ICOM

IC-F3400D Series
IC-F4400D Series

VHF AND UHF DIGITAL TRANSCEIVERS

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®, 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

Motion/stationary detection, man down and lone worker functions

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

IC-F3400D

IC-F3400DS

IC-F3400DT

iDAS™   NXDN™   dPMR™
ICOM DIGITAL ADVANCED SYSTEM

General Features

• 136–174, 380–470, 450–520 MHz versions

• 1024 Channels / 128 Zones, 32 Channels / 2 Zones (Non-display type)*
  * IC-F3400D/F4400D/F3400DP/F4400DP (Non-display type): Up to
    32 selected channels out of 1024 can be allocated to the channel knob.

• 4000 Channels with optional license key, ISL-CHEX

• High-resolution transreflective color LCD*
  * For IC-F3400DT/F3400DS/F3400DPT/F3400DPS/F4400DT/
    F4400DS/F4400DPT/F4400DPS (Display type)

• 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-283 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 1/2 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*
  * 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

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

Analog Functions

• CTCSS and DTCS tone

• 2-Tone and 5-Tone

• MDC functions (Depending on version)

• BIIS 1200 functions

• 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

• 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

• 14-pin accessory connector

• Integrated GPS with GPS position screen and auto log function

• Internal clock with time auto adjustment

• Battery life cycle management with optional intelligent charger,
  BC-225, and software, RS-BC225

• microSD card slot

IC-F3400D · IC-F4400D Series

	IC-F3400DT/DS/D NXDN Version	IC-F3400DPT/DPS/DP dPMR Version	IC-F4400DT/DS/D NXDN Version	IC-F4400DPT/DPS/DP dPMR Version
GENERAL				
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 32 channels /2 zones (Non-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	7.5 V DC nominal			
Current drain (approx.) — Tx	1.5 A		1.8 A	
Current drain (approx.) — Rx	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-283)			
Weight (approx.)	180 g; 6.4 oz (main unit) 305 g; 10.8 oz (BP-283, MB-133, FA-S81VS)		300 g; 10.6 oz (BP-283, MB-133, 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)	
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)			
RECEIVER				
Sensitivity — Analog (12 dB SINAD)	0.22 µV typical		0.23 µV typical	
Sensitivity — 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)	
Sensitivity — Digital (1% BER)	−5.5 dBµV emf typical (0.26 µV typical) (@DVN), −4.0 dBµV emf typical (0.32 µV typical) (@DN)		−4.0 dBµV emf typical (0.32 µV typical) (@DVN), −4.0 dBµV emf typical (0.32 µV typical) (@DN)	
Adjacent channel selectivity — Analog	80 dB typical (@25/20 kHz), 76 dB typical (@12.5 kHz)		75 dB typical (@25 kHz), 72 dB typical (@12.5 kHz)	
Adjacent channel selectivity — Digital	71 dB typical (@DVN), 70 dB typical (@DN)		66 dB typical (@DVN), 66 dB typical (@DN)	
Spurious response rejection	81 dB typical		76 dB typical	
Intermodulation rejection — Analog	75 dB typical (USA) 67 dB typical (EUR)		74 dB typical (USA) 68 dB typical (EUR)	
Intermodulation rejection — Digital	72 dBµV emf typical (@DVN), −41 dBm typical (@DN)		73 dBµV emf typical (@DVN), −41 dBm typical (@DN)	
Audio output power — Internal SP	1300 mW typical (at 5% distortion with 8 Ω load)			
Audio output power — External SP	1000 mW typical (at 5% distortion with 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 IC-F3400D/F4400D/F3400DP/F4400DP (Non-display type): Up to 32 selected channels out of 1024 can be allocated to the channel knob.
*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
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-283	Li-ion 7.2 V	2010 mAh (typ.), 1910 mAh (min.)	10.5 hours (Approx.)
BP-284	Li-ion 7.2 V	3350 mAh (typ.), 3120 mAh (min.)	16.5 hours (Approx.)

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

Supplied accessories: (May differ depending on version)
• BP-283 battery pack   • MB-133 belt clip

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■ BATTERY PACKS

BP-283: Rechargeable Li-ion 7.2 V/2010 mAh (typ.), 1910 mAh (min.). IP68 protection.
BP-284: Rechargeable Li-ion 7.2 V/3210 mAh (typ.), 3070 mAh (min.). IP68 protection.

■ BATTERY CHARGERS

BC-226: Connectable type charger (connects up to six BC-226 units). Charges the BP-283/BP-284 in 2.7/4.3 hours.
+BC-228: AC adapter. One AC adapter is required for up to six charger units.

BC-225: Intelligent charger. Shows the charging information with the LED lighting. Charges the BP-283/BP-284 in 3/4.5 hours (approx.).
+ BC-123SA/SE/SV: AC adapter.
RS-BC225: Intelligent charger software for Windows® PC.

BC-227: Compact type desk top charger. Charges the BP-283/BP-284 in 2.7/4.3 hours.
+ BC-123SA/SE/SV: AC adapter.

BC-219N: Desk top charger. Charges the BP-283/BP-284 in 3/4.5 hours.
+ BC-123SA/SE/SV: AC adapter.

BC-214: Multi-charger. Charges up to six BP-283/BP-284 batteries in 3/4.5 hours (approx.).
+ BC-157S: AC adapter.
*AD-132N charger adapter is supplied with the BC-214, depending on version.

■ POWER SUPPLY CABLES

CP-23L: Vehicle charger cable for use with the BC-219N or BC-227.
OPC-515L: DC power cable for use with the BC-219N, BC-225 or BC-227.
OPC-656: DC power cable for use with the BC-214.

| BC-228 | BC-226 | BC-123S | BC-225 | BC-227 | BC-219N |

| BC-214 | BC-157S | CP-23L | OPC-515L | OPC-656 |

■ SPEAKER-MICROPHONE

HM-222: Speaker microphone with emergency button and 3.5 mm earphone jack. IP68 protection.

HM-222

■ 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, 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 MBB-3.
MB-96FL: Long fixed type leather belt hanger. For use with the MBB-3.
LC-184: Hard type carrying case. Charging is possible while the case is attached.
LC-186: Hard type carrying case. Charging is possible while the case is attached.

| MB-133 | MB-136 | MB-96N | MB-96F | MB-96FL | LC-184 | LC-186 |

■ 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-F3400D: Programming software.
CS-KLD2: Key-loader for UT-134.
ISL-UGMTR: NXDN™ Type-D trunking upgrade key.
ISL-UGMD3: dPMR™ Mode 3 trunking 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.

■ 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.