



VHF/UHF DUAL BAND TRANSCEIVERS

**IC-80AD** (Handheld transceiver)

**ID-880H** (Mobile transceiver)



For the **Outdoors.**

VHF/UHF Dual Band  
Digital Transceiver, IC-80AD



**Digital & Analog**

**Easy to set up**

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

**Optional HM-189GPS  
(For IC-80AD)**

For **Mobile use.**

VHF/UHF Dual Band  
Digital Transceiver, ID-880H



**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.



Repeater



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



Repeaters linked by the Internet allow worldwide communication!



Repeater



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

\* PC and mapping software are not included. Optional data cable required.

Internet    DV mode (4.8)

## Take it into the field— Easy to use!

### Optional GPS speaker-microphone

When used with the GPS speaker-microphone, HM-189GPS, the IC-80AD shows your position data on its LCD display and offers automatic position reporting in DV mode.

### 5 Watts (typical) output power

The IC-80AD provides 5W (typ.) output power in both VHF/UHF bands. The supplied Lithium-Ion battery, BP-217, provides up to 6 hours\*<sup>1</sup> 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\*<sup>2</sup> water-resistant construction
- Auto power save and auto power off
- 10dB (approx.) built-in attenuator

\*<sup>1</sup> Tx high: Rx: Stand-by duty ratio= 1 min.: 1 min.: 8 min. Power save on.

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

### VHF/UHF DUAL BAND TRANSCEIVER

## IC-80AD

### Supplied accessories

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



The above photo includes optional HM-189GPS.

## IC-80AD & ID-880H

### D-STAR Digital Voice capability

The IC-80AD and ID-880H 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-880H. Optional HM-189GPS is required for IC-80AD.



Setting example for showing own position as 135 degrees east longitude (ID-880H)

### Wideband receiver

The IC-80AD covers 0.495–999.990MHz\* and the ID-880H 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.





**Repeater**

**ID-1**

You can communicate with Icom's 1.2GHz transceiver, ID-1, in DV mode\*.  
\* Depending on repeater configuration.

Digital mode, voice is clearer, even at the station fringe!

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

**Easy**

Easy to set up!

**IC-80AD/ID-880H**

## 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	0.800000	Yes

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

### To make a CQ call using D-STAR

**Step 1**


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



Setting example for Bellevue, WA (N7IH) as uplink repeater (IC-80AD)

**Step 2**

Hold the UR button and select a downlink repeater



Setting example for Würzburg, Germany (DB0WZ) as downlink repeater (ID-880H)

When GW set is set to Auto.

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-80ADs, ID-880H 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
  - Auto repeater function\*
  - Weather channel with weather alert\*
- \* Depending on versions

### 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-880H has a compact body, it has a large LCD display. At 64×20.7 mm (2<sup>17</sup>/<sub>32</sub>×1<sup>13</sup>/<sub>16</sub> in), the LCD offers an excellent viewing angle suitable for mobile operation. Green, yellow and amber display backlighting is available. Select the color you like!

### VHF/UHF DUAL BAND TRANSCEIVER

## ID-880H

### Supplied accessories

- (\*depending on version)
- Hand microphone, HM-133
  - Separation cable, OPC-1154A (3.4 m; 11.2ft)
  - DC power cable, OPC-1132A
  - Microphone hanger
  - Mounting bracket kit
  - Remote controller bracket

### Max. 50 Ch/sec. high speed scan

The ID-880H 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 \*25W for Taiwan version.
- Built-in noise filter (AM/FM mode)
- Data and 9600/1200bps packet jacks on the rear panel
- ±2.5ppm frequency stability
- Adjustable microphone sensitivity



# SPECIFICATIONS

GENERAL	IC-80AD	ID-880H
• Frequency coverage U.S.A. TX RX	144-148, 420-450MHz*1 0.495-999.990MHz*1*2	144-148, 430-450MHz 118-173.995, 230-549.995, 810-999.990MHz*2*3
Export TX RX	137-174, 400-470MHz*4 0.495-999.990MHz*4	136-173.995, 400-469.995MHz*4 118-173.995, 230-549.995, 810-999.990MHz*4
	*1 Guaranteed range, 144-148, 440-450MHz. *2 Cellular blocked. *3 Guaranteed range, 144-148, 430-450MHz. *4 Guaranteed range, 144-148, 430-440MHz.	
• Type of emission	F2D, F3E, F7W	F2D, F3E, F7W
• Useable temp. range	-20°C to +60°C; -4°F to +140°F	-10°C to +60°C; +14°F to +140°F
• 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 External DC power	7.4V DC (with BP-217) 10-16V DC	13.8V DC (±15%)
• Current drain TX High (VHF/UHF) RX	(at 7.4V DC) 1.8/2.1A typ. Power save/Rated output/Stand-by FM 30mA/170mA/62mA typ. DV 38mA/215mA/106mA typ. (Power save duty= 1:4)	(at 13.8V DC) 11.5/12.5A typ. 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; 2 <sup>9</sup> / <sub>16</sub> ×4 <sup>1</sup> / <sub>16</sub> ×1 <sup>1</sup> / <sub>32</sub> in.	150×40×199.2 mm; 5 <sup>29</sup> / <sub>32</sub> ×1 <sup>9</sup> / <sub>16</sub> ×7 <sup>27</sup> / <sub>32</sub> in.
• Weight (approx.)	290g; 10.3oz (with antenna and BP-217)	1300g; 2.9lb (without microphone, cable and bracket)

TRANSMITTER	IC-80AD	ID-880H
• Output power	High/Mid/Low/S-low 5W/2.5W/0.5W/0.1W typ.	High/Mid/Low 50W*/15W/5W (approx.) * 25W for Taiwan version.
• 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-80AD

#### ■ BATTERY PACK AND CASE

**BP-216** : AA (LR6) × 2 battery case  
**BP-217\*** : Li-Ion battery pack  
7.4V/1500mAh (min.), 1580mAh (typ.)

#### ■ BATTERY CHARGERS

**BC-167\*** : Wall charger (12V/500mA output)  
Charges the BP-217 in 6 hours (approx.).  
BC-167SA for 120V AC, ND or SD for 230V AC.  
**BC-139** : Rapid desktop charger.  
Charges the BP-217 in 2.5 hours (approx.).

#### ■ 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)

#### ■ 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

#### ■ 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

\*1 Same as supplied. \*2 Please note: HM-189GPS is compatible only with the IC-80AD at this time.

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RECEIVER	IC-80AD	ID-880H
• 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 More than 60dB
• 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 ID-880H

#### ■ 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 (9.8ft) DC power supply cable.  
**OPC-347** : 7m (23ft) DC power supply cable.

#### ■ MOUNTING BASE

**MB-120** : Mounting base

#### ■ EXTERNAL SPEAKER

**SP-10** : Mid sized external speaker

#### ■ EXTENSION CABLES

**OPC-440** : 5m (16.4ft) microphone extension cable.  
**OPC-647** : 2.5m (8.2ft) microphone extension cable.  
**OPC-441** : 5m (16.4ft) speaker extension cable.  
**OPC-589** : Microphone adapter cable.  
Connection for 8-pin microphone.

### OPTIONS FOR BOTH MODELS

#### ■ CLONING SOFTWARE

**CS-80/880** : Free download cloning software for IC-80AD and ID-880H.  
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)