ICOM

VHF/UHF DUAL BAND DIGITAL TRANSCEIVER

# ID-4100E

## *Enjoy Digital Communication*

### *More Actively and More Comfortably*


Terminal Mode and Access Point Mode

Flexible Installation

Intuitive User Interface

Full dot-matrix LCD  Bluetooth®  GPS  iOS™/Android™ Apps

Terminal Mode DV Gateway Access Point Mode

Bluetooth®

DIGITAL

# Compact, User-Friendly VHF/UHF Dual Bander Offers a Variety of Operating Styles

## DV GATEWAY FUNCTIONS

### Terminal Mode and Access Point Mode Expand Communication Coverage and Fun

Terminal and Access Point modes* enable you to enjoy long-distance D-STAR (Digital Smart Technology for Amateur Radio) 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 is required to be installed in the PC. An optional free download application, RS-MS3A is required to be installed, in the Android™ device.

#### Terminal Mode

By connecting the ID-4100E 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.


#### Access Point Mode

The Access Point mode enables another D-STAR transceiver to make D-STAR gateway calls through the ID-4100E connected to the Internet. 50 watts of output power can be used for a D-STAR access point.


## Flexible Installation

### 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 away from the main unit.

* Vehicle installation example (Using the optional MBF-1 mount base and MBA-8 controller bracket)

## User Friendly

### DR Function with the Latest Icom User Interface

#### 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-4100E. For example, Repeater list or GPS position information are clearly arranged and easy to read.


GPS position information example


Repeater list example

#### 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 near repeater search function, the position data of the repeater is required. The ID-4100E will be shipped with the D-STAR repeater memories preprogrammed, but the position data of some D-STAR repeaters may not be entered or exact.

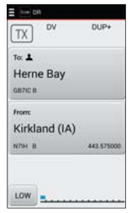
## Smart Operation

### Advanced Operation with a Smart device and Bluetooth®

#### 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-4100E 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 smart device can be transmitted via the DV Fast Data mode or DV mode.

* The optional UT-137 Bluetooth® unit must be installed in the ID-4100E. Some functions may not work properly, depending on smart devices used.




DR function setting example


Text messaging example


Sending picture example


Repeater map example



#### DV Fast Data Mode*

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

Conventional low-speed data mode 950 bps

DV Fast data mode 3480 bps

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




* Installation example (Using the optional OPC-2350LU data cable and RS-MS3W software for Windows® PC)

#### Wireless Operation with 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-4100E with three programmable buttons.

* The optional UT-137 Bluetooth® unit must be installed in the ID-4100E.



VHF/UHF DUAL BAND DIGITAL TRANSCEIVER

**ID-4100E**

Actual size

## And More

#### microSD Card Slot for Voice and Data Storage*

When used with a microSD card, you can store various information including voice memory, TX voice message, QSO 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-4100E receives 118–174 and 230–550 MHz*. You can listen to air band, marine and other VHF and UHF utility communications.

* Working range not guaranteed.

#### 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.

Green Amber Blue

#### Other Features

- The QUICK key allows instant access to menus listing dedicated functions depending on mode
- Multiple scan functions for 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
- HM-207S remote-control hand microphone (supplied as standard)

# VHF/UHF DUAL BAND DIGITAL TRANSCEIVER

# ID-4100E

## SPECIFICATIONS

| GENERAL | | | |
|---|---|---|---|
| Frequency coverage | | | |
| | Version | Transmit | Receive |
| | EUR | 144–146, 430–440 MHz | 118–174, 230–550 MHz*1 |
| | ITR | 144–146, 430–434, 435–438 MHz | 118–136.991, 144–146, 430–434, 435–438 MHz*2 |
| | Guaranteed range *1 144–146, 430–440 MHz, *2 144–146, 430–434, 435–438 MHz. | | |
| Type of emission | | F2D, F3E, F7W | |
| Mode | | DV, FM, FM-N, AM (RX only), AM-N (RX only) | |
| Operating temperature range | | –10°C to +60°C | |
| Frequency stability | | ±2.5 ppm (–10°C to +60°C based on 25°C) | |
| Antenna impedance | | 50 Ω (SO-239) | |
| Number of memory channels | | 1000 regular channels, 4 call channels, 50 program scan edges, 1500 repeater memories and 300 GPS memory | |
| Power supply requirement | | 13.8 V DC ±15% | |
| Current drain (approximate) | Tx | 13.0 A | |
| | Rx | 1.2 A/0.9 A (Maximum audio/Stand-by) | |
| Dimensions | Main unit + Controller | 150 × 40 × 171.9 mm | |
| | Controller | 122 × 40 × 29.7 mm | |
| | | (W × H × D, Projections are not included.) | |
| Weight (approximate) | Main unit | 1.1 kg | |
| | Controller | 100 g | |

| TRANSMITTER | | |
|---|---|---|
| Output power (at 13.8 V DC) | | 50 W, 15 W, 5 W (Hi, Mid, Low) |
| Max. frequency deviation | | ±5.0 kHz/±2.5 kHz (W/N) |
| Spurious emissions | | Less than –60 dBc |
| Microphone impedance | | 600 Ω (8 pin modular) |

| RECEIVER | | |
|---|---|---|
| Intermediate frequencies | | 46.35 MHz/450 kHz (1st/2nd) |
| Sensitivity | FM, FM-N | Less than 0.18 μV (amateur bands at 12 dB SINAD) |
| | DV | Less than 0.22 μV (at 1% BER) |
| Squelch sensitivity | | Less than 0.13 μV (threshold) |
| Selectivity | FM/FM-N | More than 60 dB/55 dB |
| | DV | More than 50 dB |
| Spurious and image rejections | | More than 60 dB |
| Audio output power | | More than 2.0 W (10% distortion, 8 Ω load) |
| External speaker connector | | 2 conductor 3.5 (d) mm (⅛″)/8 Ω |
| Receiver sensitivity | | (Except amateur bands.) |

| FM/FM-N (12 dB SINAD) | | | |
|---|---|---|---|
| 137–159.995 MHz | Less than 0.32 μV | 160–174.000 MHz | Less than 0.32 μV |
| 230–259.995 MHz | Less than 1.8 μV | 260–321.995 MHz | Less than 0.56 μV |
| 322–374.995 MHz | Less than 0.56 μV | 375–399.995 MHz | Less than 0.56 μV |
| 400–499.995 MHz | Less than 0.32 μV | 500–550.000 MHz | Less than 0.56 μV |
| **AM/AM-N (10dB S/N)** | | | |
| 118–136.991 MHz | Less than 1.0 μV | 230–259.995 MHz* | Less than 5.6 μV |
| 260–321.995 MHz* | Less than 1.8 μV | 322–374.995 MHz* | Less than 1.8 μV |

* Only AM mode.

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

### Supplied Accessories

- HM-207S Hand microphone
- OPC-837 control cable (3.5 m)
- OPC-345B DC power cable
- Microphone hanger
- Spare fuse

**Note for the Terminal mode and Access point mode:**

- An Internet IP connection is necessary for a PC (Windows®) or Android™ device.(Either a dynamic or static IP address can be used.)
- Before you set up the Access point, check any regulations or laws in your country.
- Only one D-STAR transceiver can transmit through an Access point at a time.
- 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.

## OPTIONS

Some options may not be available in some countries. Ask your dealer for details.

**HAND MICROPHONES**

**HM-232** | **HM-209** Active noise canceling | **HM-207S** | **HM-154**

**Bluetooth® UNIT & Bluetooth® HEADSET**

**UT-137** | **VS-3** Use with UT-137 in a pair

**EXTERNAL SPEAKERS**

**SP-35**: 2 m cable
**SP-35L**: 6 m cable

**SP-30** 102.5 mm diameter speaker

**CONTROLLER EXTENSION CABLE**

**OPC-1156** 3.5 m cable with a modular connector

**MICROPHONE EXTENSION CABLES**

**OPC-440:** 5 m
**OPC-647:** 2.5 m

**MOUNTING BASE & CONTROLLER BRACKET**

**MBF-1** Suction cup mounting base. MBA-8 is required.

**MBA-8**

**MOUNTING BRACKET**

**MBF-4** For mounting the main unit.

**DATA COMMUNICATION CABLE**

**OPC-2350LU** USB cable to connect to an Android™ device or a PC.

### SOFTWARE/APPLICATION

- **RS-MS1A**: Remote control application for Android.™
- **RS-MS1I**: Remote control application for iOS.™
- **RS-MS3A**: Terminal/AP mode application for Android.™
- **RS-MS3W**: Terminal/AP mode software for Windows® PC.
- **CS-4100**: Programming software for Windows® PC.

* Applications for Android™ devices can be freely downloaded from Google Play.
* Application for iOS™ can be freely download from App Store.
* Software for Windows® PCs can be freely download from the Icom website.

### OTHER OPTIONS

- **OPC-478UC:** USB programming cable for PC.
- **OPC-1529R:** RS-232 data communication cable for PC.
- **OPC-589:** Microphone adapter cable for use with an 8 pin microphone.

### Software/Application Comparison Chart

| Software/App | OS | Function | Required option |
|---|---|---|---|
| RS-MS1A | Android™ 4.0 or later | Remote control operation | UT-137 |
| RS-MS1I | iOS™ 8.0.1 or later | Remote control operation | UT-137 |
| RS-MS3A | Android™ 4.0 or later | Terminal/Access Point mode | OPC-2350LU |
| RS-MS3W | Windows® 7 or later | Terminal/Access Point mode | OPC-2350LU |
| CS-4100 | Windows® 7 or later | Programming | microSD card/OPC-2350LU/ OPC-1529R/OPC-478UC |

**Main unit (Front panel)**


**(Rear panel)**

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