

## OPTIONS

# IC-F5400D • IC-F6400D Series

### HAND MICROPHONES AND DESKTOP MICROPHONE

**HM-220:** Heavy duty microphone. IP54 protection.  
**HM-220T:** Heavy duty microphone with DTMF keypad. IP54 protection.  
**HM-221:** Hand microphone with emergency button. IP55 protection.  
**HM-221T:** Hand microphone with DTMF keypad and emergency button. IP55 protection.  
**SM-29:** Desktop microphone with monitor and monitor lock buttons.



### EXTERNAL SPEAKERS

**SP-30:** External speaker. Cable length 2.6 m; 8.5 ft.  
**SP-35:** Compact external speaker. Cable length 2 m; 6.6 ft.  
**SP-35L:** Compact external speaker. Cable length 6 m; 19.7 ft.



### GPS ANTENNA

**UX-241:** External GPS antenna. Cable length 5 m; 16.4 ft.

### AES/DES ENCRYPTION UNIT

**UT-134:** AES/DES encryption unit.

### ZONE COPY, PROGRAMMING AND DC POWER CABLES

**OPC-2362:** Zone copy cable. Mobile to handheld cable.  
**OPC-2363:** Programming cable.  
**OPC-1132:** DC power cable. Cable length 3 m; 9.8 ft.  
**OPC-347:** DC power cable. Cable length 7 m; 23 ft.



### SOFTWARE AND ACTIVATION KEYS

**CS-F3400D:** Programming software.  
**CS-KLD2:** Key-loader for UT-134.  
**CS-OTPM1:** OTAP manager software.  
**CS-OTAR1:** OTAR manager software.  
**ISL-UGMTR:** NXDN™ Type-D trunking upgrade key.  
**ISL-UGMD3:** dPMR™ Mode 3 upgrade key.  
**ISL-AKAES:** AES activation key.  
**ISL-CHEX:** Channel expansion key.  
**ISL-AK25K:** 25 kHz activation key.  
**ISL-AKSTM:** Dealer set mode activation key.

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

### COMMANDMIC™ AND SEPARATION KITS

**HM-218\*:** Remote control microphone for use with RMK-5. IP55 protection.  
**RMK-5\*:** Separation kit. For detached controller configuration.  
**RMK-7\*:** Dual-head separation kit. Separation kit and secondary controller for dual head configuration.

\* HM-218, RMK-5, RMK-7 and separation cables are options for IC-F5400D/F6400D, F5400DP/F6400DP only



### SEPARATION CABLES

**OPC-2364:** 1.9 m; 6.2 ft separation cable for RMK-5 or RMK-7.  
**OPC-2365:** 3 m; 9.8 ft separation cable for RMK-5 or RMK-7.  
**OPC-2366:** 5 m; 16.4 ft separation cable for RMK-5 or RMK-7.  
**OPC-2367:** 8 m; 26.2 ft separation cable for RMK-5 or RMK-7.  
**OPC-2373:** 1.9 m; 6.2 ft separation cable for HM-218, COMMANDMIC.  
**OPC-2374:** 8 m; 26.2 ft separation cable for HM-218, COMMANDMIC.



**Detached Controller\***  
Optional RMK-5 and separation cable required.



**Dual Head Controller\***  
Optional RMK-7, hand microphone and separation cables required.



**COMMANDMIC™ and Detached Controller\***  
Optional RMK-5, COMMANDMIC, HM-218 and separation cables required.

\* Detached Controller, Dual head and COMMANDMIC configurations are for IC-F5400D/IC-F6400D, F5400DP/F6400DP.

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# IC-F5400D Series

# IC-F6400D Series

## VHF AND UHF DIGITAL TRANSCEIVERS

## Look Smart, Work Smart

The IC-F5400D/F6400D series is Icom's new generation IDAS mobile radios. Incorporating cutting edge design, superb performance and a comprehensive range of features on a flexible, upgradable multi-protocol platform. The series is available in both VHF and UHF with either a numeric or full color high resolution LCD. Multiple controller configurations are available to suit almost any vehicle application.

High resolution color LCD  
(IC-F5400D/IC-F6400D only)

Optional OTAR (Over-the-Air-Rekeying)  
function for AES/DES

Multiple operating modes  
(Available mode depending on version)

- NXDN™/dPMR™ conventional
- Upgradable to NXDN™ Type-D trunking
- Upgradable to dPMR™ Mode 3 trunking
- Analog FM

Optional OTAP  
(Over-the-Air-Programming) function

IP55 jet water resistance and  
dust-protection

Built-in Bluetooth®, voice recording,  
active noise canceller functions

Optional detached controller, dual head  
or COMMANDMIC™ configurations  
(IC-F5400D/IC-F6400D only)

Encryption: DES (4-key, 64-key), AES\*

\* 4-key standard. 64-key DES requires UT-134.  
AES requires UT-134 and ISL-AKAES



IC-F5400D



IC-F5400DS

**IDAS™** ICOM DIGITAL ADVANCED SYSTEM  
**NXDN™**  
**dPMR™** digital

**General Features**

- 136–174, 380–470, 450–520 MHz versions
- 1024 Channels / 128 Zones, 99 Channels (7 Segment display type)\*
- \* IC-F5400DS/F6400DS/F5400DPS/F6400DPS: Due to the segment display, channel indication is possible for up to 99 selected channels out of 1024.
- 4000 Channels with optional license key, ISL-CHEX
- High resolution color LCD and intuitive user interface
- Large sized function and four-direction buttons
- Day and night mode display settings
- Programmable functions and menu items in a language other than English (For example French, Spanish, German, Russian and Turkish)
- MIL-STD-810 G shock, vibration, temperature and more
- IP55, water jet resistance and dust protection
- DTMF autodial and decoder

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

- NXDN or dPMR Mode 1/2 conventional
- NXDN or dPMR multi-site conventional over IP network
- NXDN Type-D single/multi-site trunking\*
- \* License key (ISL-UGMTR) required.
- dPMR Mode 3 trunking\*
- \* License key (ISL-UGMD3) required. Not available in all regions.
- 12.5 kHz digital mode (NXDN conventional)
- Analog mode
- Analog/digital mixed operation

**Digital Functions (Voice and Data)**

- Over-the-Air Programming (OTAP) function\*
- \* OTAP manager (CS-OTPM1) required.
- Over-the-Air Alias (OAA) sends own name with a call
- Over-the-Air Update (OTAU) changes the repeater channel data and site code over the air (NXDN Type-D trunking)
- Individual, group and all call
- Late entry for group call
- Unit ID and talkgroup display on receive
- Status call and polling
- Short data messages (up to 100 characters)
- Call alert (NXDN)
- GPS position
- Transparent data mode

**Analog Functions**

- CTCSS and DTCS tone
- 2-Tone and 5-Tone
- MDC functions (Depending on version)
- BIIS 1200 functions (Depending on version)
- LTR™ trunking (Depending on version)



Check our web site to know more about 6.25 kHz FDMA narrow band.  
www.icom.co.jp/world/fdma/

**Security and Safety**

- Encryption: DES (4-key, 64-key)\*, AES
- \* 4-key standard. 64-key DES requires UT-134. AES requires UT-134 and ISL-AKAES.
- Over-the-Air-Rekeying (OTAR) function\*
- \* OTAR manager (CS-OTAR1) required.
- Digital voice scrambler (Low level encryption)
- Analog voice scrambler (Inversion)
- Power ON password
- Tactical group temporarily reconfigures user talkgroups
- Remote Kill, Stun and Revive
- Remote monitor (NXDN)/ambience listening (dPMR)
- Power OFF emergency
- Emergency key for emergency call
- Lone worker function

**Scan Functions**

- Priority scan
- Voting scan for site roaming

**Voice/Audio Functions**

- Voice announcement (Channel number and zone)
- VOX function for hands-free operation
- Voice recording/playback (Saves to a microSD card)\*
- \* A microSD card is required separately.
- The following information can be embedded in the WAV file; user IDs, GPS position, frequency, AF volume, RSSI, etc. (Depending on setting).
- Customized channel announcement
- TX/RX active noise canceller
- TX/RX audio equalizer (Flat, high/mid/low boost, low cut)
- Audio compander (Analog mode)

**Hardware Features**

- Programmable ringer beep
- Built-in Bluetooth® for wireless audio and data
- A third-party wireless Bluetooth® headset (for example, 3M™ Peltor™ WS™ 5 series) can be used\*
- \* Compatibility with third-party Bluetooth® headsets cannot be guaranteed.
- Wireless radio programming over Bluetooth®
- USB connector for data transfer mode or card reader mode
- Built-in GPS with GPS position screen and auto log function\*
- \* An optional GPS antenna UX-241 is required.
- Internal clock with time auto adjustment
- Programmable D-SUB connector for external PTT, channel, horn, PA/RX speaker, ignition switch and dimmer control
- Low voltage alert
- Optional detached controller, dual head controller or COMMANDMIC™ configurations (IC-F5400D/IC-F6400D only)
- Intercom function between dual head controller or COMMANDMIC™
- microSD card slot

		IC-F5400D/DS NXDN Version	IC-F5400DP/DPS dPMR Version	IC-F6400D/DS NXDN Version	IC-F6400DP/DPS dPMR Version
<b>GENERAL</b>					
Frequency coverage* (* Depending on version)		136–174 MHz	136–174 MHz	380–470 MHz, 450–520 MHz	380–470 MHz
Number of channels		1024 channels /128 zones 4000 channels /128 zones (Option)*1 99 channels (7 Segment display type)*2			
Type of emission* (* Depending on version)		16K0F3E*3, 14K0F3E, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D	16K0F3E*3, 14K0F3E, 8K50F3E, 4K00F1E/D	16K0F3E*3, 14K0F3E, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D	16K0F3E*3, 14K0F3E, 8K50F3E, 4K00F1E/D
Power supply requirement		13.6 V DC nominal (USA/EXP), 13.2 V DC nominal (EUR)			
Current drain (approx.)	Tx	9.0 A typical (at 50 W) 5.0 A typical (at 25 W)		8.8 A typical (at 45 W) 5.0 A typical (at 25 W)	
	Rx	0.9 A typical/370 mA typical (Max. audio (Internal SP)/Standby)		0.8 A typical/270 mA typical (Max. audio (Internal SP)/Standby)	
Antenna impedance		50 Ω			
Operating temperature range		–30 °C to +60 °C; –22 °F to +140 °F			
Dimensions (W × H × D; Projections not included)		174 × 55 × 150 mm; 6.9 × 2.2 × 5.9 in			
Weight (approx.)		1.5 kg; 3.3 lb			
<b>TRANSMITTER</b>					
Output power (Hi, L2, L1)* (* Depending on version)		50 W, 25 W, 5 W (USA/EXP) 25 W, 10 W, 5.8 W (EUR)		45 W, 25 W, 4.5 W (USA/EXP) 25 W, 10 W, 5.8 W (EUR)	
Frequency stability		±1.0 ppm			
Spurious emissions		90 dB typical (USA)		80 dB typical (USA)	
FM Hum and noise		0.25 μW (≤ 1 GHz), 1.0 μW (> 1 GHz) (EUR)			
Audio harmonic distortion		54 dB typical (@25 kHz), 54 dB typical (@12.5 kHz)			
FSK error		0.5% typical (AF 1 kHz 40% deviation) 1% typical (@DVN/DN)			
<b>RECEIVER</b>					
Sensitivity	Analog (12 dB SINAD)	0.22 μV typical		0.25 μV typical	
	Analog (20 dB SINAD)	–4.0 dBμV emf typical (@25 kHz), –4.0 dBμV emf typical (@12.5 kHz)			
Adjacent channel selectivity	Digital (1% BER)	–6.0 dBμV emf typical (0.25 μV typical) (@DVN), –5.0 dBμV emf typical (0.28 μV typical) (@DN)			
	Analog	75 dB typical (@25/20 kHz), 72 dB typical (@12.5 kHz)		75 dB typical (USA) 70 dB typical (EUR)	
Spurious response rejection	Digital	65 dB typical (@DVN), 68 dB typical (@DN)		75 dB typical (USA) 70 dB typical (EUR)	
	Analog	85 dB typical			
Intermodulation rejection	Analog	78 dB typical (USA) 70 dB typical (EUR)		75 dB typical (USA) 70 dB typical (EUR)	
	Digital	70 dB typical (@DVN), 70 dB typical (@DN)		70 dB typical (@DVN), 70 dB typical (@DN)	
Audio output power	Internal SP	4.0 W typical (at 5% distortion with 4 Ω load)			
	External SP	4.0 W typical (at 5% distortion with 4 Ω load)			

Measurements made in accordance with TIA-603, EN300 086, EN301 166, EN300 113. All stated specifications are subject to change without notice or obligation.

\*1 Optional license key (ISL-CHEX) required.

\*2 IC-F5400DS/F6400DS/F5400DPS/F6400DPS: Due to the segment display, channel indication is possible for up to 99 selected channels out of 1024.

\*3 25 kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions.

DVN: Digital Very Narrow (6.25 kHz), DN: Digital Narrow (12.5 kHz), DN is for NXDN version only.

**Applicable U.S. Military Specifications & IP Rating**

Standard	MIL 810G	
	Method	Procedure
Low Pressure	500.5	I, II
	501.5	I, II
	502.5	I, II
Temperature Shock	503.5	I-C
	505.5	I
Rain Blowing/Drip	506.5	I, III
Humidity	507.5	II
Salt Fog	509.5	–
Dust Blowing	510.5	I
Vibration	514.6	I
Shock	516.6	I, IV

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

Ingress Protection Standard	
Dust & Water	IP55 (Dust-protection and jet water resistance)

<b>Supplied accessories:</b> (May differ depending on version)			
• Hand microphone, HM-220 or HM-221	• DC power cable	• Mounting bracket kit	• Microphone hanger