

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**

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**1, 14K0F3E, 11K0F3E, 11K0F7E/D, 8K50F3E, 8K10F1E/D, 4K00F1E/D	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/D	16K0F3E*1, 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	400 mA /90 mA (Max. audio (internal SP)/Standby)		400 mA /100 mA (Max. audio (internal SP)/Standby)	
RX				
Antenna impedance	50 Ω			
Operating temperature range	–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)			
Dimensions (W × H × D; Projections not included)	58 × 111.5 × 36.5 mm; 2.3 × 4.4 × 1.4 in (With BP-265)			
Weight (approx.)	320 g; 11.3 oz (BP-265, MB-124 & FA-SC55V)		310 g; 10.9 oz (BP-265, MB-124 & FA-SC57U)	
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)			
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.

** 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
 - Antenna
 - Battery charger
 - Belt clip
 - AC adapter

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

