



VHF AND UHF DIGITAL TRANSCEIVERS (NXDN™)

IC-F3202DEX

(VHF transceiver for Europe version)

IC-F4202DEX

(UHF transceiver for Europe version)

IC-F3203DEX

(VHF transceiver for Export versions)

IC-F4203DEX

(UHF transceiver for Export versions)

IECEX/ATEX INTRINSICALLY SAFE RADIO



IDAS™
ICOM DIGITAL ADVANCED SYSTEM

NXDN™

IP67



IEC Certifications

Mining : Ex ib I Mb
Gas : Ex ib IIC T4 Gb
Dust : Ex ib IIIC T110°C Db
-20°C ≤ Ta ≤ +55°C
IEC 60079-0 (2011), IEC 60079-11 (2011)

ATEX Certifications

Mining : I M2 Ex ib I Mb
Gas : II 2G Ex ib IIC T4 Gb
Dust : II 2D Ex ib IIIC T110°C Db
-20°C ≤ Ta ≤ +55°C
EN 60079-0 (2012), EN 60079-11 (2012)

IP67 Dust-tight & Waterproof Protection

The IC-F3202DEX/F3203DEX series provides rugged protection against dust and water that is equivalent to IP67. The IC-F3202DEX/F3203DEX series can withstand 1m depth of water for 30 minutes and its dust-tight construction shuts out powder dust, sand and other objects.

IDAS™ Digital Mode Operation

The IC-F3202DEX/F3203DEX series provides can program NXDN™ Type-D single-site trunking and digital conventional as well as analog mode per channel. The following digital features are programmable.

- PTT ID (TX)
- Individual/Group calls
- Block decode
- Radio check (RX)
- Stun/kill/revive (RX)
- Call alert (RX)
- Remote monitor (RX)
- Emergency (TX)
- Digital voice scrambler (15-bit)
- Power ON/OFF status call (TX)
- RAN (Radio Access Number)
- Voting scan for multi-site conventional operation

TX: Transmit, RX: Receive

Analogue Mode Compatible

The IC-F3202DEX/F3203DEX series has built-in 5-Tone, 2-Tone, CTCSS and DTCS signaling capability for analogue mode group communication and selective calling. The lone worker and man down functions automatically send an emergency signal to assist in worker safety. The radio is perfect for use as an analogue transceiver ready for future digital migration.

Other Features

- 16 memory channels with channel announcement function
- MDC 1200 PTT ID and emergency transmission
- DTMF autodial
- Three programmable buttons (including emergency red button)
- Low electrical resistivity body; Carrying case is not required
- 19.5–21 hours* operating time with BP-277EX (* 5: 5: 90 duty cycle with Power save.)
- Optional waterproof speaker-microphone, HM-203EX



SPECIFICATIONS

	IC-F3202DEX IC-F3203DEX	IC-F4202DEX IC-F4203DEX	
GENERAL			
Frequency coverage	136–174 MHz	400–470 MHz	
Number of channels	16 channels		
Type of emission	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/F1D		
Power supply requirement	7.4 V DC nominal		
Current drain (approx.)			
Tx High	550 mA		
Rx Max. audio/Standby	300 mA (Internal SP)/110 mA (Digital mode)		
Antenna impedance	50 Ω		
Operating temperature range	–20°C to +55°C		
Dimensions (W × H × D) (Projections not included)	63 × 144 × 50 mm (With BP-277EX)		
Weight (approx.)	258 g (Radio only) 466 g (With MB-94EX, BP-277EX & FA-SC55V)	250g (Radio only) 460 g (With MB-94EX, BP-277EX & FA-SC57U)	
TRANSMITTER			
Output power (at 7.4 V DC)	1 W, 0.8 W, 0.6 W (Hi, L2, L1)		
Max. permissible deviation	±5.0 kHz/±4.0 kHz/±2.5 kHz (W/M/N)		
Frequency stability	±1.0 ppm		
Spurious emissions	0.25 μV (≤ 1 GHz), 1.0 μV (> 1 GHz)		
EUR	66 dB min.		
EXP			
FM Hum and Noise (EXP)	50/46 dB typ. (W/N)	46/40 dB typ. (W/N)	
Residual modulations (EUR)	54/53/50 dB typ. (W/M/N)	48/46/42 dB typ. (W/M/N)	
Audio harmonic distortion	1.0/1.0/1.5% typ. (W/M/N) (@ AF 1 kHz 40% deviation)		
FSK error	2.0% typ. (Digital)	1.5% typ. (Digital)	
Ext. microphone connector	14-pin multi-connector/2.2 kΩ		
RECEIVER			
Sensitivity	Digital (5% BER)	–8 dBμV emf typ.	–9 dBμV emf typ.
	Analog (EUR, 20 dB SINAD)	–4 dBμV emf typ.	–5 dBμV emf typ.
Adjacent channel selectivity	Analog (EXP, 12 dB SINAD)	0.24 μV typ.	0.22 μV typ.
		78/75/70/62 dB typ. (W/M/N/D)	74/72/66/57 dB typ. (W/M/N/D)
Spurious response		85 dB typ. (W/M/N), 87 dBμV emf typ. (Digital)	75 dB typ. (W/M/N), 79 dBμV emf typ. (Digital)
	Intermodulation	67 dB typ. (W/M/N), 73 dBμV emf typ. (Digital)	
Hum and noise	EUR (With CCITT filter)	53/51/48 dB typ. (W/M/N)	46/44/41 dB typ. (W/M/N)
	EXP (Without CCITT filter)	48/43 dB typ. (W/N)	43/37 dB typ. (W/N)
Audio output power	400 mW typ. (at 5% distortion with 32 Ω load)		
External speaker connector	14-pin multi-connector/32 Ω		

Measurements made in accordance with TIA-603, EN 300-086, EN 301-166.
All stated specifications are subject to change without notice or obligation.

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	IP67 (Dust-tight and waterproof)

Supplied accessories: (May differ according to version)		
• Battery pack, BP-277EX	• Belt clip, MB-94EX	• Antenna
• Battery charger, BC-212EX	• AC adapter, BC-123S	

Read all instructions enclosed with the transceiver carefully and completely before using the transceiver.

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OPTIONS

BATTERY PACK
IP67



BP-277EX
Rechargeable
Li-ion, 7.4 V
1800 mAh (min.)
1900 mAh (typ.)

RAPID CHARGER



BC-123S^{*1} **BC-212EX**

Charges the BP-277EX in 2 hours (approx.).

SPEAKER-MICROPHONE
IP67



HM-203EX

BELT CLIP



MB-94EX
Alligator type
Same as supplied.

ANTENNAS

- FA-SC25V : 136–150 MHz
- FA-SC55V : 150–174 MHz
- FA-SC25U : 400–430 MHz
- FA-SC57U : 430–470 MHz

^{*1} BC-123SA for USA.
SE for Europe. SV for Australia.

DO NOT use the transceiver with any other equipment other than the above options.
The battery charger, BC-212EX must not be used in an explosive atmosphere.

ATEX mining protection and meaning

I	M2	Ex	ib	I	Mb
Mb = Mining equipment protection level: High protection					
I = Protection in mining group: Methane					
ib = Intrinsic safety					
Ex = Explosion proof equipment					
M2 = Must be switched OFF in case of firedamp					
I = Group I, Mining					

ATEX gas protection and meaning

II	2	G	Ex	ib	IIC	T4	Gb
Gb = GAS equipment protection level: High protection							
T4 = Device surface temperature will not exceed 135°C							
IIC = Protection in GAS group: Acetylene, Hydrogen							
ib = Intrinsic safety							
Ex = Explosion proof equipment							
G = Gas, vapour and mist							
2 = High level protection for use in Zone 1 (gas)							
II = Group II, other (non-mining) areas							

ATEX dust protection and meaning

II	2	D	Ex	ib	IIC	T110°C	Db
Db = Dust equipment protection level: High protection							
T110°C = Maximum temperature of device surface							
IIC = Dust group: Conductive dust (R_S10 ³ Ωm)							
ib = Intrinsic safety							
Ex = Explosion proof equipment							
D = Dust							
2 = High level protection for use in Zone 21 (dust)							
II = Group II, other (non-mining) areas							

* Please ask your dealer to ensure the ATEX and IECEx ratings are acceptable for the intended place of use.