



## VHF AND UHF TRANSCEIVERS

**IC-F121** (VHF transceiver)

**IC-F221** (UHF transceiver)

Meets  
**MIL-STD 810**



- 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
- SmarTrunkII™ or LTR® Trunking capability with optional UT-105 or UT-111, respectively
- Backlit LCD and keys for night time operations
- Meets 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;  
5<sup>29</sup>/<sub>32</sub>×1<sup>9</sup>/<sub>16</sub>×6<sup>19</sup>/<sub>32</sub>in
- 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 and IC-F221 meet MIL-STD requirements and strict environmental standards for shock (MIL 810 C, D, E and F) and vibration (MIL 810 C, D, E and F).

Supplied Accessories

- Hand mic. (HM-100N) ○ 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

- **HM-100TN 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-105 SmarTrunk II™ LOGIC BOARD**  
SmarTrunk II is a trademark of SmarTrunk Systems, Inc.
- **UT-108 DTMF DECODER UNIT**  
Provides DTMF decode and ANI capabilities.
- **UT-109 VOICE SCRAMBLER UNIT (Version 01)**  
Up to 32 non-rolling scrambling codes available.
- **UT-110 VOICE SCRAMBLER UNIT (Version 01)**  
Up to 1020 (255 codes × 4 groups) rolling scrambling codes are available.
- **UT-111 LTR® TRUNKING BOARD**  
LTR is a registered trademark of E.F. Johnson Company.



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Certificate Number Q14190  
Icom Inc. (Japan), is an ISO9001 certification acquired company.

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