ID-52/51/31

Some accessories of the ID-52/ID-51/ID-31 series transceivers can be used for ID-50E. Moreover, the large capacity battery pack, BP-307 from the IC-705 is compatible with ID-50E as well. If you own these models, you can take advantage of sharing accessories.

QSO Logs in CSV Data Format

Frequencies, modes, and GPS logs can be saved in the CSV data format. Various kinds of QSO information can be downloaded and easily managed.

High Visible LCD with Backlight Function

The ID-50E's large full dot LCD shows graphical information with easy-to-read characters and icons. In addition, the LCD backlight helps when using in dark places.

Large full dot LCD

750 mW Loud Audio Output Power

Built-in 750 mW powerful audio output. The internal speaker provides louder and clearer audio.

Other Features

- Easy-to-see Single Band Mode with large and bold characters.
- DV fast data mode uses data in place of voice frames
- Voice Recorder function
- External DC power jack

SPECIFICATIONS

GENERAL

Frequency coverage (Unit: MHz)	Version	Transmit	Receiver	Broadcast band
	ID-50E #12 EUR	144~146, 430~440	(A) 108~174, 375~479* (B) 137~174, 375~479*	76.00~108.00
	(A) means A band, (B) means B band. Guaranteed Range:* 144~146, 430~440 MHz			

Type of emission	F2D, F3E, F7W
Modes	DV, FM, FM-N, WFM, AM, AM-N (WFM, AM and AM-N are Rx only)
Number of memory channels	500 memory channels, 4 call channels, 25 scan edges, 100 skip channels, 500 broadcast stations, 2500 repeater lists, 300 call signs, and 300 GPS memories
Frequency resolution	5.0/6.25/8.33/10/12.5/15/20/25/30/50/100/125/200 kHz
Operating temperature range	−20°C ~ + 60°C; −4°F ~ + 140°F
Frequency stability	±2.5 ppm (−20°C ~ +60°C on the basis of 25°C)
Antenna impedance	50 Ω (SMA)

Power supply requirement	Battery pack	7.4 V DC (with BP-271/BP-272)
	Alkaline cells	5.5 V DC (with BP-273)
	External DC	10.0 ~ 16.0 V DC

Current drain (at 7.4 V DC)	Tx high	Less than 2.5 A
	Rx AF max.	Less than 400 mA (FM, FM-N) (8 Ω), Less than 450 mA (DV) (8 Ω)

Dimensions (W × H × D)	58.0 × 111.0 × 27.9 mm, 2.3 × 4.4 × 1.2 in (Projections are not included)
Weight (approx.)	300 g, 10.6 oz (with BP-272 & antenna)

TRANSMITTER

Modulation system	DV	GMSK reactance modulation
	FM, FM-N	FM reactance modulation

Output power	5 W, 2.5 W, 1.0 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	Less than ±5.0/2.5 kHz (FM/FM-N)
Ext. Mic impedance	2.2 kΩ

RECEIVER

Sensitivity	DV	Less than 0.2 µV (at 1% BER)
	FM, FM-N	Less than 0.18 µV (at 12 dB SINAD)

Selectivity	More than 50 dB (DV, FM-N), more than 55 dB (FM)
Spurious rejection	More than 60 dB

Audio output power	Internal SP	More than 750 mW (8 Ω load)
	External SP	More than 200 mW (8 Ω load)

Receiver sensitivity (except amateur bands.)

	Frequency range (Unit: MHz)	FM/FM-N/WFM (12 dB SINAD)	AM/AM-N (10 dB S/N)
BC band (WFM)	76.000~108.000	Less than 1 µV	–
A band	108.000~136.991	–	Less than 1 µV
	137.000~142.000	Less than 0.18 µV	Less than 1 µV
	142.005~148.000	Less than 0.18 µV	–
	148.005~174.000	Less than 0.32 µV	–
	375.000~399.995	Less than 0.5 µV	–
	400.000~479.000	Less than 0.32 µV	–
B band	137.000~142.000	Less than 0.18 µV	–
	142.005~148.000	Less than 0.18 µV	–
	148.005~174.000	Less than 0.32 µV	–
	375.000~399.995	Less than 0.5 µV	–
	400.000~479.000	Less than 0.32 µV	–

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

Supplied accessories	• Battery pack, BP-272 • Antenna, FA-S270C • Belt clip, MB-127 • Hand strap

Supplied accessories may differ depending on the transceiver version.

OPTIONAL ACCESSORIES

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

BATTERY PACKS AND CASE

BP-272   **BP-307**   **BP-273**

Battery packs	BP-272	BP-307	BP-273
Type	Rechargeable Li-ion, 7.4 V	Rechargeable Li-ion, 7.2 V	LR6 (AA) batteries ×3
Capacity	1880 mAh (min.) 2000 mAh (typ.)	3050 mAh (min.) 3150 mAh (typ.)	
Operating time*	8 hours (FM mode)	12.5 hours (FM mode)	-

* Approximate. Tx: Rx: standby = 1:1:8. Power save function ON. GPS OFF.

RAPID CHARGER

BC-202IP2 + BC-123S[*1]
Charges BP-272/BP-307. BC-123S is supplied with the BC-202IP2.

AC ADAPTER

BC-258[*2]
Use with a USB cable (Type-A - USB Type-C™.)

WALL CHARGER

BC-167S[*3]

EARPHONE-MICROPHONES

HM-153LS   **HM-166LS**

[*1] BC-123SA for USA plug, SE for Europe plug. [*2] BC-258A for USA plug, E for Europe plug, V for Australia plug.
[*3] BC-167SA for USA plug, SD for Europe plug, SV for Australia plug.

SPEAKER-MICROPHONES

HM-243LS For remote control   **HM-183LS** Waterproof   **HM-186LS**

HEADSETS and PLUG ADAPTER CABLE
For VOX Operation

HS-94 Earhook type   **HS-95** Neck arm type   **HS-97** Throat type

OPC-2006LS Required when using any of these headsets.

CARRYING CASE

LC-202
Use with BP-272 or BP-273.

CIGARETTE LIGHTER CABLES

CP-12L
Built-in noise filter

DC POWER CABLE

OPC-254L

PLUG ADAPTER CABLE

OPC-2144
Required when using any of HM-75A, HM-153, HM-166 or SP-40.

APPLICATION SOFTWARE

- **RS-MS1A:** Remote control application for Android™
- **RS-MS3A:** Terminal/Access point mode application for Android™
- **RS-MS3W:** Terminal/Access point mode software for Windows™ PC
- **CS-50:** Programming software for Windows™ PC
- **ST-ID50A:** Picture utility software for Android™
- **ST-ID50W:** Picture utility software for Windows™ PC

Applications for Android™ can be freely downloaded on Google Play™.
Software for Windows™ PC can be freely downloaded from the Icom website.

OTHER OPTIONS

- **AD-92SMA:** SMA-BNC antenna adapter
- **FA-S270C:** VHF/UHF antenna. Same as supplied
- **MB-127:** Belt clip. Same as supplied
- **SP-40:** Earphone (OPC-2144 required)
- **CP-23L:** Cigarette lighter cable for BC-202IP2
- **OPC-515L:** DC power cable for BC-202IP2
- **BC-202IP3L:** Rapid charger. Connectable up to 6 units
- **BC-228:** AC adapter for BC-202IP3L multiple connections