ICOM

IC-F3400D Series
IC-F4400D Series

Look Smart, Work Smart

The IC-F3400D/F4400D series is Icom's new generation IDAS handheld radios. Incorporating cutting edge design, superb performance and a comprehensive range of features including built-in GPS and Bluetooth®[1], Active Noise Cancelling technology, digital voice playback and a USB port for easy programming and data transfer. Available in three versions for VHF and UHF, each radio features a high-resolution color LCD in a compact, IP68 waterproof body.

Small, slim and stylish with custom SoC (System-on-a-Chip)

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

High-resolution transreflective color LCD

Icom's custom high power handling capacity speaker for 1300 mW of powerful audio

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

[1] Version without Bluetooth also available. Ask your Dealer for details.

Motion/stationary detection, man down and lone worker functions

Standard DES encryption, optional AES with OTAR (Over-the-Air-Rekeying)

IC-F4400DT

IC-F3400DS

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

FEATURES

IC−F3400D・IC−F4400D Series

General Features
- 136–174, 380–470, 450–520 MHz versions
- 1024 Channels / 128 Zones
- 4000 Channels with optional license key, ISL-CHEX
- High-resolution transreflective color LCD*
- 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)
- Continuous rotary knob and ON/OFF volume knob
- Quick lever switch on the top panel programmable for various functions such as lock, scrambler/encryption, etc.
- 1300 mW large volume audio from Icom custom speaker
- Improved sound clarity
- MIL-STD-810 G shock, vibration, temperature and more
- IP68 waterproof (1 m depth water for 1 hour) and dust-tight protection
- AquaQuake™ prevents audio degradation from a water-logged speaker
- 29.3 mm (1.2 inch) slim dimensions (with BP-303 battery pack)
- Battery information display
- Flat sheet keypad offers large button space and protects the radio from dust
- DTMF autodial and decoder

Operating Mode (Available mode depending on version)
- NXDN or dPMR mode 1/mode 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 (conventional mode)

Digital Functions (Voice and Data)
- Over-the-Air Programming (OTAP) function*
  * Optional 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
- Status call and polling
- Short data messages (Up to 100 characters)
- Call alert (NXDN)
- GPS position
- Transparent data mode (dPMR)

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

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)
- Emergency key for emergency call
- Man down function
- Lone worker function
- Motion/stationary detection

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 vibration alert and ringer beep
- Built-in Bluetooth® for wireless audio and data*[1]
- A third-party wireless Bluetooth® headset (for example, 3M™ Peltor™ WS™ 5 series) can be used*[1][2]
- Wireless radio programming over Bluetooth®*[1]
- USB connector for data transfer mode or card reader mode
- 14-pin accessory connector
- Integrated GPS with GPS position screen and auto log function
- Internal clock with time auto adjustment
- microSD card slot

[1] Version without Bluetooth® also available. Ask your Dealer for details.
[2] Compatibility with third-party Bluetooth® headsets cannot be guaranteed.

6.25 kHz FDMA
True RF Efficiency

Check our web site to know more about 6.25 kHz FDMA narrow band.
www.icomjapan.com/explore/digital

SPECIFICATIONS

		IC-F3400DT/DS NXDN Version	IC-F3400DT/DS dPMR Version	IC-F4400DT/DS NXDN Version	IC-F4400DT/DS dPMR Version
GENERAL					
Frequency coverage (Depending on the 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			
Type of emission (Depending on the version)	Analog	16K0F3E*², 14K0F3E, 11K0F3E, 8K50F3E	16K0F3E*², 14K0F3E, 11K0F3E, 8K50F3E	16K0F3E*², 14K0F3E, 11K0F3E, 8K50F3E	16K0F3E*², 14K0F3E, 11K0F3E, 8K50F3E
	Digital Narrow (DN)	8K30F1E/D	–	8K30F1E/D	–
	Digital Very Narrow (DVN)	4K00F1E/D	4K00F1E/D	4K00F1E/D	4K00F1E/D
Power supply requirement		7.5 V DC nominal			
Current drain (approx.)	Tx	1.5 A		1.8 A	
	Rx	580 mA /140 mA (Max. audio (internal SP)/Standby)		580 mA /140 mA (Max. audio (internal SP)/Standby)	
Antenna impedance		50 Ω			
Operating temperature range		−30 °C to +60 °C; −22 °F to +140 °F (Radio specifications)			
Dimensions (W × H × D; Projections not included)		53.6 × 123.5 × 29.3 mm; 2.1 × 4.9 × 1.2 in (with BP-303)			
Weight (approx.)		215 g; 7.6 oz (main unit)			
		340 g; 12.0 oz (with BP-303, MB-133 and FA-S81VS)		335 g; 11.8 oz (with BP-303, MB-133 and FA-S81US)	
TRANSMITTER					
Output power (Hi, L2, L1)		5 W, 2 W, 1 W			
Frequency stability		±1.0 ppm			
Spurious emissions		80 dB typical (USA) 0.25 µW (≤ 1 GHz), 1.0 µW (> 1 GHz) (EUR)			
FM Hum and noise		55 dB typical (@25 kHz), 55 dB typical (@12.5 kHz)(USA)		60 dB typical (@25 kHz), 59 dB typical (@12.5 kHz) (USA)	
Audio harmonic distortion		0.5% typical (AF 1 kHz 40% deviation)		0.4% typical (AF 1 kHz 40% deviation)	
FSK error		1% typical (@DVN/DN*³)			
RECEIVER					
Sensitivity	Digital (1% BER)	−5.5 dBµV emf typical (0.26 µV typical) (@DVN), −4.0 dBµV emf typical (0.32 µV typical) (@DN*³)		−4.0 dBµV emf typical (0.32 µV typical) (@DVN), −4.0 dBµV emf typical (0.32 µV typical) (@DN*³)	
	Analog (12 dB SINAD)	0.22 µV typical		0.23 µV typical	
	Analog (20 dB SINAD)	−5.5 dBµV emf typical (@25/20 kHz), −2.5 dBµV emf typical (@12.5 kHz)		−5.0 dBµV emf typical (@25/20 kHz), −2.0 dBµV emf typical (@12.5 kHz)	
Adjacent channel selectivity	Digital	71 dB typical (@DVN), 70 dB typical (@DN*³)		66 dB typical (@DVN), 66 dB typical (@DN*³)	
	Analog	80 dB typical (@25 kHz), 76 dB typical (@12.5 kHz)		75 dB typical (@25 kHz), 72 dB typical (@12.5 kHz)	
Spurious response rejection		81 dB typical		76 dB typical	
Intermodulation rejection	Digital	72 dBµV emf typical (@DVN), −41 dBm typical (@DN*³)		73 dBµV emf typical (@DVN), −41 dBm typical (@DN*³)	
	Analog	75 dB typical (USA) 67 dB typical (EUR)		74 dB typical (USA) 68 dB typical (EUR)	
Audio output power	Internal SP	1300 mW typical (at 5% distortion, 8 Ω load)			
	External SP	1300 mW typical (with HM-222H at 5% distortion, 8 Ω load) 1000 mW typical (at 5% distortion, 8 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 25 kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions.
*3 DVN: Digital Very Narrow (6.25 kHz), DN: Digital Narrow (12.5 kHz). DN is for NXDN version only. *4 For the transceiver with a "U" mark on the serial number label.
NXDN/dPMR modes are not compatible with each other. The radio protocol/mode cannot be changed after purchase.

Applicable U.S. Military Specifications & IP Rating

Standard	MIL 810G	
	Method	**Procedure**
Low Pressure	500.5	I, II
High Temperature	501.5	I, II
Low Temperature	502.5	I, II
Temperature Shock	503.5	I-C
Solar Radiation	505.5	I
Rain Blowing/Drip	506.5	I, III
Humidity	507.5	II
Salt Fog	509.5	–
Dust Blowing	510.5	I
Immersion	512.5	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	IP68 (Dust-tight and waterproof protection)

Battery Life

Battery pack	Type	Capacity	Operating time*
BP-303	Li-ion 7.2 V	3350 mAh (typ.), 3200 mAh (min.)	16.5 hours (Approx.)

* Tx: Rx: standby = 5:5:90 duty cycle. Power save function ON.

Supplied accessories: (May differ depending on the transceiver version)
• BP-303 battery pack   • MB-133 belt clip

IC−F3400D・IC−F4400D Series

OPTIONAL ACCESSORIES

■ BATTERY PACK

BP-303: Rechargeable Li-ion 7.2 V/3350 mAh (typ.), 3200 mAh (min.). IP68 protection.

■ BATTERY CHARGERS

BC-226: Multi-connectable rapid charger (connects up to six BC-226 units). Charges the BP-303 in 4.2 hours (approx.). AC adapter for single unit. The straight plug type is required.

+ **BC-123S:** AC adapter for single unit. The straight plug type is required.

or **BC-228**: AC adapter. One AC adapter is required for up to six charger units.

BC-227: Compact desktop charger. Charges the BP-303 in 4.4 hours (approx.). AC adapter BC-123S supplied with the BC-227, depending on version.

BC-214N: Multi-charger. Charges up to six BP-303 batteries in 4.5 hours (approx.). AC adapter BC-157S supplied with the BC-214N, depending on version. BC-214N Version #61–#63 required.

■ POWER SUPPLY CABLES

CP-23L: Vehicle charger cable for use with the BC-227.
OPC-515L: DC power cable for use with the BC-227.

BC-226　　**BC-123S**　　**BC-228**　　(Connectable up to six BC-226)

(The straight plug type is required)

BC-227　　**BC-214N**　　**CP-23L**　　**OPC-515L**
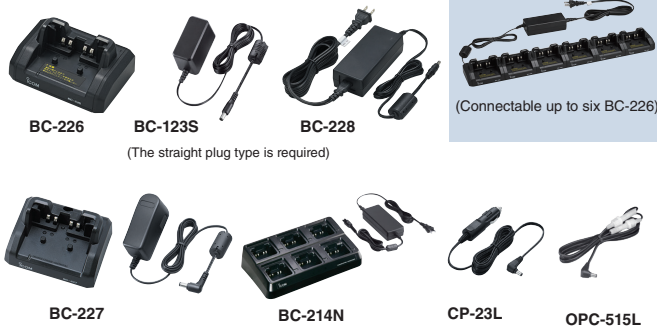
■ SPEAKER-MICROPHONE

HM-222H: Large audio speaker microphone with emergency button and 3.5 mm earphone jack. IP68 protection.

HM-222H

■ HEADSETS AND PTT SWITCH CABLE

HS-94: Earphone-headset (Use with VS-4MC)
HS-95: Behind-the-head headset (Use with VS-4MC).
HS-97: Throat microphone (Use with VS-4MC).
VS-4MC: PTT switch cable. VS-4MC is required when using any of HS-94, HS-95 or HS-97.

HS-94　　**HS-95**　　**HS-97**　　**VS-4MC**

■ BELT CLIPS, BELT HANGERS AND CARRYING CASES

MB-133: Alligator belt clip. Same as supplied.
MB-136: Swivel belt clip.
MB-96N: Swivel type leather belt hanger.
MB-96F: Fixed type leather belt hanger. For use with the MB-133.
MB-96FL: Long fixed type leather belt hanger. For use with the MB-133.
LC-184: Hard type carrying case. Charging is possible while the case is attached.

MB-133　　**MB-136**　　**MB-96N**　　**MB-96F**　　**MB-96FL**　　**LC-184**

■ OTHER OPTIONS AND CABLES

AD-118: ACC adapter. For use with Hirose plug accessory.
UT-134: AES/DES encryption unit.
OPC-2338: Programming cable. USB–14-pin type.
OPC-1870: Zone copy cable. Handheld to handheld type.
OPC-2362: Zone copy cable. Handheld to mobile type.

■ SOFTWARE AND ACTIVATION KEYS

CS-OTPM1: OTAP manager software.
CS-OTAR1: OTAR manager software.
CS-KLD2: Key-loader for UT-134.
ISL-UGMTR: NXDN™ Type-D trunking upgrade key.
ISL-UGMD3: dPMR™ Mode 3 trunking upgrade key. (Not available in all regions.)
ISL-AKAES: AES activation key.
ISL-CHEX: Channel expansion key.
ISL-AK25K: 25 kHz activation key.
ISL-AKSTM: Dealer set mode activation key.

■ ANTENNAS

FA-S81V: 136–150 MHz
FA-S82V: 148–162 MHz
FA-S83V: 160–174 MHz
FA-S81U: 380–430 MHz
FA-S82U: 430–480 MHz
FA-S83U: 470–520 MHz

■ STUBBY ANTENNAS

FA-S81VS: 136–150 MHz
FA-S82VS: 148–162 MHz
FA-S83VS: 160–174 MHz
FA-S81US: 400–450 MHz
FA-S82US: 450–490 MHz

■ CUT-TYPE ANTENNAS

FA-S67VC: 136–174 MHz
FA-S76UC: 380–520 MHz

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