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ICOM N

NEW PRODUCT INFORMATION

DUAL BAND TRANSCEIVERS



The photo shows IC-92AD (left) and IC-E92D (right).

IC-92AD (U.S.A.) IC-E92D (EURO)

Icom proudly announces the debut of submersible dual band transceiver, IC-92AD and IC-E92D. The IC-92AD/E92D is upgraded from the IC-91AD/E91 series and most of the features are retained from the IC-91AD/E91 but provides submersible protection, equivalent to IPX7. Used with the optional HM-175GPS, the IC-92AD/E92D provides GPS position reporting functions in DV mode and GPS functions are fully compatible with IC-2820H/E2820 series. The IC-92AD/E92D and HM-175GPS are targeted to D-STAR enthusiasts, amateurs who are outdoor orientated and safety related organizations who are looking for a simple GPS position reporting system.

SELLING POINTS

- IPX7 submersible construction
- Optional GPS speaker-microphone, HM-175GPS
- 4-step RF power selection
- GPS position reporting functions (DV mode)
- GPS A mode for easy D-PRS operation
- Wide band receiver with dual watch receiver capability
- Large dot-matrix display
- Total 1304 memory channels
- Simple bandscope
- Keypad navigation
- One touch reply button (DV mode)
- Built-in voice recorder and auto reply voice message (DV mode)
- Optional PC remote control capability

NEW FEATURES

Optional GPS speaker-microphone, HM-175GPS

Used with the newly designed GPS speaker-microphone, HM-175GPS, the IC-92AD/E92D shows your position data on the display and offers a position reporting function in DV mode. The IC-92AD/E92D shows the direction to a memory position or to a received D-STAR station with a compass like display needle. In addition, the GPS-A mode assists in easy D-PRS mode operation.





Compass display shows the direction to the received station



IPX7 submersible construction

The IC-92AD/E92D and HM-175GPS provide superior waterproof protection equivalent to IPX7 (1m depth of water for 30 minutes). It can be used in harsh outdoor environments, when hiking, mountain biking, touring and alpine sports.

4-step RF power selection

The IC-92AD/E92D provides 5W (typ.) output power both in VHF/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.) for saving battery consumption.

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



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

RETAINED FEATURES (From IC-91AD/E91)

Wide band receiver with dualwatch capability

The IC-92AD/E92D has dualwatch receiver capability, allowing you to receive two bands simultaneously (V/V, U/U, V/U possible). By pushing and holding the [Main/Dual] button, you can easily turn on/off the dualwatch mode, while a press of the button allows you to toggle the active VFO channels. When in the dualwatch mode, the operating frequency and mode are restricted to 495kHz–999.990MHz in FM/WFM/AM mode (VFO A) and 118–174MHz or 350–470MHz in FM/FM-N/AM/DV mode (VFO B)*.

* See specifications page for receive range coverage.

Large dot-matrix LCD

Using a large full dot-matrix LCD (37.8 \times 20 mm), the IC-92AD/E92D clearly shows two line frequency settings, alphanumeric channel name, bandscope, received short data message and GPS coordination, 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 backlight provides bright illumination for night time operation.



Total 1304 memory channels

The IC-92AD/E92D has a total 1304 memory channels with 26 memory banks. The VFO A has 800 regular channels, 50 scan edges and 2 call channels, while the VFO B has 400 regular, 50 scan edges and 2 call channels. All memory channels, memory banks and even scan edges can be named with 8-character channel comments.

RETAINED FEATURES (From IC-91AD/E91)

Simple bandscope

Spectrum activity is visually shown on the screen and AF output is emitted while sweeping the range. It is useful for finding new or interfering signals.

Keypad navigation

The 4-direction cursor buttons on the keypad gives you quick and intuitive access to many settings. The twin volume/channel knob provides convenient channel/volume setting.

External DC power jack

An external DC power jack allows for operation with an external DC power supply (10–16V DC). When used with the CP-19, CP-12L or OPC-254L, simultaneous operation during charging is possible.

Built-in CTCSS/DTCS encoder and decoder

CTCSS and DTCS tones are used for accessing a closed repeater or tone squelch operation. The pocket beep alerts you with a beep sound when the transceiver receives a preset tone.

Multiple scan functions

- The IC-92AD/E92D supports various scan types for maximum reception and ease of use.
- Full scan
 Selected band scan
- Memory mode scan
 All bank scan
- Bank link scan (DMS) Program scan link

Other features

- Squelch release function to monitor a weak signal.
- Auto power save, power off and power on
- 10 channel DTMF memory (16-digit)
- 10dB (approx) built-in attenuator
- Automatic repeater function*
- Weather channel with weather alert*
- (* USA and Canada version only)

DIGITAL FEATURES

D-STAR DV mode available (Digital Voice + data)

The IC-92AD/E92D provides DV mode operation with an AMBE codec. 950 bps data can be sent simultaneously with the digital voice transmission. The IC-92AD/E92D is compatible with the JARL D-STAR format*. In addition, when you receive an FM mode (or other mode) signal while operating in DV mode, the automatic DV detection function automatically changes the operating mode to the detected mode.

* The Digital features of the IC-92AD/E92D are compatible with IC-91 series (With UT-121), IC-2820 series (with UT-123), ID-800H, IC-V82/U82(with UT-118) and IC-2200H (with UT-118).

GPS position reporting function

When connecting an optional HM-175GPS, own and other station's position information can be sent and received*. The IC-92AD/E92D sends the position data either by holding the PTT switch, or at a preset interval (5 seconds–30 minutes), depending on the setting.

* GPS data receive only is possible when no external GPS receiver or GPS speaker-microphone is attached.

Plotting position information on mapping software

When connected to a PC* via the optional RS-232C cable, OPC-1799, the position information can be plotted on mapping software* on a PC.

* Serial port and position mapping software (NMEA 0183 format) are required.

GPS alarm

The GPS alarm sounds when your own position is close to the specified point or area.



Mobile station with HM-175GPS The IC-92AD sends position data either by holding the PTT switch, or at a preset interval depending on setting

Base station and connected to an external PC Monitors position of the mobile station.

- Programmed scan
 - Selected bank scan
 - Skip scan
- Memory scan
- Tone scan
- Priority scan

DIGITAL FEATURES

One touch reply button

The IC-92AD/E92D has a one-touch reply function. It uses the received callsign (including repeater callsign) and allows you to call back to the calling station without hassle. In addition, up to 20 received callsigns are stored as the received call record.

Built-in voice recorder and auto reply

The IC-92AD/E92D has a built-in voice recorder*. It records an incoming call in DV mode for up to 30 seconds (approx.), or can be partitioned into 3 tracks (10 seconds each). The 10-second transmit memory allows you to record your callsign, CQ and automatically answers when you receive a message. (* Available in DV mode only)

Optional PC remote control capability (Also available in analog mode)

When the IC-92AD/E92D is connected to a PC via a RS-232C cable, most functions of the IC-92AD/E92D can be controlled from the PC. In DV mode operation, you can send and receive short messages of 20 characters (Max.) on the PC.

DX communication over the D-STAR system

The 144, 440MHz D-STAR repeater is now available. It allows you cross band (144 /440/1200MHz) operation and long distance communication over the D-STAR system.



SPECIFICATIONS

Specifications described below are target values. They may be subject to change.

■ RECEIVER • Intermediate freq.

■ GENERAL

Frequency coverage	e : (Unit: MHz)
Version Transmit	Receive (Working range)
Europe 144–146,	A: 0.495–999.990 B: 118, 174, 250, 470
144–148.	A: 0.495–823.990, 849–868.990, 894–999.990
U.S.A. 420–450*1	B: 118–174, 350–470
Canada 144-148,	A: 0.495–999.990
420-450*1	B: 118–174, 350–470
137-174, SEA 400-470*2	A: 0.495–999.990 B: 118–174, 350–470
* ¹ Guaranteed range 144–	148 440–450MHz
* ² Guaranteed range, 144–	148, 430–440MHz.
• Mode	: FM, FM-N, AM*, WFM*, DV * Receive only
No. of memory Ch.	: 1304 channels (including 100
	program scan edges and 4 call)
Frequency resolutio	n : 5*. 6.25*. 8.33*. 9*. 10. 12.5. 15.
r roquonoy rocolullo	20 25 30 50 100 125 and
	200kHz
* Selectable dep	ending on operating bands or modes
Operating temp_rance	-20° C to +60°C - 4°E to +140°E
Frequency stability	+2.5 ppm (-20°C to +60°C on the
r roquorioy otability	hasis of 25°C)
Power supply requirem	pent 7 4V DC (with BP-256)
External DC power	10–16V DC
Current drain (at 7 4V	DC).
Tx High (VHF/U	HF) 1 8/2 1A typ
Mid (VHF/UH	F) $12/15A$ typ
	HE) = 0.6/0.7A typ
Slow (VHF/U	HF) $0.4/0.4A$ typ
Rx	Power save/Rated output/Stand-by
FM	38mA/150mA/65mA typ
FM/FM (dual	$\sqrt{3m}/180m}/90mA$ typ
FM/DV (dual	$50m\Delta/220m\Delta/130m\Delta$ typ
	47mA/200mA/110mA typ
(Power save c	$4/11/\sqrt{20011}/\sqrt{1011}/\sqrt{10}$
• Antenna impedance	500 (SMA)
Dimensions (WvHvI	$(-1) = 50 \times 112 \times 34.2 \text{ mm}$
	$\frac{25}{4} = \frac{25}{4} = \frac{113}{4} = \frac{111}{110} = \frac{111}{100} = \frac{111}{100} = \frac{111}{100} = \frac{111}{100} = \frac{111}{100} = \frac{111}{100} = \frac{1111}{100} = \frac{11111}{100} = \frac{11111}{100} = \frac{11111}{100} = \frac{111111}{100} = \frac{111111}{100} = \frac{1111111}{100} = 11111111111111111111111111111111111$
• Weight (approx.)	• 325a• 11 5oz (w/ant and RD 256)
	. 5259, 11.502 (Want. and BF-256)
	EM reactance modulation
• Output power (at 7.4	
riign	SW typ.
IVIIQ	∠.5vv typ.
LOW	
SIOW	U. TW TYP.
Spurious emissions	: Less than -60dBc (High, Mid)
• Max. treq. deviation	: ±5.0/2.5kHz (Wide/narrow)
• Ext. IVIIC Impedance	e : 2KΩ

	1st	VFO A	61.65MHz	(Except WFM)
				(VVFIVI)
	Jund	VFU D		
	zna		450KHZ (E	xcept vvFIVI)
	. .		13.35MHz	
-	3rd		1.95MHz (WFM)
• Sens	sitivity (1	iypical):		
FM (at 12dB	SINAD/3.5kH	lz DEV)	
1	1.625 -	29.995MH	z 0.4µV	
30).000 -	75.995MH	z 0.25µV	
76	5.000 -	117.995MHz	z 0.25µV	
118	3.000 -	173.995MH	z 0.14µV	
174	+.000 -	259.995MH	z 0.32µV	
260).000 -	349.995MH	z 0.32µV	
350).000 -	469.995MHZ	2 0.16µV	
470).000 -	299.995MH2	2 0.32µV	
600	1.000 -	999.995IVIH2	2 0.56µV	
	/I (at 120		- 1\/	
170	-000 - 1000		2 Ιμν - 1 ουλί	
170	-000 -		2 1.0µV	
4/0	0.000 -		2 2.5μν	
AIVI ((at 100B	5/N) 1 005MU-	7 1 211/	
	5 000 -	20 005MH	2 Ι.Ομν 7 Ο 56μ\/	
110	2.000 - 2.000	29.9951VII I	2 0.50µV	
222	2000 - 20000 -	246 005MH	∠ 0.5µV z 0.70µV	
2/7	7 000 -	270.005MH	z 1.1V	
	at REP	1% (1.8kbpc)		
Dv (VHF (H	2m band)	0.2211/	
		lam band)	0.22µV	
• Sele	ctivity		0.2201	
		do	More than	50dB
FM	A-Narrow		More than	45dB
\//E	M	, 01	More than	300kHz/_3dB
			Less than	700kHz/_20dB
• Spu	rious ar	d image rei	ection :	
Opui	VHF (H	am hand)	More than	60dB
	UHF (H	lam band)	More than	50dB (Except IE)
	IF poi	nt	More than	60dB
• Spu	rious ra	diation ·	Less than	–57dBm
• Audi		t power	200mW tv	p. at 10% distortion
(7.4)/	(DC)		with an 80	load
• AF o	output in	npedance :	8Ω	
			-	

:

OPTIONS

	RY PACKS AND CASE
BP-256 BP-257	: 7.4V/1620mAh Li-Ion battery. Same as supplied. (New item) : AA (LR6) × 2 battery case (New item)
	RY CHARGERS
BC-167	: Wall charger (BC-167A/E version available) Provides 12V/500mA output. Charges the BP-256 in 6 hours (approx.). Same as supplied.
BC-177	: Rapid desktop charger. Charges the BP-256 in 2.5 hours (approx.). (New item) An AC adapter, BC-123, is supplied depending on version.
+ BC-123	: AC adaptor (BC-123A/E/V version available)
	E CONTROL SOFTWARE AND CABLES
RS-92	: Remote control software. Allows remote control from a PC. OPC-1799 is included. (Microsoft [®] Windows [®] 98SE, Me, 2000, XP, Windows Vista [™]). (New item)
OPC-1799	: PC/GPS connection cable (RS-232C type) (New item)
OPC-474	: Cloning cable. Allows transceiver to transceiver cloning. Two OPC-1797s are required.
OPC-1797	: Plug adapter cable (multi-pin connector to SP/Mic connectors) (New item) OPC-1797 is required to use 2-pin type microphones and/or earphones with the transceiver.
ANTEN	NAS
FA-S270C	: VHF/UHF antenna. Same as supplied.
AD-92SMA	: Antenna connector adaptor. Allows you to connect a BNC-type antenna.
	ER-MICROPHONES AND EARPHONE-MICROPHONES
HM-174	: Waterproof speaker microphone. Equivalent to IPX7. (New item)
HM-175GPS	: Waterproof speaker microphone with GPS receiver. Equivalent to IPX7. (New item)
HM-75A	: Remote control speaker microphone. Allows you to remotely select operating channel according to programming. OPC-1797 is required.
HM-131	: Compact type speaker microphone. OPC-1797 is required.
HM-153	: Durable type earphone microphone. OPC-1797 is required.
HM-166	: Light type earphone microphone. OPC-1797 is required.
HEADS	ETS
HS-85	: Headset. Allows you hands-free operation. Includes VOX, PTT, "one-touch PTT" (TOT). OPC-1797 is required.
EARPH	ONE
SP-13	: Earphone. OPC-1797 is required.
BELT C	LIP
MB-111	: Belt clip. Same as supplied. (New item)
	ING CASE
LC-168	: Helps protect the transceiver from scratches, etc. (New item)
	ETTE LIGHTER CABLE AND DC POWER CABLE
CP-19/R	: 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)

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