



## VHF AND UHF TRANSCEIVERS

**IC-F50V** (VHF Transceiver)

**IC-F60V** (UHF Transceiver)



**Radio**



**Pager**



128 ch/  
8 zones

2-Tone, 5-Tone  
MDC-1200 compatible

5W RF  
700mW AF

IP67 Dust-tight  
and Waterproof

8-character  
LCD display

Voice  
recorder

Vibration  
alert



**VIBRATION ALERT**



**700 mW (typ.) AUDIO OUTPUT**



**VOICE STORAGE**





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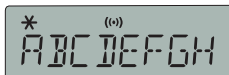
# Never miss important calls with loud audio, vibration alert and voice recorder!

### Vibration alert function

When a pre-programmed 2-tone/5-tone code or call from a specific user (MDC mode only) is received, the radio vibrates powerfully enough to be felt through heavy clothing.

### 8 minute voice recorder

When a pre-programmed 2-tone/5-tone code or a SelCall (MDC mode only) is received, the voice recorder automatically starts recording the incoming message. You will not miss an important call even when you are temporarily away from the radio. You can manually start recording incoming calls and also your own message. It records up to a maximum of 8 minutes (Or up to 48 calls of 10 sec. recording time).



\* \* icon on the display shows you have a new message.

### 700mW audio output

The IC-F50V series delivers a loud 700mW\* audio output with the built-in BTL amp. The built-in audio compander provides clear, low noise communications. Improved bass characteristics also better the audio quality.

\* Typical with internal speaker.

### Lone worker function for remote check in

When the radio is not operated for a preset period (1 to 255 min.), the radio sounds a beep and requires you to push any button. If the radio is not operated for a preset time (1 to 255 sec.), an emergency signal automatically transmits and informs your co-worker or dispatcher that something may have happened to the individual worker.

### IP67, dust-tight and waterproof protection

The IC-F50V series has outstanding protection against dust and water that is equivalent to IP67. The IC-F50V series can withstand submersion in 1m depth of water for up to 30 minutes and has dust-tight construction that prevents the ingress of dust.



### Most popular signalings built-in

Use the built-in CTCSS, DTCS, 2-Tone, 5-Tone and MDC signaling capabilities to set up your talk group or selective calling. The IC-F50V series can decode ten 2-Tone codes or eight 5-Tone codes on a channel. When a matched tone is received, the following actions are programmable for each code.

- Bell icon
- Answer back call
- Beep sound
- Auto transmit
- Radio Stun/Kill/Revive
- Voice recorder
- Vibration alert

### MDC 1200 Compatible

The following selective calling and ANI features are available with the built-in MDC signaling.

- PTT ID
- Radio check
- Caller ID
- Call alert
- SelCall
- Emergency, emergency mic monitoring
- 500 Aliases
- Status/message
- Radio stun/revive

### Mode dependent scan

In the mode dependent setting, the scanning setting is dependent on the operating channel. When you change the operating channel, the scanning list automatically changes to the operating channel setting. It is convenient when you move to a different operating area and change an operating channel, you don't have to change the scanning setting.

### Enhanced scanning

The Tx channel while scanning can be programmed per scanning list. The talk back function allows you to transmit on the channel detected after scanning resumes after a preset time, prior to the Tx channel setting. The nuisance delete function temporarily deletes a busy channel from the scanning list. Backlight at scan stop automatically turns on the LCD backlight when the scan stops.

### Compact body

56(W)×97(H)×36.4(D) mm\* compact body with durable, dependable construction, has been tested to MIL standard specifications. \* 2<sup>7</sup>/<sub>32</sub>(W)×3<sup>13</sup>/<sub>16</sub>(H)×1<sup>7</sup>/<sub>16</sub>(D) in

### Li-Ion battery pack

The large capacity 1700mAh Lithium-Ion (Li-Ion) battery pack, BP-227 provides a practical 9–10 hours\* of operating time. With the new BC-190 charger, catch calls even during the night while charging the battery with the radio power on. \* Typical operation Tx:Rx: Stand-by=5:5:90

### Other features

- 128 memory channels with 8 zones
- Inversion type\*1 voice scrambler built-in
- Optional VOX headsets available
- Optional GPS speaker-microphone
- Power ON password
- 8 DTMF autodial
- 8-character alphanumeric display
- Normal and priority scans
- 2-step power saver and 2-step low battery beep
- BIIS 1200 mode programmable
- Busy, repeater lockout functions
- BTL only version (no vibration alert and no voice recorder) and BTL/Vibration alert version (no voice recorder) available\*2 and more...

\*1 Inversion type voice scrambler is not compatible with UT-109/UT-110 voice scrambler. UT-109/UT-110 cannot be physically installed into the radio.  
\*2 Not available in some countries. (Not available in the U.S.)

## OPTIONS

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

### BATTERY PACK & CASE



BP-226

BP-227

BP-226 : AA (LR6)×5 BATTERY CASE  
BP-226 is water-resistant, equivalent to IPX4.  
BP-227 : 7.2V/1700mAh Li-Ion BATTERY PACK  
Provides 9–10 hours operating time\* (approx.).  
Operating temp. range: -20°C to +60°C; -4°F to +140°F.  
\* Tx: Rx: stand-by=5:5:90.

### MULTI-CHARGER



BC-121N+AD-100 (6 pcs.)

BC-121N MULTI-CHARGER + AD-100 CHARGER ADAPTER + BC-157 AC ADAPTER  
Rapidly charges up to 6 battery packs (Six AD-100s are required) in 2–2.5 hrs.

### RAPID CHARGER



BC-145L



BC-190

BC-190 DESKTOP CHARGER + BC-145L AC ADAPTER  
Rapidly charges the BP-227. Charge the radio, even when the radio power is on.

### RAPID CHARGER



BC-145



BC-119N+AD-100

BC-119N DESKTOP CHARGER + AD-100 CHARGER ADAPTER + BC-145 AC ADAPTER  
Rapidly charges the BP-227 in 2–2.5 hrs.

### BATTERY CHARGER



BC-147



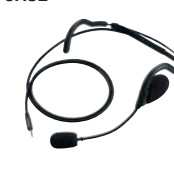
BC-152

BC-152 DESKTOP CHARGER + BC-147 AC ADAPTER  
Regularly charges the BP-227 in 9–10 hours.

### HEADSETS & VOX/PTT CASE



HS-94



HS-95



HS-97



VS-15C

HS-94 : Earhook headset with flexible boom microphone.  
HS-95 : Behind-the-head headset with flexible boom microphone.  
HS-97 : Throat microphone fits around your neck and picks up speech vibration.  
VS-15C : VOX/PTT CASE. Required when using these headsets with the transceiver. These headsets and VS-15C are water-resistant, equivalent to IPX4.

### SPEAKER-MICROPHONES



IPX7

HM-138



IPX7

HM-168



IP57

HM-169



GPS

IP57

HM-170GP

HM-138 : Full sized speaker-microphone. Equivalent to IPX7.  
HM-168 : Compact type speaker-microphone. Equivalent to IPX7.  
HM-169 : Rugged type speaker-microphone. Equivalent to IP57.  
HM-170GP: GPS speaker-microphone for BIIS mode. Equivalent to IP57.

### BELT CLIPS & LEATHER BELT HANGERS



MB-86



MB-96F

MB-86 : Swivel type. Prevents accidental dropping from your belt.  
MB-98 : Alligator type. Same as supplied.  
MB-96F : Fixed type belt hanger for use with MB-98.  
MB-96N : Swivel type belt hanger.

### POWER SUPPLY CABLES



CP-17L

OPC-515L

OPC-656

CP-17L : CIGARETTE LIGHTER CABLE For use with BC-119N and BC-152.  
OPC-515L: DC POWER CABLE For BC-119N and BC-152.  
OPC-656 : DC POWER CABLE for BC-121N.

### ANTENNAS



FA-S24V

FA-S59V

FA-S62VS

FA-S63VS

ANTENNAS  
FA-S24V : 136–150MHz (Blue)  
FA-S59V : 150–174MHz (Red)  
STUBBY ANTENNAS  
FA-S62VS: 150–162MHz (Red, 90mm)  
FA-S63VS: 160–174MHz (Green, 90mm)

## SPECIFICATIONS

## GENERAL

- Frequency range :
  - IC-F50V 136–174MHz
  - IC-F60V 400–470MHz
  - 450–512MHz (U.S.A.)
  - 450–520MHz (General)
- Number of channels : Max. 128 channels/ 8 zones
- Channel spacing : 12.5/25kHz, 15/30kHz
- Antenna impedance : 50Ω (SMA Type)
- Frequency error : ±2.5ppm
- PLL channel step : 2.5/3.125kHz
- Power supply requirement : 7.2V DC
- Current drain (approx) :
  - Transmit High 1.8A
  - Receive AF max. 500mA (Internal speaker)
  - 300mA typ. (External speaker)
  - Stand-by 85mA
- Operating Temp. range : –30°C to +60°C; –22°F to +140°F
- Dimensions (W × H × D) : 56 × 97 × 36.4 mm ;  
(projections not included) 2<sup>7</sup>/<sub>32</sub> × 3<sup>13</sup>/<sub>16</sub> × 1<sup>7</sup>/<sub>16</sub> in.
- Weight (approx.) VHF : 280g; 9.9oz (With BP-227)
- UHF 284g; 10.0oz (With BP-227)

## TRANSMITTER

- Output power IC-F50V : 5.0W
- IC-F60V 4.0W
- Modulation system : Variable reactance frequency modulation
- Max. frequency deviation : ±5kHz (wide)
- ±2.5kHz (narrow)
- Modulation limiting : 60–100% of Max. deviation
- Audio harmonic distortion : 3% typ. (AF 1kHz, 40% deviation)
- Spurious emissions : 70dB min.
- Adjacent channel power : 70dB min. (wide)
- 60dB min. (narrow)
- FM Hum and Noise : 46dB typ. (wide)
- 40dB typ. (narrow)
- External MIC impedance : 9-pin multi connector/2.2kΩ

Measurements made in accordance with EIA-152C/204D, TIA-603.  
All stated specifications are subject to change without notice or obligation.

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## RECEIVER

- Sensitivity : 0.25μV typ. (at 12dB SINAD)
- Squelch sensitivity : 0.25μV typ. (at threshold)
- Adjacent channel selectivity : 75dB typ. (wide)
- 65dB typ. (narrow)
- Spurious response : 70dB
- Intermodulation : 74dB typ.
- Hum and noise : 45dB typ. (wide)
- 40dB typ. (narrow)
- Audio output power : 0.7W typ. (Internal speaker)
- 0.5W typ. (External speaker)
- at 5% distortion with an 8Ω load
- External SP connector : 9-pin multi connector/8Ω

## Applicable U.S. Military Specifications &amp; 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	506.4	I, III
Humidity	507.4	–
Salt Fog	509.4	–
Dust	510.4	I
Vibration	514.5	I
Shock	516.5	I, IV

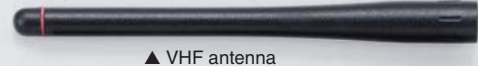
Also meets equivalent MIL-STD-810-C, -D and -E.

## Ingress Protection Standard

Dust & Water IP67 (Dust-tight and waterproof protection)

## Supplied accessories:

- Antenna (Length may differ according to version)



▲ VHF antenna



▲ UHF antenna



• Alligator-type belt clip, MB-98



• Battery pack, BP-227

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