



IC-F2000D

# Compact, Waterproof Digital Business Radio



dPMR™ Mode 1/2 digital operation

Slim, compact and lightweight

IP67 waterproofing and dust-tight protection

Motion detection, stationary detection, man down and lone worker functions as standard

**Good audio quality for noisy environments** 

Long-lasting battery life

**Channel announcement function** 













## Compact, Slim Dimensions, Waterproof Digital Transceiver

#### **■ dPMR<sup>™</sup> Mode 1/2 Operation**

The IC-F1000D/F2000D provides dPMR digital Modes 1, 2 as well as analogue operation. dPMR digital mode offers 6.25kHz spectrum efficiency, higher security and greater audio clarity even on the fringes of the communication range.

The following dPMR features are programmable:

- Remote kill, stun and revive (RX)
- Ambience listening
- Status Call (TX and RX beep)
- SDM (Short Data Message) (RX, notification only)
- Voting scan for multi-site conventional operation
- · GPS position data (TX) with optional GPS microphone, HM-171GPW

TX: Transmit, RX: Receive

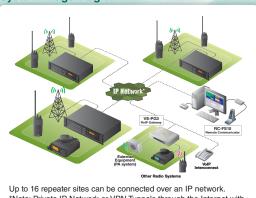
#### Intelligent Emergency Functions

To assist in worker safety, the IC-F1000D/F2000D has four emergency related functions: motion detection, stationary detection, man down and lone worker functions. If one of these functions are activated, the transceiver automatically enters an emergency phase and starts counting down to send an emergency signal. The acceleration sensor sensitivity level is programmable in 10-levels for each function.

#### Optional GPS Speaker-Microphone

With the optional GPS speaker-microphone, HM-171GPW, GPS position data can be attached to a voice or data transmission such as responding a GPS request status call.

#### System image diagram



\*Note: Private IP Network or VPN Tunnels through the Internet with Static endpoints.



VHF AND UHF DIGITAL TRANSCEIVERS (dPMR™)

IC-F1000D IC-F2000D

#### **IP67 Waterproof and Dust-tight Protection**

While the body is compact, the IC-F1000D/ F2000D has rugged construction providing superior protection against water (1m depth for 30 minutes), dust, sand, mud and other objects. The radio is also tested to MIL-STD 810 specifications. It can withstand harsh use.

#### Slim, Compact and Lightweight

The IC-F1000D/F2000D has a compact 52.2×111.8×30.3mm body and weighs only 260g (with BP-280 battery pack and belt clip). It's easy to carry around anywhere.

#### Long-Lasting Battery Pack

The large capacity waterproof battery pack, BP-280 (2400mAh typ.), provides 18 hours of operating time\*. The supplied rapid charger BC-213\* charges the BP-280 in 3.5 hours

\* Tx: Rx: Standby=5:5:90. Power save function ON. BC-213 may be not supplied depending on version.

#### Easy to Hear in a Noisy Environment

The large 36mm speaker of the transceiver provides clear 800mW\* audio. The built-in BTL amplifier increases the audio output power and delivers loud and intelligible voice to a radio operator working in noisy environments.

\* Typical with internal speaker.

#### Built-in 2-Tone and 5-Tone (Analogue mode)

The IC-F1000D/F2000D has built-in 2-Tone, 5-Tone, CTCSS and DTCS signaling capability for analogue mode group communication and selective calling. The IC-F1000D/F2000D can be used as an analogue transceiver ready for future digital migration.

#### Other Features

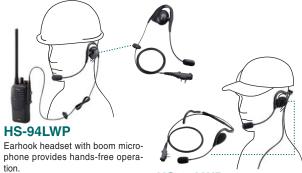
- DTMF autodial memories
- BIIS PTT ID call and emergency call
- Surveillance function
- Escalating alarm
- VOX capability for hands-free operation
- Channel announcement function
- Red emergency switch on the top panel

## The IC-F1000D/F2000D: **Added Value Optional Accessories**



### **Manufacturing** & Construction

»Headsets



#### **HS-95LWP**

Behind-the-head type with boom microphone provides hands-free



Throat microphone picks up your speech vibration, even in a noisy environment.



## **Facility & Security Guard**

»Speakermicrophones



#### **HM-171GPW**

GPS speaker-microphone for sending GPS position data with voice







#### **HM-159LA**

getting wet.

Full size, durable speaker-microphone provides loud audio.

**HM-158LA** 

Lightweight, compact size speaker-microphone.





### Retail & **Hospitality**

»Earphonemicrophones



#### **HM-153LA**

Durable lapel microphone with earphone for low-profile, discreet placement.



#### **HM-166LA**

Lightweight lapel microphone with earphone.

#### **SPECIFICATIONS**

	IC-F1000D	IC-F2000D			
GENERAL					
Frequency coverage	136-174MHz*	400-470MHz*			
Number of channels	16 channels				
Type of emission	16K0F3E (25kHz), 14K0F3E (20kHz),				
(* Depending on version)	8K50F3E (12.5kHz), 4K00F1E/D (6.25kHz)				
Power supply requirement	7.5V DC nominal				
Current drain (approx.)					
Tx High	1.3A	1.4A			
Rx Max. audio (Internal SP)	400mA	400mA			
Standby	110mA	110mA			
Antenna impedance	50Ω				
Operating temperature range	-25°C to +55°C (Radio specifications)				
Dimensions (W×H×D)	52.2×111.8×30.3 mm (With BP-280)				
(Projections not included)	, ,				
Weight (approx.)	260g (With MB-133 and BP-280)				
TRANSMITTER					
Output power (at 7.5V DC)	5W, 2W, 1W (Hi, L2, L1)				
Max. frequency deviation	± 5.0kHz/±4.0kHz/±2.5kHz (Wide/Middle/Narrow)				
Frequency stability	±1.0ppm				
Spurious emissions	0.25μW (≤ 1GHz), 1.0μW (> 1GHz)				
Residual modulation	52/50/46dB typ. (W/M/N)	54/53/48dB typ. (W/M/N)			
Audio harmonic distortion		1.0%/1.0%/1.5% typ. (W/M/N)			
Addio Harmonic distortion	(AF 1kHz 40% deviation)	(AF 1kHz 40% deviation)			
FSK error	5.0% max.				
Ext. microphone connector	3-conductor 2.5 (d) mm (1/10")/2.2kΩ				
RECEIVER					
Sensitivity (at 20dB SINAD)	-4dBµV emf typ. (W/M/N)	-5/-5/-2dB emf typ. (W/M/N)			
(at 5% BER)	-8dBµV emf typ. (Digital)	-8dBµV emf typ. (Digital)			
Adianak danah ladi 1879	77/74/69dB typ. (W/M/N)	75/74/69dB typ. (W/M/N)			
Adjacent channel selectivity	59dB typ. (Digital)	58dB typ. (Digital)			
Spurious response rejection	80dB typ.				
Internal distriction and a 12	69dB typ. (W/M/N)	70dB typ. (W/M/N)			
Intermodulation rejection	74dBµV emf typ. (Digital)	74dBµV emf typ. (Digital)			
Hum and noise	52/50/46dB typ. (W/M/N)	50/48/45dB typ. (W/M/N)			
Audio output power	, , ,				
Internal SP (With 12Ω load)	800mW typ. (at 5% distortion)				
External SP (With 8Ω load)	400mW typ. (at 5% distortion)				
Ext. speaker connector	2-conductor 3.5 (d) mm (1/8")/8Ω				
leasurements made in accordance with EN 201 166 and EN 200 086					

Measurements made in accordance with EN 301 166 and EN 300 086. All stated specifications are subject to change without notice or obligation. \*Some frequency ranges may be restricted, depending on country.

#### Applicable U.S. Military Specifications & IP Rating

Standard	MIL 810G				
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			
Solar Radiation	505.5	I			
Rain Blowing/Drip	506.5	I, III			
Humidity	507.5	_			
Salt Fog	509.5	-			
Dust Blowing	510.5	I			
Immersion	512.5	I			
Vibration	514.6	I			
Shock	516.6	I, IV			
Also mosts assistant MIL CTD 010 C. D. F. and F.					

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

Ingress Protection Standard	
Dust & Water	IP67 (Dust-tight and waterproof protection)
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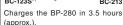
#### **OPTIONS**

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



Battery packs	Туре	Capacity	Operating time*	
BP-278	Li-ion	1130mAh (min.)	9 hours	
	7.2V	1190mAh (typ.)	(Approx.)	
BP-279	Li-ion	1485mAh (min.)	12 hours	
	7.2V	1570mAh (typ.)	(Approx.)	
BP-280	Li-ion	2280mAh (min.)	18 hours	
	7.2V	2400mAh (typ.)	(Approx.)	
*Tx: Rx: standby = 5:5:90 duty cycle. Power save function ON				









OPC-2004I A

BELT CLIP

BC-123SA for USA plug. SE for Europe plug. SV for Australia plug. SUK for UK plug.

hours (approx.)

CHARGER BRACKET





OPC-656 For use with BC-214

MB-130 For use with BC-213

## STUBBY ANTENNAS FA-SC26VS: 136-144MHz

• FA-SC73US: 450-490MHz

#### STANDARD ANTENNAS

- FA-SC25V: 136-150MHz FA-SC55V: 150-174MHz • FA-SC27VS: 142–150MHz FA-SC56VS: 150–162MHz FA-SC25U: 400–430MHz • FA-SC57VS: 160-174MHz • FA-SC57U: 430-470MHz • FA-SC26US: 400–450MHz
  - **CUT ANTENNAS** • FA-SC61VC: 136-174MHz • FA-SC61UC: 380-520MHz

PTT SWITCH CABLE AND PLUG ADAPTER CABLE

VS-4LA: For manual PTT operation.

Either VS-4LA or OPC-2004LA is required when using the HS-97.

- SPEAKER-MICROPHONES
- HM-168LWP: Waterproof speaker microphone HM-171GPW: GPS speaker microphone
- HM-158LA: Compact type speaker microphone • HM-159LA: Full size durable speaker microphone

#### **EARPHONE-MICROPHONES**

FA-SC26US FA-SC27VS FA-SC26VS

- HM-153LA: Durable earphone microphone
  HM-166LA: Light-weight earphone microphone

#### **HEADSETS**

- . HS-94I WP: Farnhone-headset
- HS-95LWP: Behind-the-head headset
- HS-97: Throat microphone (Use with VS-4LA or OPC-2004LA) CHARGER ADAPTER

AD-130 charger adapter is supplied with the BC-214.

#### Supplied accessories: (May differ depending on version)

- Battery pack, BP-280 · Belt clip, MB-133
- Desktop charger, BC-213
- Antenna
- AC adapter, BC-123S



The "3D GENUINE Icom label" is attached to the rear chassis under the battery. Check the Icom website for details: http://www.icom.co.jp/world/genuine-info/

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#### Icom France s.a.s.

Zac de la Plaine - 1, Rue Brindejonc des Moulinais BP 45804 - 31505 TOULOUSE CEDEX 5 Tél: +33 (0)5 61 36 03 03 - Fax: +33 (0)5 61 36 03 00

WEB ICOM: http://www.icom-france.com E-mail: icom@icom-france.com



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