



IC-F3100D Series
IC-F4100D Series

VHF AND UHF DIGITAL TRANSCEIVERS

Everything You Expect in a Business Radio ... Plus Digital!



IC-F3100D series

IC-F4100D series

The IC-F3100D/F4100D series is a digital/analog dual mode radio compatible with NXDN™ conventional, Type-D single-site trunking or dPMR™ conventional operation. Selected functions which do not require an LCD and keypad offer an affordable and reliable digital work radio for business and industry users.

Multiple operating modes (Available mode depending on version)

- NXDN™ conventional and Type-D single-site trunking
- dPMR™ conventional
- Analog FM

Digital/analog mixed mode operation

Superb digital audio clarity

800 mW (typical) loud and intelligible audio

Digital voice scrambler

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

IP54 and MIL-STD-810 F rugged construction

Channel announcement

5 W (VHF), 4 W (UHF) RF output power

iDAS™
ICOM DIGITAL ADVANCED SYSTEM

NXDN™

dPMR™
digital

FEATURES

General Features

- 136–174, 350–400, 400–470, 450–512, 450–520 MHz versions
- 800 mW (typical) loud internal speaker audio
- Non-slip, large PTT button
- Bright 3-color LCD
- Compact (58 × 111.5 × 36.5 mm) and lightweight (320 g with BP-265, MB-124 and FA-SC55V)
- Tested to IP54 and 11 categories of MIL-STD-810 F environmental tests
- DTMF autodial memories
- 16-position rotary selector and ON/OFF volume knob



800 mW loud audio



Non-slip, large PTT

Operating Mode
(Available mode depending on version)

- NXDN conventional and Type-D single-site trunking
- dPMR Mode 1/2 conventional
- NXDN/dPMR multi-site conventional over IP network
- Analog mode
- Analog/digital mixed mode operation

Digital Functions

- Individual and group call
- PTT ID (TX only)
- Late entry for group call
- Power ON or Power OFF status (TX only)
- Emergency and GPS request status (RX only)
- Call alert (RX only) (NXDN version)
- Radio check (RX only)
- Emergency (No ACK TX)
- GPS position reporting (Optional HM-171GP required)
- Block decode
- RAN code

Analog Functions

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

Safety and Security

- Digital voice scrambler
- Radio Stun/Revive/Kill (RX only)
- Remote monitor (RX only)(NXDN)/ambience listening (RX only) (dPMR)
- Lone worker function
- Surveillance function temporarily turns OFF the beep and LED indicator

Scan Functions

- Priority scan monitors one or two priority channels while scanning non-priority channels
- Mode dependent scan automatically changes the scan list according to the operating channel
- Voting scan (dPMR version)

Voice/Audio Functions

- VOX function for hands-free operation
- Escalating alarm
- Channel announcement function



Channel announcement



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

SPECIFICATIONS

IC-F3100D • IC-F4100D

	IC-F3101D (USA) IC-F3102D (EUR) IC-F3103D (EXP) NXDN Version	IC-F3102D (EUR) IC-F3103D (EXP) dPMR Version	IC-F4101D (USA) IC-F4102D (EUR) IC-F4103D (EXP) NXDN Version	IC-F4102D (EUR) IC-F4103D (EXP) dPMR Version
GENERAL				
Frequency coverage* (* Depending on version)	136–174 MHz	136–174 MHz	350–400 MHz (EXP), 400–470 MHz (ALL), 450–520 MHz (EXP), 450–512 MHz (USA)	350–400 MHz (EXP), 400–470 MHz (EXP/EUR)
Number of channels	16 channels			
Type of emission* (* Depending on version)	16K0F3E*, 14K0F3E, 11K0F3E, 11K0F7E/D, 8K50F3E, 8K10F1E/D, 4K00F1E/D	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/D	16K0F3E*, 14K0F3E, 11K0F3E, 8K50F3E, 4K00F1E/D	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/D
Power supply requirement	7.5 V DC nominal			
Current drain (approx.)	1.3 A			
	TX		RX	
Antenna impedance	400 mA /90 mA (Max. audio (internal SP)/Standby) 400 mA /100 mA (Max. audio (internal SP)/Standby)			
Operating temperature range	50 Ω			
Dimensions (W × H × D; Projections not included)	–30 °C to +60 °C; –22 °F to +140 °F (Radio specifications) (USA/EXP)			
	–25 °C to +55 °C; –13 °F to +131 °F (Radio specifications) (EUR)			
Weight (approx.)	58 × 111.5 × 36.5 mm; 2.3 × 4.4 × 1.4 in (With BP-265)			
	320 g; 11.3 oz (BP-265, MB-124 & FA-SC55V)		150 g; 5.3 oz (main unit)	
TRANSMITTER				
Output power (Hi, L2, L1)	5 W, 2 W, 1 W		4 W, 2 W, 1 W	
Maximum frequency deviation	±5.0 kHz (@25 kHz), ±4.0 kHz (@20 kHz), ±2.5 kHz (@12.5 kHz)		±5.0 kHz (@25 kHz), ±4.0 kHz (@20 kHz), ±2.5 kHz (@12.5 kHz)	
Frequency stability	±1.0 ppm			
Spurious emissions	70 dB min. (USA/EXP)		70 dB min. (USA/EXP)	
FM Hum and noise	0.25 μW (≤ 1 GHz), 1.0 μW (> 1 GHz) (EUR)		0.25 μW (≤ 1 GHz), 1.0 μW (> 1 GHz) (EUR)	
Residual modulation	52 dB typ. (@25 kHz), 46 dB typ. (@12.5 kHz) (USA/EXP)		50 dB typ. (@25 kHz), 44 dB typ. (@12.5 kHz) (USA/EXP)	
Audio harmonic distortion	56 dB typ. (@25 kHz), 54 dB typ. (@20 kHz), 50 dB typ. (@12.5 kHz)(EUR)		56 dB typ. (@25 kHz), 55 dB typ. (@20 kHz), 51 dB typ. (@12.5 kHz)(EUR)	
FSK error	1.0% typ. (AF 1 kHz 40% deviation)		1.0% typ. (AF 1 kHz 40% deviation)	
	5.0% max.		5.0% max.	
RECEIVER				
Sensitivity	Analog (12 dB SINAD)	0.23 μV typ.		0.24 μV typ.
	Analog (20 dB SINAD)	–4.0 dBμV emf typ.		–4.0 dBμV emf typ.
	Digital (5% BER)	0.18 μV typ. (USA/EXP) –8.0 dBμV emf typ. (EUR)		0.18 μV typ. (USA/EXP) –8.0 dBμV emf typ. (EUR)
Adjacent channel	Analog	77 dB typ. (@25 kHz), 74 dB typ. (@20 kHz), 71 dB typ. (@12.5 kHz)		74 dB typ. (@25 kHz), 72 dB typ. (@20 kHz), 67 dB typ. (@12.5 kHz)
Spurious response rejection		91 dB typ.		80 dB typ.
Intermodulation rejection	Analog	75 dB typ. (USA/EXP)		75 dB typ. (USA/EXP)
		67 dB typ. (EUR)		67 dB typ. (EUR)
Hum and noise		48 dB typ. (@25 kHz), 42 dB typ. (@12.5 kHz) (USA/EXP)		47 dB typ. (@25 kHz), 42 dB typ. (@12.5 kHz) (USA/EXP)
		53 dB typ. (@25 kHz), 51 dB typ. (@20 kHz), 48 dB typ. (@12.5 kHz)(EUR)		53 dB typ. (@25 kHz), 51 dB typ. (@20 kHz), 47 dB typ. (@12.5 kHz)(EUR)
Audio output power	Internal SP	800 mW typ. (at 5% distortion, 12 Ω load)		
	External SP	400 mW typ. (at 5% distortion, 8 Ω load)		

Measurements made in accordance with TIA-603, EN300 086, EN301 166. All stated specifications are subject to change without notice or obligation.
*1 25 kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions.

Applicable U.S. Military Specifications & IP Rating

Standard	MIL 810 F	
	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
Rain Blowing/Drip	506.4	I, III
Humidity	507.4	–
Salt Fog	509.4	–
Dust Blowing	510.4	I
Vibration	514.5	I
Shock	516.5	I, IV

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

Ingress Protection Standard	
Dust & Water	IP54 (Dust-protection and water resistant)

Battery Life

Battery pack	Type	Capacity	Operating time* (Approx.)
BP-264	Ni-MH 7.2 V	1400 mAh	12 hours (VHF), 11 hours (UHF)
BP-265	Li-ion 7.4 V	2000 mAh (typ.), 1850 mAh (min.)	17.5 hours (VHF), 16 hours (UHF)

* TX: RX: Standby = 5:5:90 duty cycle. Power save function ON.

- Supplied accessories:** (May differ or not supplied depending on version)
- Battery pack
 - Battery charger
 - AC adapter
 - Antenna
 - Belt clip

OPTIONS

■ BATTERY PACKS & BATTERY CASE

BP-263: LR6 (AA) × 6 Battery case.
BP-264: 1400 mAh Ni-MH battery pack.
BP-265: 2000 mAh (typ.), 1850 mAh (min.) rechargeable Li-ion battery.



■ BATTERY CHARGERS

BC-191: Desktop charger for BP-264 Ni-MH battery.
 Charges the BP-264 in 2 hours (approximate).

+ **BC-123SA/SE/SV:** AC adapter.

BC-193: Desktop charger for BP-265 Li-ion battery.
 Charges the BP-265 in 2.5 hours (approximate).

+ **BC-123SA/SE/SV:** AC adapter.

BC-192: Desktop charger for BP-264 Ni-MH battery.
 Charges the BP-264 in 16 hours (approximate).

+ **BC-147SA/SV or BC-206SE:** AC adapter.

BC-197: Multi-charger. Charges up to six BP-264 or BP-265 batteries.

+ **BC-157S:** AC adapter.

* AD-120 for BP-264 or AD-121 for BP-265 charger adapter is supplied with the BC-197, depending on version.



■ POWER SUPPLY CABLES AND CHARGER BRACKET

CP-23L: Vehicle charger cable for use with the BC-191 or BC-193.
OPC-515L: DC power cable for use with the BC-191, BC-192 or BC-193.
OPC-656: DC power cable for use with the BC-197.
MB-130: Charger bracket for use with the BC-191, BC-192 or BC-193.



■ SPEAKER-MICROPHONES AND EARPHONE

HM-158LA: Compact speaker microphone.
HM-159LA: Speaker microphone with 3.5 mm earphone jack.
HM-171GP: GPS speaker microphone.
SP-27: Tube earphone with 3.5 mm plug.



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

■ HEADSETS, PTT SWITCH CABLE & PLUG ADAPTER

HS-94: Earphone-headset (Use with either VS-4LA or OPC-2004LA)
HS-95: Behind-the-head headset (Use with either VS-4LA or OPC-2004LA)
HS-97: Throat microphone (Use with either VS-4LA or OPC-2004LA)
VS-4LA: PTT switch cable.
OPC-2004LA: Plug adapter cable for VOX operation.



■ BELT CLIPS

MB-124: Alligator belt clip. Same as supplied.



■ SOFTWARE AND CABLES

CS-F3100D_F5120D: Programming software
OPC-478UC: USB type radio programming cable.
OPC-474: Radio to radio cloning cable.

■ ANTENNAS

FA-SC25V: 136–150 MHz
FA-SC55V: 150–174 MHz
FA-SC01U: 350–400 MHz
FA-SC25U: 400–430 MHz
FA-SC57U: 430–470 MHz
FA-SC72U: 470–520 MHz



■ HIGH GAIN ANTENNAS

FA-SC62V: 150–160 MHz
FA-SC63V: 155–165 MHz



■ STUBBY ANTENNAS

FA-SC56VS: 150–162 MHz
FA-SC57VS: 160–174 MHz
FA-SC73US: 450–490 MHz



■ CUT-TYPE ANTENNAS

FA-SC61VC: 136–174 MHz
FA-SC61UC: 380–520 MHz



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