



**IC-F1100D** Series  
**IC-F2100D** Series

**VHF AND UHF DIGITAL TRANSCEIVERS**

## Big on Audio, Small on Size 1500 mW Class Leading Audio

The IC-F1100D and IC-F2100D IDAS™ digital handheld units improve on the past performance of the IC-F1000D and IC-F2000D as well as setting a new standard in digital communication. This model continues Icom's reputation for high power audio clarity with a leading edge 1500 mW speaker. These compact handheld radios are also waterproof, dustproof and come with a long lasting battery for those times when communication matters. The digital handheld units are available in three designs which are Simple version with no display or keypad (IC-F1100D & IC-F2100D), simple keypad and display version (IC-F1100DS & IC-F2100DS) and Full keypad and display version (IC-F1100DT & IC-F2100DT).

**Icom's custom high power handling capacity speaker for 1500 mW of powerful audio**

**Compact, waterproof durable design (IP67/55/54 and MIL-STD-810-G)**

**Multiple operating modes**

(Available protocol differs depending on version)

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

**Over-the-Air Alias (OAA) function displays the caller's name without programming (IC-F1100DT/DS and IC-F2100DT/DS only)**

**Motion/Stationary detection, Man Down and Lone Worker functions**

**Operating time of up to 18 hours with the BP-280**



IC-F1100DT

IC-F2100DS

IC-F1100D

**IDAS™**  
ICOM DIGITAL ADVANCED SYSTEM

**NXDN™**

**dPMR™**  
digital

## General Features

- 136–174, 350–400, 400–470, 450–512, 450–520 MHz versions
- 128 Channels / 8 Zones (for LCD types)
- 16 Channels (for non-display types)
- Icom's customized speaker offers a louder 1500 mW audio output
- An engineered casing that amplifies and improves acoustic sound clarity
- Compact (52.2 (W) × 111.8 (H) mm; 2.1 × 4.4 in) and light-weight
- IP67/55/54 waterproof and dust-tight protection
- Tested to 12 categories of MIL-STD-810-G environmental tests
- AquaQuake™ – Expels water ingress from the speaker grill
- DTMF autodial memories
- 16-position rotary selector and ON/OFF volume knob
- Programmable keys – Increase the number of programmable key assignments by using the “Shift key”
- Operating times of up to 18 hours (with the supplied BP-280 battery pack)
- Eight character alphanumeric display (for LCD types)
- Three color LED



1500 mW powerful audio



Icom custom high power handling capacity speaker



Waterproof for 30 minutes in one meter depth of water

## Operating Mode (Available protocol differs depending on version)

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



Check our website to know more about 6.25 kHz FDMA narrow band.  
[www.icomjapan.com/explore/digital/](http://www.icomjapan.com/explore/digital/)

## Digital Functions (Voice and Data)

- AMBE+2™ vocoder
- Over-the-Air Alias (OAA) displays the caller's name without programming (for LCD types)
- Individual, Group and All call
- Late entry for Group call
- Status call and Polling
- Short data messages (for LCD types)
- Call alert (NXDN)
- Radio check (RX only) (NXDN)
- GPS position capabilities (requires HM-171GPW)
- Up to 500 ID numbers for IDAS or MDC 1200 signaling system can be saved in the Call List to show the alias name

## Analog Functions

- CTCSS and DTCS tone
- 2-Tone and 5-Tone
- MDC functions\*; PTT ID, Emergency (TX/RX), Radio check (RX), Stun (RX), Revive (RX) (\* Depending on version)
- BIIS PTT ID transmission

## Safety and Security

- Digital voice scrambler (Low level encryption)
- Radio Stun/Revive/Kill (RX only)
- Remote monitor (NXDN)/ambience listening (dPMR)
- Man down, Lone worker and Emergency call key capability
- Motion and Stationary detection function
- Surveillance function temporarily turns OFF the beep and LED indicator
- Power ON password (for LCD types)

## Scan Functions

- Priority scan monitors one or two priority channels while scanning non-priority channels
- Voting scan automatically selects the optimal repeater site
- Mode dependent scan automatically changes the scan list, depending on the operating channel
- Power ON scan function
- Talk Back timer

## Voice/Audio Functions

- Channel announcement function
- VOX function for hands-free operation
- Siren sound for security alarm

		IC-F1100DT/DS	IC-F1100D	IC-F2100DT/DS	IC-F2100D
<b>GENERAL</b>					
Frequency coverage* (* Varies, depending on the version)		136–174 MHz (NXDN/dPMR)		350–400 MHz (NXDN, EXP) 400–470 MHz (NXDN/dPMR, USA/EUR/EXP) 450–512 MHz (NXDN, USA) 450–520 MHz (NXDN, EXP)	
Number of channels		128 channels/ 8 zones	16 channels	128 channels/ 8 zones	16 channels
Type of emission* (* Depends on the version)		11K0F3E, 4K00F1E, 4K00F1D (USA) 16K0F3E, 14K0F3E, 11K0F3E, 8K50F3E, 4K00F1E, 4K00F1D (EXP) 16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E, 4K00F1D (EUR)			
Power supply requirement		7.5 V DC nominal			
Current drain (approximate)	Tx	1.3 A (at 5 W)		1.6 A (at 5 W), 1.4 A (at 4 W)	
	Rx	520 mA /110 mA (Max. audio (internal SP)/Standby)		520 mA /110 mA (Max. audio (internal SP)/Standby)	
Antenna impedance		50 Ω			
Operating temperature range		–30°C to +60°C; –22°F to +140°F (Radio specification) (USA/EXP) –25°C to +55°C (Radio specification) (EUR)			
Dimensions (W × H × D; Projections not included)		IC-F1100DS/D, IC-F2100DS/D: 52.2 × 111.8 × 29.4 mm; 2.1 × 4.4 × 1.2 in (With BP-280) IC-F1100DT, IC-F2100DT: 52.2 × 111.8 × 34.1 mm; 2.1 × 4.4 × 1.3 in (With BP-280)			
Weight (approximate)		IC-F1100D, IC-F2100D: 258 g; 9.1 oz (With BP-280 and MB-133) IC-F1100DS, IC-F2100DS: 266 g; 9.4 oz (With BP-280 and MB-133) IC-F1100DT, IC-F2100DT: 277 g; 9.8 oz (With BP-280 and MB-133)			
<b>TRANSMITTER</b>					
Output power (Hi, L2, L1)		5 W, 2 W, 1 W		5 W, 2 W, 1 W (400–470 MHz versions) 4 W, 2 W, 1 W (All other versions)	
Maximum frequency deviation		± 5.0 kHz (25 kHz), ±4.0 kHz (20 kHz), ±2.5 kHz (12.5 kHz)			
Spurious emissions		70 dB minimum (USA/EXP) (350–400 MHz is included)			
Frequency stability		0.25 μW (≤ 1 GHz), 1.0 μW (> 1 GHz) (EUR/EXP) (Except 350–400 MHz)			
Audio harmonic distortion		±2.0 ppm		±1.0 ppm	
FM Hum and Noise (without CCITT filter)		0.8%/0.9%/1.0% typical (25/20/12.5 kHz) (at AF 1 kHz 40% deviation)		0.7%/0.9%/1.0% typical (25/20/12.5 kHz) (at AF 1 kHz 40% deviation)	
Residual modulations (with CCITT filter)		46 dB typ. (25 kHz) (EXP), 44 dB typ. (12.5 kHz) (USA/EXP)		44 dB typical (12.5 kHz) (USA)	
FSK error		51/49/45 dB typical (25/20/12.5 kHz) (EUR/EXP)			
External microphone connector		5% maximum			
External microphone connector		3-conductor 2.5 (d) mm (1/10 in)/2.2 kΩ			
<b>RECEIVER</b>					
Sensitivity	Digital	–9 dBμV typical emf (0.18 μV typical) (at 5% BER)		–8 dBμV typical emf (0.20 μV typical) (at 5% BER)	
	Analog	0.24 μV typical (at 12 dB SINAD)		0.24 μV typical (at 12 dB SINAD)	
Adjacent channel selectivity	Digital	–5/–5/–2 dBμV typ. emf (25/20/12.5 kHz) (at 20 dB SINAD)		–5/–5/–2 dBμV typ. emf (25/20/12.5 kHz) (at 20 dB SINAD)	
	Analog	59 dB typ.		58 dB typ.	
Spurious response rejection		77/75/67 dB typ. (25/20/12.5 kHz)			
Intermodulation rejection	Digital	80 dB typical		80 dB typical	
	Analog	71 dB typ. (USA/EXP), 74 dBμV emf typ. (EUR/EXP)		70 dB typ. (USA/EXP), 74 dBμV emf typ. (400–470 MHz, EUR/EXP) 71 dBμV emf typ. (350–400 MHz, EXP)	
Hum and noise	(With CCITT filter)	76 dB typ. (25 kHz) (EXP), 75 dB typ. (12.5 kHz) (USA/EXP), 69 dB typ. (EUR/EXP)		77 dB typ. (25 kHz) (EXP), 77 dB typ. (12.5 kHz) (USA/EXP), 70 dB typ. (EUR/EXP)	
	(Without CCITT filter)	48 dB typ. (25 kHz) (EXP), 43 dB typ. (12.5 kHz) (USA/EXP)		42 dB typical (12.5 kHz) (USA)	
AF output power (at 5% distortion)	Internal SP	51/49/46 dB typ. (25/20/12.5 kHz) (EUR/EXP)		50/48/45 dB typ. (25/20/12.5 kHz) (EUR/EXP)	
	External SP	1500 mW typical (With an 8 Ω load)		1500 mW typical (With an 8 Ω load)	
External speaker connector		450 mW typical (With an 8 Ω load)			
External speaker connector		2-conductor 3.5 (d) mm (1/8 in)/8 Ω			

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

### 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 Immersion) IP55/IP54 (Dust and Water jets/Water resistant)
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### Battery Life

Battery pack	Type	Capacity	Operating time*	
			VHF	UHF
BP-280	Li-ion 7.2 V	2400 mAh (typ.), 2280 mAh (min.)	Up to 18 hours (at 5 W)	Up to 17 hours (at 5 W), Up to 18 hours (at 4 W)
BP-279	Li-ion 7.2 V	1570 mAh (typ.), 1485 mAh (min.)	Up to 11.5 hours (at 5 W)	Up to 11 hours (at 5 W), Up to 11.5 hours (at 4 W)
BP-278	Li-ion 7.2 V	1190 mAh (typ.), 1130 mAh (min.)	Up to 9 hours (at 5 W)	Up to 8.5 hours (at 5 W), Up to 9 hours (at 4 W)

\* TX: RX: standby = 5:5:90. Power save function ON.

**Supplied accessories:** (May differ, or not supplied, depending on version)  
• Battery pack, BP-280 • Belt clip, MB-133 • Antenna  
• Desktop charger, BC-213\* • AC adapter, BC-123SE/SUK/SV or BC-242\*



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/>

**BATTERY PACKS**

**BP-278:** 1190 mAh (typ.), 1130 mAh (min.) rechargeable Li-ion battery.  
**BP-279:** 1570 mAh (typ.), 1485 mAh (min.) rechargeable Li-ion battery.  
**BP-280:** 2400 mAh (typ.), 2280 mAh (min.) rechargeable Li-ion battery.



BP-278 BP-279 BP-280

**BATTERY CHARGERS**

**BC-213:** Desktop charger.  
 Charges the BP-278, BP-279 or BP-280. Charges the BP-280 in 3.5 hours (approximate).  
 + **BC-123SA/SE/SUK/SV** or **BC-242:** AC adapter.

**BC-214:** Multi-charger.  
 Charges up to six radios and/or batteries at the same time.  
 + **BC-157S:** AC adapter.

\* AD-130 charger adapter is supplied with the BC-214, depending on the version.



BC-213 BC-123SA BC-214 BC-157S

**POWER SUPPLY CABLES AND CHARGER BRACKET**

**CP-23L:** Vehicle charger cable for use with the BC-213.  
**OPC-656:** DC power cable for use with the BC-214.  
**MB-130:** Charger bracket for use with the BC-213.



CP-23L OPC-656 MB-130

**SPEAKER-MICROPHONES**

**HM-171GPW:** GPS speaker microphone with a waterproof connector. IP67 protection.  
**HM-168LWP:** Waterproof speaker microphone with a waterproof connector. IP67 protection.  
**HM-159LA:** Speaker microphone with a 3.5 mm earphone jack.  
**HM-158LA:** Compact speaker microphone with a 3.5 mm earphone jack.



HM-171GPW HM-168LWP HM-159LA HM-158LA

**EARPHONE-MICROPHONES**

**HM-153LA:** Durable lapel microphone with earphone.  
**HM-166LA:** Light weight lapel microphone with earphone.



HM-153LA HM-166LA

**HEADSETS, PTT SWITCH CABLE & PLUG ADAPTER**

**HS-94LWP:** Earphone-headset with a waterproof connector.  
**HS-95LWP:** Behind-the-head headset with a waterproof connector.  
**HS-94:** Earphone-headset. (Use with either the VS-4LA or OPC-2004LA)  
**HS-95:** Behind-the-head headset. (Use with either the VS-4LA or OPC-2004LA)  
**HS-97:** Throat microphone. (Use with either the VS-4LA or OPC-2004LA)  
**VS-4LA:** PTT switch cable for manual PTT operation.  
 (For use with either the HS-94, HS-95 or HS-97)  
**OPC-2004LA:** Plug adapter cable for VOX operation.  
 (For use with either the HS-94, HS-95 or HS-97)



HS-94LWP HS-95LWP HS-97 VS-4LA OPC-2004LA

**BELT CLIP**

**MB-133:** Alligator belt clip. Same as supplied.

**SOFTWARE AND CABLE**

**CS-F2100D:** Programming software. (#11 NXDN, #12 dPMR)  
**OPC-478UC:** USB type radio programming cable.

**ANTENNAS**

**FA-SC25V:** 136–150 MHz  
**FA-SC28V:** 148–162 MHz  
**FA-SC29V:** 160–174 MHz  
**FA-SC55V:** 150–174 MHz  
**FA-SC25U:** 400–430 MHz  
**FA-SC57U:** 430–470 MHz  
**FA-SC72U:** 470–520 MHz  
**FA-SC01U:** 350–400 MHz  
**FA-SC02U:** 330–380 MHz



FA-SC25V FA-SC28V FA-SC29V FA-SC55V FA-SC25U FA-SC57U



FA-SC72U FA-SC01U

**STUBBY ANTENNAS**

**FA-SC26VS:** 136–144 MHz  
**FA-SC27VS:** 142–150 MHz  
**FA-SC56VS:** 150–162 MHz  
**FA-SC57VS:** 160–174 MHz  
**FA-SC26US:** 400–450 MHz  
**FA-SC73US:** 450–490 MHz



FA-SC26VS FA-SC27VS FA-SC56VS



FA-SC57VS FA-SC26US FA-SC73US

**CUT-TYPE ANTENNAS**

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



FA-SC61VC FA-SC61UC

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

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