



VHF AND UHF DIGITAL TRANSCEIVERS (dPMR™)

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™
COM DIGITAL ADVANCED SYSTEM



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.

dPMR™ Mode 1/2 Operation

The IC-F3202DEX/F3203DEX series provides basic operation in dPMR Mode 1, 2 conventional mode. It is compatible with Mode 2 multi-site system. The following dPMR features are programmable.

- PTT ID (TX)
- Power ON/OFF status call (TX)
- Ambience listening (RX)
- Lone worker/Man down function
- Voting scan for Mode 2 multi-site system
- Individual/Group call
- Stun/kill/revive (RX)
- Emergency (TX)
- Digital voice scrambler

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
- BIIS 1200 PTT ID 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		136–174MHz	400–470, 450–520, 350–400MHz
Number of channels		16 channels	
Type of emission	EUR	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/F1D	
	EXP	16K0F3E, 11K0F3E, 8K50F3E, 4K00F1E/F1D	
Power supply requirement		7.4V DC nominal	
Current drain (approx.)			
Tx High		550mA	
Rx Max. audio/Standby		300mA (Internal SP)/110mA (Digital mode)	
Antenna impedance		50Ω	
Operating temperature range		–20°C to +55°C	
Dimensions (W×H×D) (Projections not included)		63×144×50mm (With BP-277EX)	
Weight (approx.)		258g (Radio only) 466g (With MB-94EX, BP-277EX & FA-SC55V)	250g (Radio only) 460g (With MB-94EX, BP-277EX & FA-SC57U)
TRANSMITTER			
Output power (at 7.4V DC)		1W, 0.8W, 0.6W (Hi, L2, L1)	
Max. permissible deviation		±5.0kHz/±4.0kHz/±2.5kHz (W/M/N)	
Frequency stability		±1.0ppm	
Spurious emissions	EUR	0.25μW (≤ 1GHz), 1.0μW (> 1GHz)	
	EXP	66dB min.	
FM Hum and Noise (EXP)		50/46dB typ. (W/N)	46/40dB typ. (W/N)
Residual modulations (EUR)		54/53/50dB typ. (W/M/N)	48/46/42dB typ. (W/M/N)
Audio harmonic distortion		1.0/1.0/1.5% typ. (W/M/N) @ AF 1kHz 40% deviation)	
FSK error		2.0% typ. (Digital)	1.5% typ. (Digital)
Ext. microphone connector		14-pin multi-connector/2.2kΩ	
RECEIVER			
Sensitivity	Digital (5% BER)	–8dBμV emf typ.	–9dBμV emf typ.
	Analog (EUR, 20dB SINAD)	–4dBμV emf typ.	–5dBμV emf typ.
	Analog (EXP, 12dB SINAD)	0.24μV typ.	0.22μV typ.
Adjacent channel selectivity		78/75/70/62dB typ. (W/M/N/D)	74/72/66/57dB typ. (W/M/N/D)
Spurious response		85dB typ. (W/M/N), 87dBμV emf typ. (Digital)	75dB typ. (W/M/N), 79dBμV emf typ. (Digital)
Intermodulation	EUR	67dB typ. (W/M/N), 73dBμV emf typ. (Digital)	
	EXP	75/75/67dB typ. (W/N/D)	74/74/73dB typ. (W/N/D)
Hum and noise	EUR (With CCITT filter)	53/51/48dB typ. (W/M/N)	46/44/41dB typ. (W/M/N)
	EXP (Without CCITT filter)	48/43dB typ. (W/N)	43/37dB typ. (W/N)
Audio output power		400mW typ. (at 5% distortion with 32Ω load)	
External speaker connector		14-pin multi-connector/32Ω	

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	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	

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Icom Inc.

1-1-32, Kami-minami, Hirano-Ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013

www.icom.co.jp/world

Count on us!

Icom America Inc.

12421 Willows Road NE,
Kirkland, WA 98034, U.S.A.
Phone: +1 (425) 454-8155
Fax: +1 (425) 454-1509
E-mail: sales@icomamerica.com
URL: http://www.icomamerica.com

Icom Canada

Glenwood Centre #150-6165
Highway 17A, Delta, B.C.,
V4K 5B8, Canada
Phone: +1 (604) 952-4266
Fax: +1 (604) 952-0090
E-mail: info@icomcanada.com
URL: http://www.icomcanada.com

Icom Brazil

Rua Itororó, 444 Padre Eustáquio
Belo Horizonte MG,
CEP: 30720-450, Brazil
Phone: +55 (31) 3582 8847
Fax: +55 (31) 3582 8987
E-mail: sales@icombrasil.com

Icom (Europe) GmbH

Communication Equipment
Auf der Krautweide 24
65812 Bad Soden am Taunus, Germany
Phone: +49 (6196) 76885-0
Fax: +49 (6196) 76885-50
E-mail: info@icom-europe.com
URL: http://www.icomeurope.com

Icom Spain S.L.

Ctra. Rubi, No. 88 "Edificio Can Castanyer"
Bajos A 08174, Sant Cugat del Valles,
Barcelona, Spain
Phone: +34 (93) 590 26 70
Fax: +34 (93) 598 04 46
E-mail: icom@icomspain.com
URL: http://www.icomspain.com

Icom (UK) Ltd.

Blacksole House, Altira Park,
Herne Bay, Kent, CT6 6GZ, U.K.
Phone: +44 (0) 1227 741741
Fax: +44 (0) 1227 741742
E-mail: info@icomuk.co.uk
URL: http://www.icomuk.co.uk

Icom France s.a.s.

Zac de la Plaine,
1 Rue Brindejone des Moulinais, BP 45804,
31505 Toulouse Cedex 5, France
Phone: +33 (5) 61 36 03 03
Fax: +33 (5) 61 36 03 00
E-mail: icom@icom-france.com
URL: http://www.icom-france.com

Icom (Australia) Pty. Ltd.

Unit 1 / 103 Garden Road,
Clayton, VIC 3168 Australia
Phone: +61 (03) 9549 7500
Fax: +61 (03) 9549 7505
E-mail: sales@icom.net.au
URL: http://www.icom.net.au

Icom New Zealand

39C Rennie Drive, Airport Oaks,
Auckland, New Zealand
Phone: +64 (09) 274 4062
Fax: +64 (09) 274 4708
E-mail: inquiries@icom.co.nz
URL: http://www.icom.co.nz

Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road,
Taipei, Taiwan, R.O.C.
Phone: +886 (02) 2559 1899
Fax: +886 (02) 2559 1874
E-mail: sales@asia-icom.com
URL: http://www.asia-icom.com

Shanghai Icom Ltd.

No.101, Building 9, Caifuxingyuan Park,
No.188 Maotang Road, Chedun Town,
Songjiang District, Shanghai, 201611, China
Phone: +86 (021) 6153 2768
Fax: +86 (021) 5765 9987
E-mail: bjicom@bjicom.com
URL: http://www.bjicom.com

OPTIONS

BATTERY PACK

IP67



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

RAPID CHARGER



BC-123S**

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

** BC-123SA for USA.
SE for Europe. SV for Australia.

DO NOT use the transceiver with any other equipment other than the above options.

ATEX mining protection and meaning

I	M2	Ex	ib	I	Mb	Mb = Mining equipment protection level: High protection
					I	I = Protection in mining group: Methane
					ib	ib = Intrinsic safety
					Ex	Ex = Explosion proof equipment
					M2	M2 = Must be switched OFF in case of firedamp
					I	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	T4 = Device surface temperature will not exceed 135°C
							IIC	IIC = Protection in GAS group: Acetylene, Hydrogen
							ib	ib = Intrinsic safety
							Ex	Ex = Explosion proof equipment
							G	G = Gas, vapour and mist
							2	2 = High level protection for use in Zone 1 (gas)
							II	II = Group II, other (non-mining) areas

ATEX dust protection and meaning

II	2	D	Ex	ib	IIIC	T110°C	Db	Db = Dust equipment protection level: High protection
							T110°C	T110°C = Maximum temperature of device surface
							IIIC	IIIC = Dust group: Conductive dust (R _s ≤10 ³ Ωm)
							ib	ib = Intrinsic safety
							Ex	Ex = Explosion proof equipment
							D	D = Dust
							2	2 = High level protection for use in Zone 21 (dust)
							II	II = Group II, other (non-mining) areas

* Please ensure the IC-F3202DEX/F3203DEX series rating is acceptable for the intended place of use.

Your local distributor/dealer:

Communications (Southern) Ltd

Telephone:

South-East 01489 799060 / South-West 01258 789799
or 0700 4 RADIOS (723467) / 01794 723467
email: sales@commsouthern.co.uk
web: www.commsouthern.co.uk