



**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, dust-tight 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

## FEATURES

## IC-F1100D • IC-F2100D Series

## 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 lightweight
- 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 18/17 hours (VHF/UHF, 5 W output with the supplied BP-280 battery pack)
- Eight character alphanumeric display (for LCD types)
- Three color LED
- Optional 1500 mW Speaker-Microphone, HM-222HLWP\*

\* For the transceiver with a "U" mark on the serial number label.



1500 mW powerful audio



Icom custom high power handling capacity speaker



Waterproof for 30 minutes in one meter depth of water



1500 mW powerful audio with optional HM-222HLWP

## 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)
- 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

## SPECIFICATIONS

## IC-F1100D • IC-F2100D Series

GENERAL		IC-F1100DT/DS		IC-F1100D		IC-F2100DT/DS		IC-F2100D	
Frequency coverage* (* Varies, depending on the version)		136–174 MHz (NXDN/dPMR)				350–400 MHz (NXDN, EXP, IC-F2100D only) 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)			
	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)							
TRANSMITTER									
Output power (Hi, L2, L1)		5 W, 2 W, 1 W				5 W, 2 W, 1 W			
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)							
Frequency stability		0.25 μW (≤ 1 GHz), 1.0 μW (> 1 GHz) (EUR/EXP)							
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)				54/52/48 dB typical (25/20/12.5 kHz) (EUR/EXP)			
External microphone connector		5% maximum 3-conductor 2.5 (d) mm (1/10 in)/2.2 kΩ							
RECEIVER									
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)				76/75/69 dB typ. (25/20/12.5 kHz)			
Intermodulation rejection	Digital	80 dB typical							
	Analog	71 dB typ. (USA/EXP), 74 dBμV emf typ. (EUR/EXP)				70 dB typ. (USA/EXP), 74 dBμV emf typ. (EUR/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 8 Ω load)	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 450 mW typical (Single end) 1500 mW typical (BTL, HM-222HLWP connected*)				1500 mW typical 400 mW typical (Single end) 1500 mW typical (BTL, HM-222HLWP connected*)			
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).

\* For the transceiver with a "U" mark on the serial number label.

## Applicable U.S. Military Specifications &amp; 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)

## 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)
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)
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)

\* 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:  
www.icomjapan.com/explore/genuine\_info/



## OPTIONAL ACCESSORIES

## IC-F1100D • IC-F2100D Series

## ■ 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-214N:** 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-214N, depending on the version.



BC-213 BC-123SA BC-214N 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-214N.  
**MB-130:** Charger bracket for use with the BC-213.



CP-23L OPC-656 MB-130

## ■ SPEAKER-MICROPHONES

**HM-222HLWP:** High-power audio speaker microphone with a 3.5 mm earphone jack.  
 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-222HLWP 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

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

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## ■ HEADSETS, PTT SWITCH CABLE &amp; 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.

## ■ 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-SC55V FA-SC28V FA-SC29V 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

## ■ PARTNER PRODUCT

Icom affiliated IJKP Product

**IJKP**

**IJKP-HM-2PL-OW:**  
 Acoustic Type Earphone Microphone



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