



VHF/UHF MULTIBAND FM TRANSCEIVER

IC-E90

**Surprisingly compact, full featured tri-bander
with wideband receiver**

**5 Watts on 50MHz, 144MHz,
and 430MHz**

**Wideband receiver—
495kHz–999.990MHz!**

**555 alphanumeric memory
channels with Icom's
NEW DMS (Dynamic Memory Scan)
technology!**

5 Watts on 50MHz, 144MHz and 430MHz

Enjoy a full 5 watts on all three bands from the supplied 1300mAh Lithium-Ion battery pack, BP-217. Along with the energy conserving settings, the BP-217 provides up to 5 to 6 hours*¹ of operating time and greatly reduces both the size and weight needed to get full output power. Just recharge and go!

*¹ Tx high: Rx: Stand-by duty ratio= 1: 1: 8

Wideband receiver — 495kHz to 999.990MHz*²

The IC-E90 offers a wideband AM, FM, and WFM scanning receiver. Not only you can hear your favorite TV programs with the pre-programmed TV memories, but you can also listen to shortwave, AM and FM broadcast radio stations with excellent sound quality.

*² Receiver range and pre-programmed memories differs depending on version.

Rugged palm sized*³, splash resistant construction

This compact, lightweight radio is comfortable in the smallest of hands, and offers full radio control for large fingers. The aluminum die-cast case and chassis is designed for the most rugged environments with splash resistance equivalent to JIS 4 specifications.

*³ 58(W)×87(H)×29(D) mm ; 280g (With antenna and BP-217)

DTCS and CTCSS tone squelch

A standard feature of the IC-E90 is both DTCS and CTCSS encode and decode capability. Choose from either 104 DTCS or 50 CTCSS codes for receive and transmit, individually. In addition, a pocket beep function gives you an audio alert when a matched tone signal is received — a great feature for quiet group operations.

DMS (Dynamic Memory Scan) bank scanning

With 555 alphanumeric memory channels, including 50 band edges and 5 call channels, Icom's DMS technology gives you flexible scanning lists. With a maximum of 18 banks or 100 channels per bank, you can pick and choose the desired channel for scanning from the 500 memories.

Rich in features but simple in operation

Simple, one-handed operation is the most valuable feature of the IC-E90. The backlit ten-key pad allows you to enter frequency, memory number and set various other features. The tuning knob can be customized for channel selection, or volume control.

Wait! There's more...

- DTMF encoder with 10 memories
- Morse code synthesizer indicates the frequency in morse code
- Backlit LCD and keypad
- Auto squelch • 13 scanning modes
- High speed scanning
- PC Programmable • Antenna tip replaceable
- 5.5–11V DC operation • Split operation
- Wide/narrow transmit capability



Icom Inc.

SPECIFICATIONS

GENERAL

• Frequency coverage : (Unit: MHz)

Version	50MHz	144MHz	430MHz	Receive
EUR	50-52	144-146	430-440	0.495-999.990
UK	50-52	144-146	430-440	
ITR	50-51	144-146	430-434, 435-438	
EUR-1	—	144-146	430-440	0.495-29.995, 50-52, 76-135.995,
FRA	50.2-51.2	144-146	430-440	144-146, 430-440
ESP	—	144-146	430-440	50-50.2, 144-146, 430-440

- Mode : FM, AM (Rx. only), WFM (Rx. only)
- No of memory Ch. : 555 (500 reg., 50 scan edges, 5 call)
- Operating temp. range : -10°C to +60°C
- Frequency stability : ±6ppm (-10°C to +60°C)
- Power supply : 5.5 to 11V DC or specified battery pack
- Current drain (at 8.0V DC):
 - Tx High (5.0W) : 2.0A typ.
 - Rx Rated audio : 220mA typ.
 - Standby : 100mA typ.
 - Power saved : 65mA typ. (duty=1:4)
- Tuning steps (kHz) : 5, 6.25, 8.33, 9, 10, 12.5, 15, 20, 25, 30, 50, 100, 200
- Antenna impedance : 50Ω (SMA)
- Dimensions : 58(W)×87(H)×29(D) mm (projections not included)
- Weight (approx.) : 280g (with BP-217 and antenna)

TRANSMITTER

- Output power (8.0V DC): High 5W typ. Low 0.5W typ.
- Spurious emissions : Less than -60dB
- Max. freq. deviation : ±5.0kHz
- Ext. MIC connector : 3-conductor 2.5(d) mm/2kΩ

RECEIVER

- Receive system : Double-conversion superheterodyne
- Intermediate freq. : 1st 69.45MHz (FM/AM)
13.35MHz (WFM)
2nd 450kHz
- Sensitivity* (typ., except spurious points):
 - FM : 1.625-4.995MHz 0.4μV
 - (at 12dB SINAD) : 5.000-49.995MHz 0.18μV
 - 50.000-54.000MHz 0.16μV
 - 54.005-143.995MHz 0.18μV
 - 144.000-148.000MHz 0.16μV
 - 148.005-209.995MHz 0.4μV
 - 210.000-225.000MHz 1.0μV
 - 340.000-429.995MHz 0.32μV
 - 430.000-450.000MHz 0.16μV
 - 450.005-832.990MHz 0.32μV
 - 833.000-999.990MHz 1μV

WFM (at 12dB SINAD)	40.000-108.000MHz	1μV
	175.000-221.995MHz	1.8μV
	470.000-770.000MHz	3.2μV
AM (at 10dB S/N)	0.495-4.995MHz	1.3μV
	5.000-29.995MHz	0.56μV
	118.000-136.000MHz	0.5μV
	222.000-229.995MHz	0.79μV
	320.000-329.995MHz	1μV

- Selectivity (except WFM) : More than 15kHz/-9dB
Less than 30kHz/-60dB
- Spurious and image rejection ratio:
 - 50MHz : More than 60dB (half IF: 50dB, IF: 40dB)
 - 144MHz : More than 60dB (half IF: 50dB)
 - 430MHz : More than 50dB (IF: 60dB)
- Audio output power : 200mW typ. at 10% distortion/8Ω load (at 25°C)
- Ext. speaker connector : 2-conductor 3.5(d) mm/8Ω

Supplied accessories (*depending on version)

- Battery pack (BP-217)
- Wall charger* (BC-110DR)
- Antenna (FA-S6270D)
- Swivel belt clip (MB-83)

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

OPTIONS

BATTERY PACK AND CASE

BP-216

R6 (AA) batteries × 2



BP-217

Li-Ion 7.4V/1300mAh



BATTERY PACKS AND CASE		BP-216	BP-217
OUTPUT POWER		0.1W typ.	5.0W typ.
BATTERY LIFE	50MHz	—	6hours
	144/430MHz	—	5hours

Battery life is approx. time; (Tx high: Rx: Stand-by=1: 1: 8)

BC-139 DESKTOP CHARGER



Rapidly charges battery pack BP-217. Charging time (approx.): 2.5 hours.

CP-19R CIGARETTE LIGHTER CABLE WITH NOISE FILTER



Allows you to operate the transceiver with 11V DC output through a cigarette lighter socket (12V). The connected battery pack is charged simultaneously.

LC-152A CARRYING CASE



Helps protect the transceiver from scratches, etc. Fits any battery pack.

SPEAKER-MICROPHONES



- HM-46 : Slim dimensions. Equipped with an earphone jack and transmit indicator.
- HM-75A : Allows you to remotely select operating channels, etc., according to cloning.
- HM-131 : Compact and durable body. Equipped with an earphone jack and a revolving clip.

HS-85 HEAD SET



For hands-free operation. Includes VOX, PTT and "one-touch" PTT with a time-out timer.

MB-83 SWIVEL BELT CLIP



Prevents accidental dropping from your belt. Same as supplied.

SP-13 EARPHONE



Provides clear audio in noisy environments.

AD-92SMA ANTENNA CONNECTOR ADAPTER



Allows you to connect a BNC-type antenna.

BC-110DR WALL CHARGER



Regularly charges battery packs. The same as supplied with some versions.

CS-T90A CLONING SOFTWARE + OPC-478 CLONING CABLE

Provides quick and easy editing of memory channels, memory names and set mode contents, for local repeater frequencies, etc.

OPC-474 CLONING CABLE

Used for handheld-to-handheld data cloning.

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