



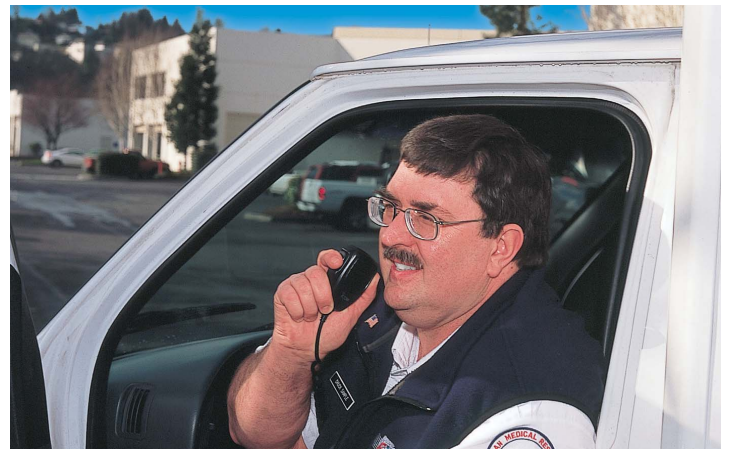
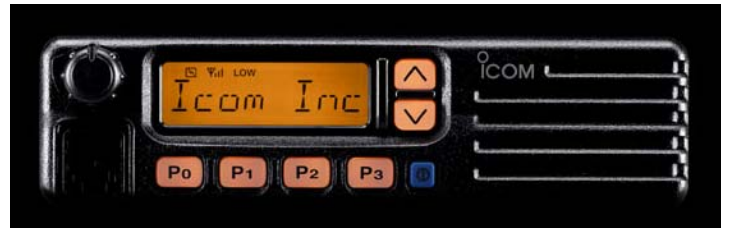
VHF AND UHF TRANSCEIVERS

IC-F121 (VHF transceiver)

IC-F221 (UHF transceiver)



- **Powerful 50W (VHF), 45W (UHF) Output**
- **6 Prog. Buttons and Independent Volume Knob**
- **4W typ. Front-mounted Speaker**
- **128 Memory Channels with 8 Memory Banks**
- **8-Character Alphanumeric Display**
- **Flexible Hanger Actions**
- **Built-in 2-Tone, 5-Tone, CTCSS, DTCS Encoder & Decoder**
- **Advanced Multi 2-Tone/5-Tone Systems (See overleaf for details)**
- **Standard DTMF Encoder and Optional DTMF Decoder with ANI Function**
- **Programmable Wide/Narrow Channel Spacing for Each Channel**
- **2.5kHz Channel Step (U.S.A. VHF only)**



Icom Inc.

ADDITIONAL FEATURES

Advanced Multi 2-Tone/5-Tone systems

- Programmable actions when a matched tone is received
 - Bell icon indication ON/OFF/Blink
 - Answer back calls
 - Beep sounds
 - Scan Start/Stop
 - Auto transmission
 - Stun/Kill functions (prevents use of a lost or stolen radio)
 - External out for horn drive (Optional OPC-617 is required)
- 32 Tx and 9 Rx 5-Tone codes available
- 11 Tx and Rx 2-Tone codes available

Other features

- Hook scan function and Hook scan ON/OFF button are assignable
- 10 scanning lists and normal/priority scan
- Power on password
- Optional Voice Scrambler, UT-109/UT-110
- LTR® Trunking capability with optional UT-111
- Backlit LCD and keys for night time operations
- Tested to the MIL-STD 810 C, D, E and F specifications

SPECIFICATIONS

GENERAL

- Frequency coverage : IC-F121 136–174MHz
IC-F221 440–490MHz
- Number of channels : 128 channels/8 banks
- Channel spacing : 12.5/25kHz, 15/30kHz
- PLL channel step : VHF 2.5, 3.125kHz
UHF 5, 6.25kHz
- Frequency stability : VHF ±5.0ppm
UHF ±2.5ppm
- Operating temp. range : -30°C to +60°C; -22°F to +140°F
- Power supply voltage : 13.6V DC
- Current drain (approx.) : Tx VHF (50W) 14A
UHF (45W) 13A
Rx max. audio 1200mA
stand-by 300mA
- Antenna impedance : 50Ω (SO-239)
- Dimensions (W×H×D) : 150×40×167.5mm;
5²⁹/₃₂×1⁹/₁₆×6¹/₃₂in
- Weight : 1.1kg ; 2.4lb

TRANSMITTER

- Output power : VHF 50W
(at 13.6V DC) UHF 45W
- Max. freq. deviation : ±5.0/2.5kHz (wide/narrow)
- Spurious emissions : 70dB typ.
- Adjacent Ch. power : 70/60dB (wide/narrow)
- Mic. impedance : 600Ω (8-pin modular)

RECEIVER

- Sensitivity : 0.25μV typ. (at 12dB SINAD)
- Squelch sensitivity : 0.25μV typ.
- Adjacent Ch. selectivity : 75/65dB typ. (wide/narrow)
- Spurious response : 75dB
- Intermodulation : VHF 74dB typ.
UHF 75dB typ.
- Audio output power : 4W typ. at 10% distortion with a 4Ω load
- Ext. SP connector : 2-conductor 3.5 (d) mm (1/8")/4Ω

Applicable U.S. Military Specifications

The IC-F121/F221 has been tested to and passed the following MIL-STD requirements and strict environmental standards.

Standard	MIL 810 C		MIL 810 D		MIL 810 E		MIL 810 F	
	Method	Proc.	Method	Proc.	Method	Proc.	Method	Proc.
Low Pressure	500.1	I	500.2	I,II	500.3	I,II	500.4	I,II
High Temp.	501.1	I	501.2	I,II	501.3	I,II	501.4	I,II
Low Temp.	502.1	I	502.2	I,II	502.3	I,II	502.4	I,II
Temp. Shock	503.1	I	503.2	I	503.3	I	503.4	I
Solar Radiation	505.1	I	505.2	I	505.3	I	505.4	I
Rain	506.1	I,II	506.2	I,II	506.3	I,II	506.4	I,II
Humidity	507.1	I,II	507.2	II,III	507.3	II,III	507.4	—
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	—
Dust	510.1	I	510.2	I	510.3	I	510.4	I
Vibration	514.2	VIII,X	514.3	I	514.4	I	514.5	I
Shock	516.2	I,II,V	516.3	I,IV	516.4	I,IV	516.5	I,IV

Supplied Accessories

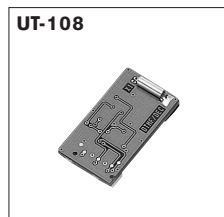
- Hand mic. (HM-152)
- DC power cable
- Mounting bracket kit
- Hanger Kit
- Key assign stickers

Measurements made in accordance with EIA-152C/204D, TIA-603. 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-152T** DTMF MICROPHONE
- **OPC-617** ACC CABLE
For external terminal connection.
- **SM-25** DESKTOP MICROPHONE
Convenient for dispatching. Equipped with monitor switch.
- **SP-5/SP-10/SP-22** EXTERNAL SPEAKERS
Compact and easy-to-install.
Input impedance: 4Ω; Max. input power: 5W
- **UT-108** DTMF DECODER UNIT
Provides DTMF decode and ANI capabilities.
- **UT-109** VOICE SCRAMBLER UNIT (Version 02)
Up to 32 non-rolling scrambling codes available.
- **UT-110** VOICE SCRAMBLER UNIT (Version 02)
Up to 1020 (255 codes × 4 groups) rolling scrambling codes are available.
- **UT-111** LTR® TRUNKING BOARD
Provides LTR® trunking capabilities.
LTR is a registered trademark of E.F. Johnson Company.



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