



NEW PRODUCT INFORMATION

VHF FM TRANSCEIVERS

IC-V80 (for U.S.A./Export)
IC-V80E (for Europe)



Icom proudly announces the debut of a new 2m handheld transceiver, IC-V80 and IC-V80E. The IC-V80/E is the successor to the extremely successful IC-V8/T3H. The basic features of the IC-V8/T3H like user-friendly operation and 5.5W of output power are shared with this model. In addition to these features, the IC-V80/E provides 750mW (typical) loud and intelligible audio with the BTL amplifier and IP54 dust and water resistant body at more competitive price. The IC-V80/E is a simple, easy-to-use radio at a great value.

The IC-V80/E is targeted at users of the IC-V8/T3H series and also is durable enough for tough use in both the amateur and light commercial markets.

SELLING POINTS

- **144MHz single band handheld**
- **5.5W RF output power with the supplied battery pack**
- **750mW (typical) of loud and intelligible audio with the BTL amplifier circuitry**
- **13 hours* of operating time with the supplied 1400mAh Ni-MH battery pack**
 (* Approx for 5:5:90 duty cycle with power save on)
- **Dust protection and water resistant construction, equivalent to IP54**
- **Tested to the MIL-STD-810-F**
- **VOX function built-in**
 (Optional headset and adapter cable required.)
- **5-character alphanumeric display**
- **A total of 207 of memory channels**
- **CTCSS and DTCS tone squelch**
- **DTMF memory channels**
- **Desktop charger, BC-192 and AC adapter, BC-147S supplied*** (* Depending on version)

FEATURES

5.5W of output power

The IC-V80/E employs a new low consumption current FET module and provides 5.5W of high power and long operating time. For even longer operating time, 2.5W or 0.5W of reduced output power settings can be selectable.

750mW loud audio

The IC-V80/E uses the BTL (bridge-tied load) amplifier that doubles the audio output. The 36mm large speaker delivers 750mW of loud and intelligible audio*. Great in noisy environments.

* Typical value using internal speaker.

IP54 and MIL-STD-810 rugged construction

While the IC-V80/E is a compact unit with a height of only 112mm, the dust protection and water-resistance equivalent to IP54 provides reliable operation in harsh environments. The IC-V80/E is tested to and has passed 11 categories of MIL-STD-810 environmental tests.

Alphanumeric display

The 5-character alphanumeric display clearly shows channel name, operating frequency and memory number with bright illumination. An S-meter icon (∇) shows the signal strength of the receiving frequency and output power level while transmitting.



▲ Display indication

Three types of batteries to choose from

The IC-V80/E has three types of battery packs and case to choose from. Nickel metal hydride (Ni-MH) battery pack, BP-264, Lithium-ion (Li-Ion) battery pack, BP-265, and battery case, BP-263 are selectable for your preference. The BP-264 battery pack, BC-192 regular charger and BC-147S AC adapter will be supplied depending on version.

Battery pack	BP-264	BP-265	BP-263
Type	Ni-MH	Li-Ion	Alkaline cells
Voltage	7.2V	7.4V	AA (LR6) × 6
Capacity	1400mAh	1900mAh (min.) 2000mAh (typ.)	
Operating time	13 hours*	19 hours*	—
Rapid charger	BC-191	BC-193	—
Regular charger	BC-192	—	—

* Typical operation; Tx (high):Rx:Stand-by duty cycle=5:5:90 with auto power save.

A total of 207 memory channels

The IC-V80/E has a total of 207 memory channels, including 200 regular channels, 6 scan edges and 1 call channel. The channel name is programmable with 5 characters for easy recognition.

Integrated VOX function

The IC-V80/E has VOX (Voice Operated Transmit) function for convenient hands-free operation with a compatible optional headset and plug adapter cable. Also, the VOX gain and VOX delay time are adjustable.

Built-in CTCSS and DTCS

The CTCSS and DTCS tones are built-in for quiet stand-by and repeater access. Pocket beep and tone scan are also possible. The tone scan allows the operator to detect the subaudible tone that is used for repeater access.

Scan functions

Various scan functions including program, memory, skip, priority and tone scan can be programmed.

Other Features

- WX channel receive and weather alert function (USA version only)
- Power save function
- BNC type antenna connector
- Automatic repeater function (USA version only)
- TOT (time out timer) setting
- Repeater lockout and busy channel lockout
- PC cloning capability and transceiver to transceiver cloning
- Direct keypad frequency entry
- DTMF memory channels
- Auto power off
- Wide/narrow channel setting



▲ IC-V80E (Europe version)

SPECIFICATIONS

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

■ GENERAL

- Frequency range (MHz) :

Version	Tx working range	Rx working range	TX/RX Guaranteed
U.S.A., Australia	144-148	136-174	144-148
Europe, UK	144-146	144-146	144-146
Export, China	136-174	136-174	144-148
Korea	144-146	144-146	144-146

- Type of emission : F2D, F3E
- No. of memory channel : 207 channels (Including 1 call channel and 3 pairs of scan edges)
- Antenna impedance : 50Ω (BNC Type)
- Tuning steps : 5, 10, 12.5, 15, 20, 25, 30, 50 kHz
- Power supply requirement : 7.2V DC
- Current drain :
 - Tx High (5.5W) 1.4A typical
 - Mid (2.5W) 0.9A typical
 - Low (0.5W) 0.6A typical
 - Rx AF max. 310mA typ. (Internal SP, 16Ω)
 - 180mA typ. (External SP, 8Ω)
 - Stand-by 65mA typical
 - Power save 20mA typical
- Operating Temp. range: -20°C to +60°C ; -4°F to +140°F
- Frequency stability : ±2.5ppm (-20°C to +60°C) at 25°C
- Dimensions (W×H×D) : 58×112×30 mm; (projections not included) 2⁹/₃₂×4¹³/₃₂×1³/₁₆ in
- Weight (approx.) : 140g; 4.9oz (without battery pack) 360g; 12.7oz (with BP-264 and Ant.)

■ TRANSMITTER

- Output power : 5.5, 2.5, 0.5W (High, mid, low)
- Modulation system : Variable reactance modulation
- Spurious emissions : Less than -60dB
- Max. deviation : ±5kHz/±2.5kHz (wide/narrow)
- External microphone : 3-conductor 2.5 (d) mm connector (1/10")/2.2kΩ

■ RECEIVER

- Receiving system : Double conversion superheterodyne
- Intermediate frequency: 1st 21.7MHz 2nd 450kHz
- Sensitivity : 0.14μV typ. (at 12dB SINAD)
- Squelch sensitivity : 0.1μV typ. (at threshold)
- Selectivity : 70dB/50dB typ. (Wide/narrow)
- Intermodulation : 70dB/65dB typ. (Wide/narrow)
- Spurious image rejection : 75dB typ.
- Audio output power : 0.75W typical (Internal SP, 16Ω) 0.45W typical (External SP, 8Ω)
- Ext. speaker connector : 3-conductor 3.5 (d) mm (1/8")/8Ω

Applicable U.S. Military Specifications & IP Rating

Icom makes rugged products that have been tested to and passed the following MIL-STD requirements and Ingress Protection standards.

Standard	MIL 810F	
	Method	Procedure
Low Pressure	500.4	I, II
High Temperature	501.4	I, II
Low Temperature	502.4-3	I, II
Temperature Shock	503.4	I
Solar Radiation	505.4	I
Rain Blowing/Drip	506.4	I, III
Humidity	507.4	-
Salt Fog	509.4	-
Dust Blowing	510.4	I
Vibration	514.5	I
Shock	516.5	I, IV

Also meets equivalent MIL-STD-810-C, -D and -E.

Ingress Protection Standard	
Dust & Water	IP54 (Dust-protection and water resistant)

Comparison with other Icom 2m handheld radios

Model Name	IC-V80 IC-V80E	IC-V85 IC-V85E	IC-V82	IC-V8 IC-T3H
Output Power	5.5W	7W	7W	5.5W
Size (W×H×D)	58×112×30mm	56×110×34.4mm	54×139×36.7mm	54×132×35mm
Weight (approx.)	360g (with BP-264 and ANT)	310g (with BP-227 and ANT)	390g (with BP-222N and ANT)	350g (with BP-222N)
Water resistance	IP54	IPX4	-	-
Frequency coverage	136-174MHz*1	136-174MHz*1	136-174MHz*1	136-174MHz*1
No of memory channels	207	107	207	107
Channel comment	5 characters	5 characters	5 characters	5 characters
CTCSS/DTCS tone	Yes	Yes	Yes	Yes
DTMF memory	Yes	Yes	Yes	Yes
DTMF decode/ANI	No	Yes with UT-108	Yes with UT-108	Yes with UT-108
Weather channel	Yes*2	Yes*2	Yes*2	Yes*2
Operating time	13 hours with BP-264	7 hours with BP-227	6.2 hours with BP-211N	11 hours with BP-210N
Operating Temp. range	-20°C to +60°C	-10°C to +60°C	-10°C to +60°C	-10°C to +60°C
LCD Backlight	Yes	Yes	Yes	Yes
VOX capability	Yes (built-in)*3	Option VS-1L*4	Option VS-1L*4	Option VS-1L*4
AF output power	750mW typ.	300mW	300mW	300mW

*1 Depending on version. *2 USA version *3 HS-94/HS-95/HS-97 and OPC-2004 required. *4 HS-94/HS-95/HS-97 and VS-1L required.

OPTIONS

■ BATTERY PACKS AND CASE

- BP-263 : AA (LR6) × 6 cells (New item)
 BP-264 : 7.2V/1400mAh Ni-MH battery. Same as supplied. (New item)
 BP-265 : 7.4V/1900mAh (min.), 2000mAh (typ.) Li-Ion battery. (New item)

■ BATTERY CHARGERS

- BC-191 : Rapid desktop charger for Ni-MH battery pack BP-264. Charges the BP-264 in 2 hours (approx.). (New item)
 + BC-123S : AC adapter (BC-123SA/SE/SV versions available)
 BC-192 : Regular desktop charger for Ni-MH battery pack BP-264. Charges the BP-264 in 16 hours (approx.) with 16V DC input. (New item)
 + BC-147S : AC adapter (BC-147SA/SE versions available)
 BC-193 : Rapid desktop charger for Li-Ion battery pack BP-265. Charges the BP-265 in 2.5 hours (approx.). (New item)
 + BC-123S : AC adapter (BC-123SA/SE/SV versions available)



■ POWER SUPPLY CABLES

- CP-23L : Cigarette lighter cable for use with the BC-191 or BC-193.
 OPC-515L : DC power cable for use with the BC-191, BC-192 or BC-193.

■ CLONING SOFTWARE AND CABLES

- CS-V80 : Cloning software. (New item)
 OPC-478/UC : Cloning cable (RS-232C type/USB type)
 OPC-474 : Cloning cable for transceiver to transceiver cloning.

■ SPEAKER-MICROPHONES & EARPHONE-MICROPHONES

- HM-153L : Durable earphone microphone.
 HM-158L : Compact type speaker microphone.
 HM-159L : Full size durable speaker microphone.

■ HEADSETS

- HS-94 : Earphone-headset (Use with OPC-2004)
 HS-95 : Behind-the-head headset (Use with OPC-2004)
 HS-97 : Throat microphone (Use with OPC-2004)
 OPC-2004 : Plug adapter cable. OPC-2004 is required when using the HS-94, HS-95 and HS-97. (New item)



■ BELT CLIP

- MB-124 : Alligator type. Same as supplied. (New item)



■ SUPPLIED ACCESSORIES (Differs depending on versions)

<Ni-MH battery + regular charger version>

- Battery pack, BP-264
- Battery charger, BC-192
- AC adapter, BC-147S
- Belt clip, MB-124
- Antenna, FA-B2E