

ICOM

VHF/UHF DUAL BAND TRANSCEIVER

**IC-92AD**

***D-STAR: Take It To the Field!***

**GPS**

Offers position reporting.  
(With optional GPS speaker-microphone)

**D-STAR**

Includes DV mode digital voice  
and low-speed data.

**Submersible**

Equivalent to IPX7 protection.  
(1 meter depth for 30 minutes)

Photo includes optional GPS speaker-microphone, HM-175GPS.

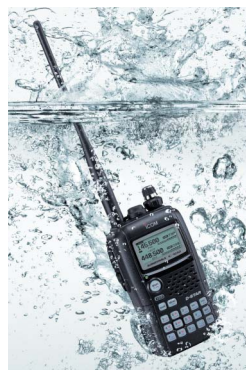


# D-STAR

**Take It To the Field!  
Tough, Submersible Com**

## Rugged Submersible Protection

The IC-92AD and HM-175GPS have superior waterproof protection and is equivalent to IPX7 (1m depth of underwater for 30 minutes). The aluminum diecast chassis and gasket-sealed housing provide performance you can count on in harsh outdoor environments; when hiking, mountain biking, touring and for alpine activities.



## Optional GPS Speaker-microphone

Used with the GPS speaker-microphone, HM-175GPS, the IC-92AD shows your position data on the display and offers automatic position reporting in DV mode. The IC-92AD shows the direction to a received D-STAR station or to a memory stored with a compass-like display pointer. In addition, the GPS-A mode assists in easy D-PRS system operation.

### GPS application examples

#### Touring with GPS

Even if you separate from your group, the radio shows the distance and direction to help you to re-join them.



#### Hiking with GPS

When you find a nice viewpoint, you can send the location to your friends.

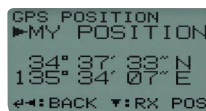


#### Meeting with GPS

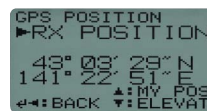
Exchanging position information with someone else helps you get together.



### Examples of GPS functions



My (own) position information



RX (received station) position information



Compass information



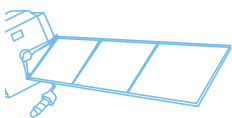
Direction and distance to RX station



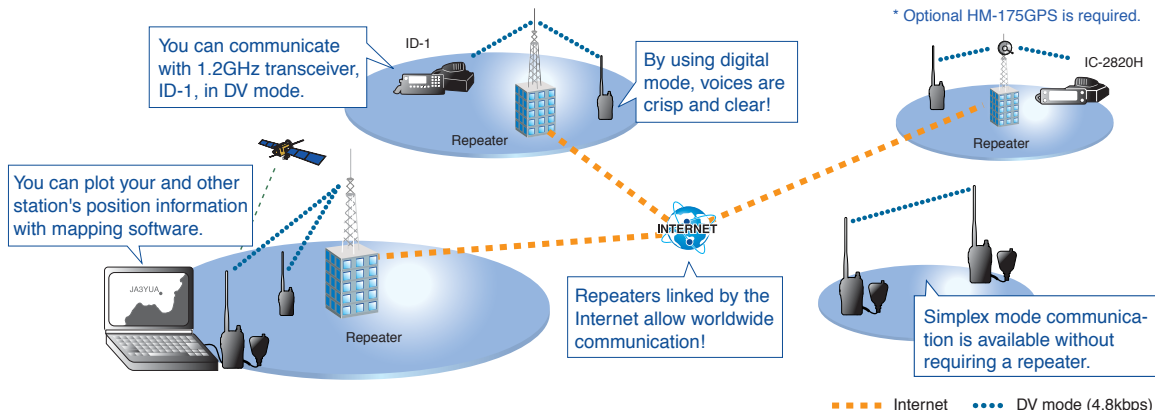
VHF/UHF DUAL BAND  
TRANSCIVER

**IC-92AD**





## With the IC-92AD, exchanging position information\* is easy! D-STAR repeaters use the Internet to carry your signals anywhere!



## Instruction!

## Feature-rich Functions

### Wideband receiver with dualwatch capability

The IC-92AD has dualwatch receiver capability, allowing you to receive\* on two bands simultaneously (including the same band). By pushing and holding the [Main/Dual] button, you can easily turn dualwatch on and off, while a single press toggles the active VFO channels (A band/B band).

\* See specifications for receive range coverage.

### 5 Watts (typical) output

Icom's original wideband PA circuit and supplied lithium-ion battery pack provides 5W (typ.) output power on both VHF and UHF bands. The supplied BP-256 provides up to 6/5.5 hours\* of operating time. When you don't need full power operation, you can reduce output power to 2.5/0.5/0.1W (typ.) to reduce battery consumption.

Output power	High (5W typ.)	Mid (2.5W typ.)	Low (0.5W typ.)	S-Low (0.1W typ.)
VHF	6 hrs.	8.5 hrs.	14.5 hrs.	19 hrs.
UHF	5.5 hrs.	7.5 hrs.	14.5 hrs.	19 hrs.

\* VHF/UHF single mode, Tx high: Rx: Stand-by duty ratio= 1: 1: 8

### Simple bandscope

Spectrum activity is displayed on the screen and audio is heard while sweeping. The bandscope is useful for finding new or interfering signals.



Simple bandscope example

### Built-in voice recorder function

The built-in voice recorder\* records an incoming call for up to 30-seconds (approx.), (or 15 sec. x 2 tracks, 10 sec. x 3 tracks). For automated outgoing calls, you can pre-record up to 10 seconds of your callsign and/or CQ message in the IC-92AD's voice memory.

(\* Available in DV mode only)

## Convenient Operation

### Large dot-matrix Display

Using a large full dot-matrix display (37.8x20 mm; 1 1/2x2 5/32 in), the IC-92AD clearly shows two-line frequency settings, alphanumeric channel name, bandscope, received message and position information, etc. You can change the display setting to show frequency or memory name in the center of the display. In addition, automatic LCD and keypad backlighting provides bright illumination for night time operation.



Memory name large setting

### One touch reply button

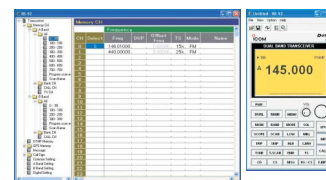
The one-touch reply [CALL RX->CS] button memorizes the received callsign(s) with a single touch. This function allows you to respond to the calling station without hassle. In addition, up to 20 received callsigns are stored in a received call history.

### Keypad navigation

The four cursor direction buttons on the keypad give you quick and intuitive access to many settings. The dual volume/channel knob provides convenient channel selection and volume control.

### Optional PC remote control capability

When connected to a PC via RS-232C, most functions of the IC-92AD can be controlled from the PC with the optional RS-92 software. In DV mode operation, you can send and receive short messages of 20 characters (max.) on the PC.



### Other features

- Total of 1304 memory channels
- External DC power jack (10-16V DC acceptable)
- 10 channel DTMF memory (16-digit)
- Squelch disable function to monitor a weak signal
- Built-in CTCSS/DTCS tone encoder and decoder (FM mode)
- Auto power save, power off and power on
- 26 memory banks with selected bank and bank link scanning
- 10dB (approx) built-in attenuator
- Automatic repeater function\*
- Weather channel with weather alert\* (\* USA and Canada versions only)



## SPECIFICATIONS

## GENERAL

• Frequency coverage and Mode : (Unit: MHz)

Version	Transmit	Receive (Working range)	Mode
U.S.A.	144-148, 420-450*1	A band: 0.495-999.990*3 B band: 118-174, 350-470	FM/WFM*/AM**4
			FM/FM-N/AM**4/DV
Canada	144-148, 420-450*1	A band: 0.495-999.990 B band: 118-174, 350-470	FM/WFM*/AM**4
			FM/FM-N/AM**4/DV
Export SEA	137-174, 400-470*2	A band: 0.495-999.990 B band: 118-174, 350-470	FM/WFM*/AM**4
			FM/FM-N/AM**4/DV

\*1 Guaranteed range, 144-148, 440-450MHz. \*3 Cellular blocked.

\*2 Guaranteed range, 144-148, 430-440MHz. \*\*4 Receive only.

- Memory channels : 1304 channels (including 100 program scan edges and 4 call channels)
- Useable temp. range : -20°C to +60°C; -4°F to +140°F
- Tuning steps : 5°, 6.25°, 8.33°, 9°, 10, 12.5, 15, 20, 25, 30, 50, 100, 125, 200 kHz  
\* Available depending on the operating bands.
- Frequency stability : ±2.5ppm (-20°C to +60°C)
- Power supply : 7.4V DC (with BP-256)
- External DC power : 10-16V DC
- Digital Tx speed : 4.8kbps
- Voice coding speed : 2.4kbps
- Current drain (at 7.4V DC):  
Tx High (VHF/UHF) 1.8/2.1A typ.  
Rx Power save(Duty=1:4)/Rated output/Stand-by  
FM (Single) 38mA/150mA/65mA typ.  
FM/FM (Dual) 43mA/180mA/90mA typ.  
FM/DV (Dual) 50mA/220mA/130mA typ.  
DV (Single) 47mA/200mA/110mA typ.
- Antenna impedance : 50Ω (SMA)

- Dimensions (W×H×D) : 59×112×34.2 mm; 2<sup>9</sup>/<sub>16</sub>×4<sup>1</sup>/<sub>2</sub>×1<sup>1</sup>/<sub>32</sub> in. (projections not included)
- Weight (approx.) : 325g; 11.5oz (with antenna and BP-256)

## TRANSMITTER

- Output power : High 5W typ. Mid 2.5W typ.  
Low 0.5W typ. S-low 0.1W typ.
- Spurious emissions : Less than -60dBc (High, Mid)
- Max. freq. deviation : ±5.0/2.5kHz (FM wide/narrow)

## RECEIVER

- Ext. MIC impedance : 2kΩ
- Intermediate frequencies :  
A band (1st/2nd) 61.65MHz/450kHz (Except WFM)  
WFM (1st/2nd/3rd) 59.25MHz/13.35MHz/1.95MHz  
B band (1st/2nd) 46.35MHz/450kHz
- Sensitivity (typical, except spurious points) :  
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
- Selectivity :  
AM/FM Wide : More than 50dB  
FM-Narrow, DV : More than 45dB  
WFM : More than 300kHz/-3dB  
Less than 700kHz/-20dB
- Spurious and image rejection :  
VHF (Ham band) : More than 60dB  
UHF (Ham band) : More than 50dB (IF; more than 60dB)
- Spurious radiation : Less than -57dBm
- Audio output power : More than 200mW at 10% distortion (7.4V DC) with an 8Ω load
- Ext. speaker impedance: 8Ω

## Supplied accessories (\*depending on version)

- Battery pack (BP-256) ● Wall charger\* (BC-167A/D)
- Antenna (FA-S270C) ● Belt clip (MB-111) ● Hand strap

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

## OPTIONS

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

## BATTERY PACK AND CASE



BP-256 BP-257

## BP-256 7.4V/1620mAh Li-Ion BATTERY PACK

Provides 6/5.5 hours\* operating time (approx.).

(\* VHF/UHF FM single mode typical operation with Tx (H): Rx: standby=1:1.8)

## BP-257 BATTERY CASE FOR AA (LR6)×2 alkaline cells.

Output power: 0.1W typ. BP-257 is not waterproof.

## SPEAKER-MICROPHONES



HM-174

HM-175GPS

HM-174 : Waterproof speaker microphone. Equivalent to IPX7.

HM-175GPS : Waterproof speaker microphone with GPS receiver. Equivalent to IPX7.

HM-75A, HM-131, HM-153 and HM-166 speaker microphones

are also available with the OPC-1797 plug adapter cable.

## BC-177 DESKTOP CHARGER



Rapidly charges battery pack BP-256. Charging time (approx.): 2.5 hours. AC adapter is supplied with the BC-177.

## BC-167A/D WALL CHARGER



Charges the BP-256 in 6 hours (approx.). Same as supplied with some versions.

## POWER SUPPLY CABLES



CP-19R

OPC-254L

CP-19R : Cigarette lighter cable with DC-DC converter. 10-16V DC required.

OPC-254L : For use with an external power supply. 10-14V DC required for high power output.

CP-12L : Cigarette lighter cable is also available.

## REMOTE CONTROL SOFTWARE AND CONNECTION CABLE



RS-92

OPC-1799

RS-92: Provides remote control capability from a PC. OPC-1799 is included.

OPC-1799 : RS-232C type PC connection cable.

## OPC-1797 PLUG ADAPTER CABLE



MIC/SP plug adapter. For use of the HM-75A, HM-131, HM-153, HM-166, HS-85, OPC-474 and SP-13.

## LC-168 CARRYING CASE



Helps protect the transceiver from scratches, etc.

## AD-92SMA ANTENNA CONNECTOR ADAPTER

Allows you to connect a BNC-type antenna.

## HS-85 HEADSET

Allows you hands-free operation. Includes VOX, PTT, "one-touch PTT" with time out timer (TOT). OPC-1797 is required.

## MB-111 BELT CLIP

Same as supplied.

## OPC-474 CLONING CABLE

Used for handheld-to-handheld data cloning. Two OPC-1797s are required.

## SP-13 EARPHONE

Provides clear audio in noisy environments. OPC-1797 is required.

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