

## OPTIONS

# IC-F5120D • IC-F6120D Series

### ■ HAND MICROPHONES AND DESKTOP MICROPHONE

- HM-148G:** Heavy duty microphone. IP54 protection.
- HM-148T:** Heavy duty microphone with DTMF keypad. IP54 protection.
- HM-152:** Hand microphone with emergency button.
- HM-152T:** Hand microphone with DTMF keypad.
- HM-211:** Noise cancelling microphone.
- SM-26:** Desktop microphone with monitor and monitor lock buttons.



### ■ EXTERNAL SPEAKERS

- SP-30:** External speaker. 20 W rated input power.
- SP-35/L:** Compact external speaker.  
SP-35 cable length: 2 m; 6.6 ft.  
SP-35L cable length: 6 m; 19.7 ft.



### ■ ACC CABLES

- OPC-1939\*:** ACC cable enables you to connect an external equipment. D-SUB 15-pin type.
- OPC-2078\*:** ACC cable enables you to connect an external equipment. D-SUB 25-pin type.

\* Note : No Digital Modulation "IN" when using accessory cables.



### ■ PROGRAMMING SOFTWARE AND CABLE

- CS-F3100D:** Programming software.
- OPC-1122U:** Programming cable. (USB type)

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

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# IC-F5120D Series IC-F6120D Series

## VHF AND UHF DIGITAL TRANSCEIVERS

### Solid Fundamental Digital Radio

The IC-F5120D/F6120D mobile series is a simple and straight forward range that offers business and industry radio users 6.25 kHz channel spacing, and digital/analog mixed mode operation. Ideal for transportation and delivery fleets, the streamlined IC-F5120D/F6120D series has an abundance of mobile features and is compatible with NXDN™ Type-D single-site trunking and dPMR™ Mode 1, 2 conventional modes\*, providing an affordable digital and/or analog solution.

\* Available mode depending on the transceiver version.

#### Multiple operating modes (Available mode depending on version)

- NXDN™ conventional
- dPMR™ conventional
- NXDN™ Type-D single-site trunking
- Analog FM
- Analog/Digital mixed mode operation (conventional)

\* Not available in all regions.

#### Superb digital audio clarity

#### Loud and clear 4 watts (typical) front mount speaker

#### MDC 1200 compatible (Depending on version)

#### Built-in 2-tone, 5-tone, CTCSS and DTCS (analog mode)

#### 50 W (VHF), 45 W (UHF) RF output power\*

\* 25 W for EUR version.

#### MIL-STD-810 F rugged construction



IC-F5121D

**General Features**

- 136–174, 350–400, 400–470, 450–520 MHz versions
- 128 Channels / 8 Zones
- 8-character alphanumeric display
- MIL-STD-810 F such as shock, vibration temperature and more
- Four large programmable buttons
- Surveillance function
- Microphone hanger action programmable
- Talk around function
- Time out timer, lock-out penalty
- DTMF autodial

**Operating Mode (Available mode depending on version)**

- NXDN™ or dPMR™ conventional
- NXDN™ or dPMR™ multi-site conventional over IP network
- NXDN™ Type-D single-site trunking
- Analog mode
- Analog/digital mixed mode operation (conventional)

**Digital Functions (Voice and Data)**

- PTT ID and ANI
- Block decode (NXDN™)
- Up to 500 individual and up to 500 group ID aliases (Each for single-site/multi-site/conventional)
- Status
- Short data message
- Call alert (NXDN™)
- Radio check (RX) (NXDN™)
- RAN (Radio Access Number) (NXDN™)/CC (dPMR™)
- Transparent data call (dPMR™)
- GPS data (PC and software required to show received position data)

**Analog Functions**

- CTCSS and DTCS tone
- 2-Tone and 5-Tone
- MDC functions (for NXDN™ version)
- BIIS PTT ID transmission

**Security and Safety**

- Digital voice scrambler
- Radio Kill, Stun and Revive (RX)
- Emergency
- Power OFF emergency
- Lone worker function
- Power ON password function
- Remote monitor (RX) (NXDN™)/Ambience listening (dPMR™)

**Scan Functions**

- Priority scan
- Voting scan (dPMR™)
- Nuisance delete function

**Voice/Audio Functions**

- 4 W (typical) powerful, front mounted speaker
- Escalating alarm

**Hardware Features**

- GPS receiver connection with optional ACC cable
- Optional D-SUB connector, OPC-2078/OPC-1939, for ignition switch, external PTT, serial input/output, horn honk, channel control and public address function, according to programming\*

\* No digital modulation "IN" when using accessory cables.



Photo includes optional OPC-2078.

- Supplied compact hand microphone, HM-152



Check our web site to know more about 6.25 kHz FDMA narrow band. [www.icom.co.jp/world/fdma/](http://www.icom.co.jp/world/fdma/)

	IC-F5121D (USA) (NXDN Version) IC-F5123D (EXP) (NXDN/dPMR Versions)	IC-F6121D (USA) (NXDN Version) IC-F6123D (EXP) (NXDN/dPMR Versions)	IC-F5122D (EUR) (NXDN/dPMR Versions)	IC-F6122D (EUR) (NXDN/dPMR Versions)
<b>GENERAL</b>				
Frequency coverage* (* Depending on version)	136–174 MHz	350–400 MHz (EXP) 400–470 MHz (USA/EXP) 450–512 MHz (USA) 450–520 MHz (EXP)	136–174 MHz	400–470 MHz
Number of channels	128 channels /8 zones			
Type of emission* (* Depending on version)	16K0F3E*, 11K0F3E, 4K00F1D/E		16K0F3E, 14K0F3E, 8K50F3E, 4K00F1D/E	
Power supply requirement	13.6 V DC			
Current drain (approximate)	Tx	10 A (at 50 W)	11 A (at 45 W)	5 A (at 25 W)
	Rx	1.2 A/300 mA (Max. audio/Standby)		
Antenna impedance	50 Ω (SO-239)		50 Ω (BNC)	
Operating temperature range	–30 °C to +60 °C; –22 °F to +140 °F		–25 °C to +55 °C; –13 °F to +131 °F	
Dimensions (W × H × D; Projections not included)	150 × 40 × 167.5 mm; 5.9 × 1.6 × 6.6 in		150 × 40 × 117.5 mm; 5.9 × 1.6 × 4.6 in	
Weight (approximate)	1.1 kg; 2.4 lb		0.8 kg; 1.8 lb	
<b>TRANSMITTER</b>				
Output power (Hi, L2, L1)	50 W, 25 W, 5 W	45 W, 25 W, 4.5 W	25 W, 10 W, 5.8 W	
Frequency stability	±1.0 ppm			
Spurious emissions	72 dB minimum (USA) 70 dB minimum (EXP)		0.25 μV (≤1GHz), 1.0 μV (>1GHz)	
FM Hum and noise	46 dB typical (@25 kHz), 40 dB typical (@12.5 kHz)		–	
Residual modulation	–		55 dB typical (@25 kHz), 53 dB typical (@20 kHz), 50 dB typical (@12.5 kHz)	
Audio harmonic distortion	3% typical (AF 1 kHz 40% deviation)			
FSK error	5% maximum (@Digital)			
Microphone impedance	600 Ω (8-pin modular)			
<b>RECEIVER</b>				
Sensitivity	Analog (12 dB SINAD)	0.25 μV typical		–
	Analog (20 dB SINAD)	–		–4 dBμV emf typical
Adjacent channel selectivity	Digital (5% BER)	0.18 μV typical		–8 dBμV emf typical
	Analog	80 dB typical (@25 kHz), 70 dB typical (@12.5 kHz)	75 dB typical (@25 kHz), 70 dB typical (@12.5 kHz)	80 dB typical (@25/20 kHz), 70 dB typical (@12.5 kHz)
Spurious response rejection	Digital	65 dB typical	60 dB typical	65 dB typical
	Analog	70 dB minimum		
Intermodulation rejection	Analog	75 dB typical		67 dB typical
	Digital	70 dBμV emf typical		–
Hum and noise	45 dB typical (@25 kHz), 40 dB typical (@12.5 kHz)		55 dB typical (@25 kHz), 53 dB typical (@20 kHz), 50 dB typical (@12.5 kHz)	
Audio output power	4.0 W typical (at 5% distortion with 4 Ω load)			
External speaker connector	2-conductor 3.5 (d) mm (1/8")/4 Ω			

Measurements made in accordance with TIA-603, EN300 086 and EN301 166. All stated specifications are subject to change without notice or obligation. \* 25 kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions.

**Applicable U.S. Military Specifications**

Standard	MIL 810F	
	Method	Procedure
Low Pressure	500.4	I, II
High Temperature	501.4	I, II
Low Temperature	502.4	I, II
Temperature Shock	503.4	I
Solar Radiation	505.4	I
Humidity	507.4	–
Settling Dust	510.4	III
Vibration	514.5	I
Shock Functional	516.5	I, IV

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

**Supplied accessories:**

- HM-152 hand microphone
- DC power cable
- Mounting bracket kit
- Microphone hanger
- Key assign stickers