



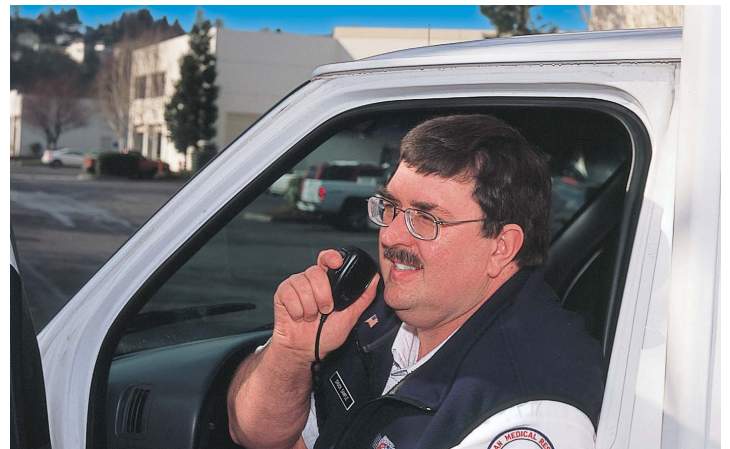
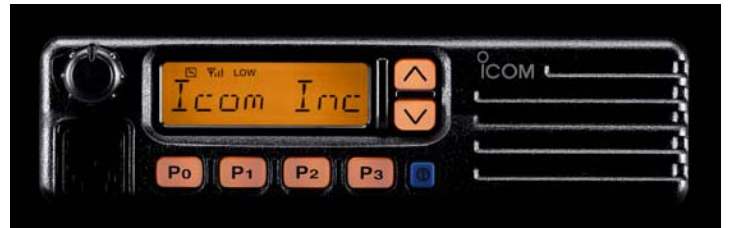
## VHF AND UHF TRANSCEIVERS

**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
- 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>1</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/F221 meets MIL-STD requirements and strict environmental standards as follows.

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

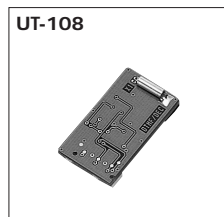
- Hand mic. (HM-100N)
- DC power cable
- Mounting bracket kit
- Hanger Kit
- Key assign stickers

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

OPTIONS

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

- **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 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**  
LTR is a registered trademark of E.F. Johnson Company.



Icom Inc.

1-1-32, Kamiminami, Hirano-ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013 URL: <http://www.icom.co.jp/world/index.html>

Count on us!

Icom America Inc.

2380 116th Avenue NE,  
Bellevue, WA 98004, U.S.A.  
Phone : +1 (425) 454-8155  
Fax : +1 (425) 454-1509  
E-mail : [sales@icomamerica.com](mailto:sales@icomamerica.com)  
URL : <http://www.icomamerica.com>

Icom New Zealand

146A Harris Road, East Tamaki,  
Auckland, New Zealand  
Phone : +64 (09) 274 4062  
Fax : +64 (09) 274 4708  
E-mail : [inquiries@icom.co.nz](mailto:inquiries@icom.co.nz)  
URL : <http://www.icom.co.nz>

Icom (UK) Ltd.

Unit 9, Sea St., Herne Bay,  
Kent, CT6 8LD, U.K.  
Phone : +44 (0)1227 741741  
Fax : +44 (0)1227 741742  
E-mail : [info@icomuk.co.uk](mailto:info@icomuk.co.uk)  
URL : <http://www.icomuk.co.uk>

Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road,  
Taipei, Taiwan, R.O.C.  
Phone : +886 (02) 2559 1899  
Fax : +886 (02) 2559 1874  
E-mail : [sales@asia-icom.com](mailto:sales@asia-icom.com)  
URL : <http://www.asia-icom.com>

Icom Canada

Glenwood Centre #150-6165 Highway 17,  
Delta, B.C., V4K 5B8, Canada  
Phone : +1 (604) 952-4266  
Fax : +1 (604) 952-0090  
E-mail : [info@icomcanada.com](mailto:info@icomcanada.com)  
URL : <http://www.icomcanada.com>

Icom (Europe) GmbH

Communication Equipment  
Himmelgeister Str. 100,  
D-40225 Düsseldorf, Germany  
Phone : +49 (0211) 346047  
Fax : +49 (0211) 333639  
E-mail : [info@icomeurope.com](mailto:info@icomeurope.com)  
URL : <http://www.icomeurope.com>

Icom France Sa

Zac de la Plaine, 1,  
Rue Brindejonc des Moulinais BP 5804,  
31505 Toulouse Cedex, France  
Phone : +33 (5) 61 36 03 03  
Fax : +33 (5) 61 36 03 00  
E-mail : [icom@icom-france.com](mailto:icom@icom-france.com)  
URL : <http://www.icom-france.com>

Beijing Icom Ltd.

10C07, Long Silver Mansion, No.88, Yong Ding  
Road, Haidian District, Beijing, 100039, China  
Phone : +86 (010) 5889 5391/5392/5393  
Fax : +86 (010) 5889 5395  
E-mail : [bjicom@bjicom.com](mailto:bjicom@bjicom.com)  
URL : <http://www.bjicom.com>

Icom (Australia) Pty. Ltd.

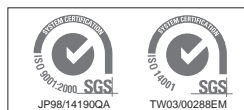
A.B.N. 88 006 092 575  
290-294 Albert Street, Brunswick,  
Victoria, 3056, Australia  
Phone : +61 (03) 9387 0666  
Fax : +61 (03) 9387 0022  
E-mail : [sales@icom.net.au](mailto:sales@icom.net.au)  
URL : <http://www.icom.net.au>

Icom Spain S.L.

Ctra. de Gracia a Manresa Km. 14,750  
08190 Sant Cugat del Valles Barcelona, Spain  
Phone : +34 (93) 590 26 70  
Fax : +34 (93) 589 04 46  
E-mail : [icom@icomspain.com](mailto:icom@icomspain.com)  
URL : <http://www.icomspain.com>

Icom Polska

Sopot, 3 maja 54, Poland  
Phone : +48 (58) 550 7135  
Fax : +48 (58) 551 0484  
E-mail : [icompolska@icompolska.com.pl](mailto:icompolska@icompolska.com.pl)  
URL : <http://www.icompolska.com.pl>



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