



VHF/UHF DUAL BAND TRANSCEIVERS

IC-E80D ID-E880

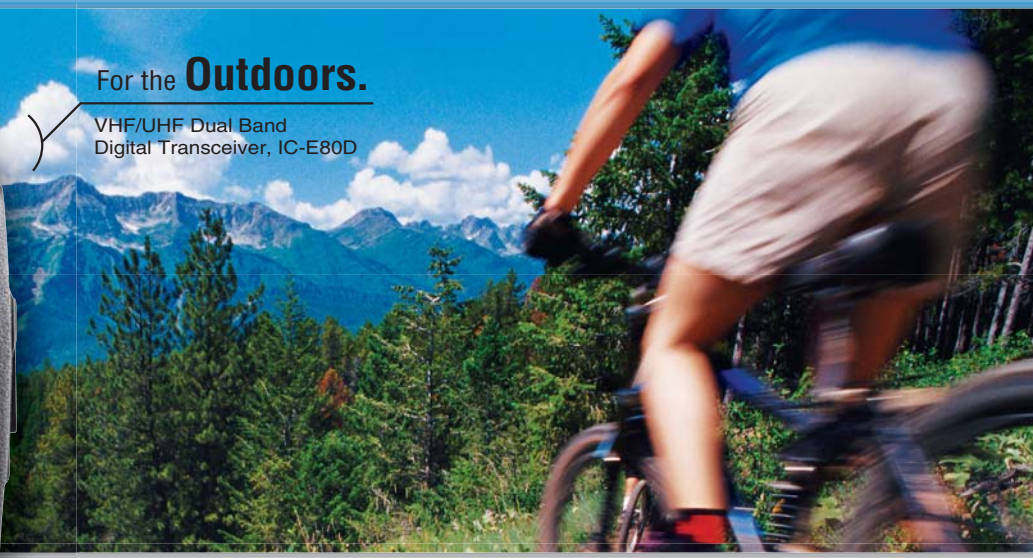
(Handheld transceiver)

(Mobile transceiver)



For the **Outdoors.**

VHF/UHF Dual Band
Digital Transceiver, IC-E80D



Digital & Analog

Easy to set up

**Free download software
CS-80/880**

**Optional HM-189GPS
(For IC-E80D)**

For **Mobile use.**

VHF/UHF Dual Band
Digital Transceiver, ID-E880



DIGITAL

Enjoy

Enjoy long distance communication. Exchange position information and messages.

Lots of Fun, Advanced Digital D-STAR

D-STAR (Digital Smart Technology for Amateur Radio) is a Digital communication protocol developed by the JARL (Japan Amateur Radio League). By using a D-STAR repeater and an Internet gateway, a D-STAR radio makes long distance communications easy.

Plot your own position and the positions of other stations by using mapping software.



* PC, mapping software included. Optional data cable required.



Repeater



GPS position reporting function with the optional HM-189GPS.

INTERNET

Repeaters linked by the Internet allow worldwide communication!



Repeater

By using a D-STAR radio, you can enjoy crisp and clear communication.

— Internet — DV mode

Take it into the field— Easy to use!

Optional GPS speaker-microphone

When used with the GPS speaker-microphone, HM-189GPS, the IC-E80D shows your position data on its LCD display and offers automatic position reporting in DV mode.

5 Watts (typical) output power

The IC-E80D provides 5W (typ.) output power in both VHF/UHF bands. The supplied Lithium-Ion battery, BP-217, provides up to 6 hours*¹ of operating time.

External DC power jack

The external DC power jack allows for operation with an external DC power supply (10–16V DC). When used with the DC power cable, operation during charging is possible.

Other features

- 4 step RF power selection (5W, 2.5W, 0.5W, 0.1W)
- IPX4*² water-resistant construction
- Auto power save and auto power off
- 10dB (approx.) built-in attenuator

*¹ Tx high: Rx: Stand-by duty ratio= 1 min.: 1 min.: 8 min. Power save on.

*² Only when the supplied battery pack (or optional battery case), antenna and jack cover are attached.

VHF/UHF DUAL BAND TRANSCEIVER

IC-E80D

Supplied accessories

- (* depending on version)
- Battery pack, BP-217
- Wall charger, BC-167*
- Antenna, FA-S270C
- Belt clip, MB-107
- Hand strap

IC-E80D & ID-E880

D-STAR Digital Voice capability

The IC-E80D and ID-E880 can transmit and receive D-STAR format digital voice and 950 bps* data communication, simultaneously. Analog FM mode is also available.

* Approximate value.

GPS position reporting functions

Your position data is shown on the display and can be sent* to other station. In addition, the GPS A mode assists in D-PRS mode operation to send your position information to an APRS server.

* 3rd party GPS receiver is required for ID-E880. Optional HM-189GPS is required for IC-E80D.



Setting example for showing own position as 135 degrees east longitude (ID-E880)

Wideband receiver

The IC-E80D covers 0.495–999.990MHz* and the ID-E880 covers 118–173.995, 230–549.995 and 810–999.990MHz.* You will be able to listen to aviation, marine, weather channels and other utility communications.

* Receiver range depending on versions.

See specification page for details.



The above photo includes optional HM-189GPS.

Easy

Easy to set up!

IC-E80D/ID-E880

D-STAR repeater list and DR mode operation

The D-STAR repeater list stores up to 300 channels of repeater call signs, frequencies, gateway call signs, duplex direction and offset frequency with 8-character channel name.

The D-STAR repeater (DR) mode operation makes it easier to use D-STAR repeater.

Group 1 (Remain 297 CH)							
No.	Name	Repeater Call Sign	Gateway Call Sign	Operating Freq.	DUP	Offset Freq.	RPT1 USE
0	WA-BLV-A	N7IH A	N7IH G				
1	WA-BLV-B	N7IH B	N7IH G	443.575000	+DUP	5.000000	Yes
2	WA-BLV-C	N7IH C	N7IH G	145.290000	-DUP	0.600000	Yes

* Repeater list programming example using CS-80/880.

You can communicate with Icom's 1.2GHz transceiver, ID-1, in DV mode*.

* Depending on repeater configuration.

ing digital mode, voice is and clear, even at the nication fringe!



Simplex mode communication in DV and FM mode is available without requiring a repeater.

le (4.8kbps)

To make a CQ call using D-STAR:

When GW set is set to Auto.

Step 1

Push the DR button and select an uplink repeater (RPT1) for access



Setting example for Würzburg, Germany (DB0WZ) as uplink repeater (IC-E80D)

Step 2

Hold the UR button and select a downlink repeater



Setting example for Bellevue, WA, U.S.A. (N7IH) as downlink repeater (ID-E880)

Then push the PTT button to transmit

* Above photos show setting example only.

Common features

CS-80/880 free download software

Used with the CS-80/880 cloning software, various settings can be made from a PC. Share your memory channels info and radio settings between IC-E80Ds, ID-E880s or both. Available for free download from:

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

* Either OPC-1529R, OPC-478 or OPC-478UC optional cable is required.

Other features common to both radios

- Total of 1052 memory channels with 8-character channel name
- 16 channels DTMF memory (24-digit)
- LCD and keypad backlighting
- Monitor function to listen to a weak signal
- Built-in CTCSS/DTCS tone encoder and decoder (FM mode only)
- Tone scan and pocket beep function
- 26 memory banks with selected bank and bank link scanning
- Key lock function
- 1750Hz tone function

Other digital features for both radios

- One touch reply function
- 50 channels GPS memory and GPS alarm
- 300 channels D-STAR repeater list
- D-STAR access repeater scan

D-STAR makes mobile operation much more fun!

Detachable controller

The controller is separated from the main unit for flexible installation. The controller has magnets on the rear panel, it allows the controller to attach to the main unit or other metal objects.

Compact body with large display

While the ID-E880 has a compact body, it has a large LCD display. At 64x20.7 mm, the LCD offers an excellent viewing angle suitable for mobile operation. Green, yellow and amber display backlighting is available. Select the color you like!

Max. 50 Ch/sec. high speed scan

The ID-E880 has a maximum scanning speed of 50 channels per second while in program scan mode. This scanning power allows the utmost efficiency when searching a wide frequency range.

Other features

- 50W output power both VHF/UHF band
- Built-in noise filter (AM/FM mode)
- Data and 9600/1200bps packet jacks on the rear panel
- ±2.5ppm frequency stability
- Adjustable microphone sensitivity

VHF/UHF DUAL BAND TRANSCEIVER

ID-E880

Supplied accessories

- (*depending on version)
- Separation cable, OPC-1154A (3.4 m)
 - DC power cable, OPC-1132A
 - Hand microphone, HM-133
 - Remote controller bracket
 - Microphone hanger
 - Mounting bracket kit



SPECIFICATIONS

GENERAL	IC-E80D	ID-E880
• Frequency coverage	144-146, 430-440MHz 0.495-999.990MHz*1	144-146, 430-440MHz 118-173.995, 230-549.995, 810-999.990MHz*1
Europe TX RX		
Europe-1 TX/RX		
Italy TX RX	144-146, 430-434, 435-438MHz 0.495-29.995, 50-51, 76-136.995, 144-146, 430-434, 435-438MHz*2	144-146, 430-434, 435-438MHz 118-173.995, 230-549.995, 810-999.990MHz*2
France TX RX	144-146, 430-440MHz 0.495-29.995, 50-52, 76-136.995, 144-146, 430-440MHz*1	
	*1 Guaranteed range, 144-146, 430-440MHz. *2 Guaranteed range, 144-146, 430-434, 435-438MHz.	
• Type of emission	F2D, F3E, F7W	F2D, F3E, F7W
• Useable temp. range	-20°C to +60°C	-10°C to +60°C
• Frequency stability	±2.5ppm (-20°C to +60°C on the basis of 25°C)	±2.5ppm (-10°C to +60°C on the basis of 25°C)
• Digital TX speed	4.8kbps	4.8kbps
• Voice coding speed	2.4kbps	2.4kbps
• Antenna impedance	50Ω (SMA)	50Ω (SO-239)
• Memory channels	1052 channels (including 50 program scan edges and 2 call channels)	1052 channels (including 50 program scan edges and 2 call channels)
• Power supply	7.4V DC (with BP-217)	13.8V DC (±15%)
External DC power	10-16V DC	
• Current drain	(at 7.4V DC)	(at 13.8V DC)
TX High (VHF/UHF)	1.8/2.1A typ.	11.5/12.5A typ.
RX	Power save/Rated output/Stand-by FM 30mA/170mA/62mA typ. DV 38mA/215mA/106mA typ. (Power save duty=1:4)	Max. audio Less than 1.2A Stand-by Less than 0.9A
• Dimensions (W×H×D) (projections not included)	58.4×103×34.2 mm;	150×40×199.2 mm;
• Weight (approx.)	290g (with antenna and BP-217)	1300g (without microphone, cable and bracket)

TRANSMITTER	IC-E80D	ID-E880
• Output power	High/Mid/Low/S-low 5W/2.5W/0.5W/0.1W typ.	High/Mid/Low 50W/15W/5W (approx.)
• Spurious emissions	Less than -60dBc (High, Mid)	Less than -60dB
• Max. freq. deviation	±5.0/2.5kHz (FM wide/narrow)	±5.0/2.5kHz (FM wide/narrow)
• Ext. MIC impedance	2KΩ	600Ω (8-pin modular)

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

OPTIONS

OPTIONS FOR IC-E80D		OPTIONS FOR ID-E880	
■ BATTERY PACK AND CASE	BP-216 : AA (LR6) × 2 battery case BP-217* : Li-Ion battery pack 7.4V/1500mAh (min.), 1580mAh (typ.)	■ SPEAKER-MICROPHONES, HEADSET AND EARPHONE	HM-189GPS* : GPS speaker microphone HM-75A : Remote control speaker microphone. HM-131 : Compact type speaker microphone. HM-153 : Durable type earphone microphone. HM-166 : Light type earphone microphone. HS-85 : Headset. Allows you hands-free operation. Includes VOX, PTT, "one-touch PTT" (TOT). SP-13 : Earphone
■ BATTERY CHARGERS	BC-167* : Wall charger (12V/500mA output) Charges the BP-217 in 6 hours (approx.). BC-167ND or SD for 230V AC BC-139 : Rapid desktop charger. Charges the BP-217 in 2.5 hours (approx.).	■ OTHER OPTIONS	MB-107* : Alligator type belt clip. MB-86 : Swivel type belt clip. LC-163 : Carrying case FA-S270C* : VHF/UHF antenna AD-92SMA : Antenna connector adaptor. Allows you to connect a BNC-type antenna
■ CIGARETTE LIGHTER CABLES AND DC POWER CABLE	CP-19R : Cigarette lighter cable with DC-DC converter. CP-12L : Cigarette lighter cable with noise filter. OPC-254L : DC power cable. For use of the transceiver with an external power supply. (12V DC required)		

*1 Same as supplied. *2 Please note: HM-189GPS is compatible only with the IC-E80D at this time.

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Icom Inc.

1-1-32, Kami-minami, Hirano-ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013 URL: <http://www.icom.co.jp/world/index.html>

Count on us!

Icom America Inc.

2380 116th Avenue NE,
Bellevue, WA 98004, U.S.A.
Phone: +1 (425) 454-8155
Fax: +1 (425) 454-1509
E-mail: sales@icomamerica.com
URL: <http://www.icomamerica.com>

Icom New Zealand

146A Harris Road, East Tamaki,
Auckland, New Zealand
Phone: +64 (09) 274 4062
Fax: +64 (09) 274 4708
E-mail: inquiries@icom.co.nz
URL: <http://www.icom.co.nz>

Icom (UK) Ltd.

Unit 9, Sea St., Herne Bay,
Kent, CT6 8LD, U.K.
Phone: +44 (01227) 741741
Fax: +44 (01227) 741742
E-mail: info@icomuk.co.uk
URL: <http://www.icomuk.co.uk>

Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road,
Taipei, Taiwan, R.O.C.
Phone: +886 (02) 2559 1899
Fax: +886 (02) 2559 1874
E-mail: sales@asia-icom.com
URL: <http://www.asia-icom.com>

Icom Canada

Greenwood Centre #150-6165 Highway 17,
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 (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@icom-europe.com
URL: <http://www.icomeurope.com>

Icom France s.a.s.

Zac de la Plaine,
1 Rue Brindejont 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>

Beijing Icom Ltd.

10C07, Long Silver Mansion, No.88,
Yong Ding Road, Haidian District,
Beijing, 100039, China
Phone: +86 (010) 5889 5391/5392/5393
Fax: +86 (010) 5889 5395
E-mail: bjicom@bjicom.com
URL: <http://www.bjicom.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>

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 Polska

81-850 Sopot, ul. 3 Maja 54, Poland
Phone: +48 (59) 550 7135
Fax: +48 (59) 551 0484
E-mail: icompolksa@icompolksa.com.pl
URL: <http://www.icompolksa.com.pl>

RECEIVER	IC-E80D	ID-E880
• Intermediate frequencies	Except WFM (1st/2nd) 61.65MHz/450kHz WFM (1st/2nd/3rd) 59.25MHz/13.35MHz/1.95MHz	46.35MHz/450kHz (1st/2nd)
• Sensitivity (typical)	FM (at 12dB SINAD, 3.5kHz DEV) 1.625-29.995MHz 0.4µV 30.000-75.995MHz 0.25µV 76.000-117.995MHz 0.25µV 118.000-173.995MHz 0.14µV 174.000-259.995MHz 0.32µV 260.000-349.995MHz 0.32µV 350.000-469.995MHz 0.16µV 470.000-599.995MHz 0.32µV 600.000-999.995MHz 0.56µV WFM (at 12dB SINAD, 52.5kHz DEV) 76.000-108.000MHz 1µV 175.000-221.995MHz 1.8µV 470.000-770.000MHz 2.5µV AM (at 10dB S/N, 30% Mod.) 0.495-4.995MHz 1.3µV 5.000-29.995MHz 0.56µV 118.000-137.000MHz 0.5µV 222.000-246.995MHz 0.79µV 247.000-329.995MHz 1µV DV (at BER 1%, 4.8kbps) VHF (Ham band) 0.22µV UHF (Ham band) 0.22µV	FM (at 12dB SINAD) 118.000-136.995MHz 0.16µV 137.000-173.995MHz 0.16µV 230.000-259.995MHz 0.56µV 260.000-299.995MHz 0.32µV 300.000-349.995MHz 0.22µV 350.000-399.995MHz 0.22µV 400.000-499.995MHz 0.16µV 500.000-549.995MHz 0.16µV 810.000-879.990MHz 0.45µV 880.000-999.990MHz 0.45µV AM (at 10dB S/N, 30% Mod.) 118.000-136.995MHz 0.5µV 137.000-173.995MHz 0.5µV 230.000-259.995MHz 1.8µV 260.000-299.995MHz 1.0µV 300.000-349.995MHz 0.79µV 350.000-399.995MHz 0.63µV 400.000-499.995MHz 0.56µV 500.000-549.995MHz 0.56µV DV (at BER 1%, 4.8kbps) VHF (Ham band) Less than 0.35µV UHF (Ham band) Less than 0.35µV
• Selectivity	AM/FM Wide More than 50dB FM-N, DV More than 45dB WFM More than 300kHz/-3dB Less than 700kHz/-20dB	FM Wide More than 10kHz/6dB Less than 30kHz/60dB FM-N More than 6kHz/6dB Less than 20kHz/60dB DV More than 50dB
• Spurious and image rejection	VHF (Ham band) More than 60dB UHF (Ham band) More than 50dB (IF points: More than 60dB)	More than 60dB
• Spurious radiation	Less than -57dBm	Less than -57dBm
• Audio output power	More than 300mW (at 7.4V DC) at 10% distortion with an 8Ω load	More than 2.0W (at 13.8V DC)
• Ext. speaker impedance	8Ω	8Ω

OPTIONS FOR BOTH MODELS

■ HAND MICROPHONES

HM-103 : Lightweight hand microphone.
HM-154 : Hand microphone with up/down buttons.
HM-133* : Remote control microphone.

■ DC POWER SUPPLY CABLES

OPC-1132A* : 3m DC power supply cable.
OPC-347 : 7m DC power supply cable.

■ MOUNTING BASE

MB-120 : Mounting base

■ EXTERNAL SPEAKER

SP-10 : Mid sized external speaker

■ EXTENSION CABLES

OPC-440 : 5m microphone extension cable.
OPC-647 : 2.5m microphone extension cable.
OPC-441 : 5m speaker extension cable.
OPC-589 : Microphone adapter cable.
 Connection for 8-pin microphone.

■ CLONING SOFTWARE

CS-80/880 : Free download cloning software for IC-E80D and ID-E880.
 Please download from the following URL.
<http://www.icom.co.jp/world/support/index.html>
 One of either OPC-1529R, OPC-478 or OPC-478UC is required.

■ CLONING & DATA CABLES

OPC-1529R : Data communication cable for PC or GPS receiver connection. (RS-232C type)
OPC-478 : PC cloning cable (RS-232C type)
OPC-478UC : PC cloning cable (USB type)
OPC-474 : Transceiver to transceiver cloning cable. (Between same models only)

Your local distributor/dealer: