

DUAL BAND FM TRANSCEIVER

IC-E2820

READY TO GO ON THE ROAD with D-STAR and GPS **Optional UT-123 is required



D-STAR Function

(Digital Smart Technology for Amateur Radio)

Digital voice mode with GPS receiver*

*Optional UT-123 is required

VHF/UHF Dual Band

50W output on both bands

Wideband Receiver

With diversity receive capability

Quality analog fundamentals, futuristic digital capability now!

Wideband receiver with simultaneous receive capability

The IC-E2820 receives 118-549.995 and 810-999.990MHz* with dualwatch receiver capability that allows you to receive* two bands simultaneously (including within a single band). Almost all VHF & UHF communications are available to you!

* Depending on version. See specifications for details.

Diversity receive capability

If you have two antennas, diversity receive* capability is useful for mobile operation where the received signal strength changes continuously. Within a single band, the radio compares signal strength from each antenna and chooses the better signal to maintain good sound and receive quality.

* Available on 127, 136, 146, 375, 440, 500MHz bands in FM, FM-N, DV mode only.

50W output power on both VHF and UHF bands

A MOSFET power amplifier provides a powerful 50W on both the 2m and 70cm bands, making this compact rig's signal travel for miles! Output power is selectable in 3 steps.

User-friendly operation

The large 93×28 mm full dot-matrix display presents an easy-to-read graphical interface,

viewable over a wide angle. Push the "Function" button to call up the assigned functions menu on the display. In addition, tuning knobs and buttons for each band are arranged side-by-side, providing intuitive operation.



Symmetric layout and easy-to-read graphical interface

Separate controller from main unit

The controller is separated from the main unit for flexible installation. The controller has magnets on the rear panel, allowing you to attach the controller to the main unit or other metal objects. This makes clean and neat installation easy! A 3.4m separation cable. OPC-1663, and a short cable (10cm), OPC-1712, are included.

522 memory channels

The IC-E2820 has a total of 522 memory channels, 500 regular channels, 2 call channels and 20 scan edge channels. Each memory channel stores tone frequency, skip information and so on. The Dynamic Memory Scan (DMS) system divides these memories into 26 groups, A to Z, and provides easy channel selection. Of course, bank scanning is also possible.

Band scope function

The band scope function lets you watch conditions near the receiving frequency and visually assists in finding other stations.



Other features

- ±2.5ppm high frequency stability with TCXO unit
- Green to amber variable display background color
- 104×2 DTCS/50 CTCSS tone squelch operation
- Max. 45 channel/sec. high speed scan capability in programmed scanning mode
- 9600bps packet terminal, mini DIN (6-pin) connector
- Long or short squelch delay
- Automatic attenuator
- FM narrow capability
- Sub-band auto mute function
- 16 DTMF memory channels (24 digits)
- DTMF pager and code squelch function
- Auto power off
- Adjustable microphone sensitivity
- ALC (Automatic microphone Level Control) function
- 1750Hz tone signal for repeater access

D-STAR digital voice + GPS receiver (With optional UT-123)





D-STAR DV mode + GPS receiver

The optional UT-123 provides D-STAR (Digital Smart Technology for Amateur Radio) DV mode operation plus GPS receiver capability. Your location information can be sent simultaneously with the digital voice transmission.

Location information exchange

The IC-E2820 sends your location information either when the mic PTT switch is pushed, or at a preset interval (5 seconds-30 minutes). When available from a calling station, the IC-E2820 displays the distance and direction to the station.



GPS alarm

The GPS alarm alerts you by beeping when a preprogrammed point is within 500m or 1km range from your location or any one of preprogrammed points is within a preset square range.

GPS location tracking

When connected to a PC* via the optional RS-232C cable, OPC-1529R, your own or the received location information can be plotted by mapping software* on a PC.

* Serial port and map software (NMEA 0183) are required.

One touch reply function

The one-touch reply function makes it easy to respond to a calling station instantly. In addition, up to 20 received callsigns are automatically stored as received call records.

Built-in voice recorder and auto reply function

The built-in voice recorder* records an incoming call for up to 30-seconds (approx.), (or 15 sec. \times 2 tracks, 10 sec. x 3 tracks). The 10 sec. transmit memory allows you to record your callsign or other message, and also automatically answers when you receive a message. (* Available in DV mode only)

Low-speed data communication

When connected to a PC* via the optional data cable, OPC-1529R, data communication is available simultaneously with a digital voice

(* Serial port and serial communication software are required.)

DX communication over the D-STAR system

D-STAR repeaters for 430 and 1200MHz will be available in Europe* gradually, allowing cross-band repeater operation and long distance communication via the Internet.

* Ask your dealer for repeater availability in your country.

SPECIFICATIONS

GENERAL

• Frequency coverage (Unit: MHz):

Version	Transmit	Receive
Europe-1	144-146,	(L): 118–549.995*1
	430-440	(R): 118-173.995, 375-549.995, 810-999.990*1
Europe-2		(L): 144-146, 430-440
	430-440	(R): 144-146, 430-440

(L) means left side receiver, (R) means right side receiver Tx/Rx guaranteed range, 144-146, 430-440MHz only

: FM, AM (Receive only), DV (With UT-123) Number of channels : 522 (Including 2 call and 20 scan edges) Antenna connector SO-239 (50 Ω) \times 2 (Tx/Rx and Diversity)

13.8V DC ±15% Power supply Usable Temp. range : -10°C to +60°C Frequency stability : ±2.5ppm

(-10°C to +60°C on the basis of 25°C) • Tuning steps : 5, 6.25, 10, 12.5, 15, 20, 25, 30, 50kHz

• Current drain (at 13.8V DC, approx.): At high (50W) Rx Standby 1.2A Max. audio 1.8A

· Dimensions (projections not included: W×H×D) : 150×40×187.7mm Main Unit Controller 150×58×31.5mm

Weight (approx.) Main Unit

1.5kg 210g (with OPC-1712) Controller

TRANSMITTER

: 50W. 15W approx., 5W approx. Output power Max. frequency deviation: ±5.0/2.5kHz (Wide/narrow) Spurious emissions : Less than -60dB Microphone impedance : 600Ω (8-pin modular iack)

RECEIVER

Intermediate frequency

38 85MHz/450kHz (1st/2nd) Left side receiver 46.35MHz/450kHz (1st/2nd) Right side receiver

Sensitivity (Ham bands only)

Less than 0.18uV (at 12dB SINAD) FM DV (with UT-123) Less than 0.35µV (at BER 1%) Squelch sensitivity : Less than 0.13µV (at threshold) Selectivity

FM (Wide/narrow) More than 10/6kHz at 6dB Less than 30/20kHz at 60dB DV (With UT-123) More than 50dB

Spurious and image rejection:

Left side receiver More than 60/55dB (VHF/UHF) Right side receiver More than 60/60dB (VHF/UHF)

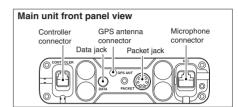
Audio output (at 13.8V DC): More than 2.4W

at 10% distortion with an 8Ω load • Ext. speaker connector : 2-conductor 3.5 (d) mm (½")/8Ω

Receiver sensitivity (Less than; not guaranteed, for your reference only): FM (12dB SINAD)

118-159.995MHz* 0.32μV 160-179.995MHz 0.56µV 180–219.995MHz 5.6μV 225–349.995MHz 5.6μV 220–224.995MHz 0.56μV 350–359.995MHz 0.56μV 360-374.995MHz 5.6µV 375-399.995MHz 0.56µV 400–499.995MHz* 0.32μV 500–549.995MHz 0.56μV 810–879.990MHz 0.79μV 880-999.990MHz 1.8uV (* Except ham bands)

AM (10dB S/N) 118–159.995MHz 1.0µV 220-224.995MHz 1.8μV 225–349.995MHz 18µV 350–359.995MHz 1.8μV 375–399.995MHz 1.8μV 360–374.995MHz 18µV



Supplied accessories:

- Hand microphone, HM-133
 DC power cable, OPC-1132 Controller cable OPC-1712 (10 cm)
- Separation cable, OPC-1663 (3.4 m)
- Mounting bracket kit • Microphone connector plate

Spare fuse

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



• HM-133 REMOTE CONTROL MICROPHONE Same as supplied.



• HM-154 HAND MICROPHONE Regular hand microphone



• OPC-440, OPC-647 MIC EXTENSION CABLES OPC-440: 5.0m OPC-647: 2.5m



• OPC-589 MIC ADAPTER CABLE Allows you to connect an 8-pin microphone.



• UT-123 DIGITAL/GPS UNIT Provides D-STAR DV mode and GPS capabilities.



• OPC-1529R DATA COMMUNICATION CABLE Allows you data communica-tion in DV mode and PC cloning with CS-2820.

CLONING SOFTWARE For quick and easy programming of memories, etc. Either OPC-1529R or OPC-478 is required. • OPC-478 CLONING CABLE

CS-2820



• SP-10 EXTERNAL SPEAKER



OPC-441 SPEAKER **EXTENSION CABLE**



OPC-1132, OPC-347 DC POWER CABLES OPC-1132: 3.0m OPC-347: 7.0m



• MB-120 MOUNT BASE Mounts the remote control head. Angle and direction is adjustable



OPC-1663, OPC-1712 SEPA-RATION CABLES OPC-1712: 10cm Same as supplied

www.icom.co.ip/world



OPC-478: RS-232C cable • OPC-474 CLONING CABLE Data cloning cable between transceivers.

Count on us!

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