

### A New Legacy: Slimmer, Smaller and Infinitely Better

The IC-F52D series is a next generation IDAS™ handheld radio. It not only inherits design and technical advantages from the IC-F3400D series, but also offers state-of-the-art improvements applying size and usability from the hugely popular IC-F50V/IC-F50 series analog models. The IC-F52D series is a true mixture of legacy and modern technology in one of the most compact packages available today.

#### Small, light and feature packed

#### Multiple operating modes

- Analog FM
- NXDN™/dPMR™ conventional
- Upgradable to NXDN™ Type-D trunking
- Upgradable to dPMR™ Mode 3 trunking

#### Full dot-matrix display, rotary channel and volume knob ensure every-day operation

#### Built-in Bluetooth®, voice recording, active noise cancelling functions

#### Motion/Stationary detection, man down and lone worker functions

#### OTAP (Over-the-Air Programming) function easily reconfigures in-the-field radios

#### Intelligent battery management helps to extend the battery life



IC-F52D

IC-F62D

### General Features

- 136–174, 350–400, 400–470, 450–520 MHz versions
- 512 CH / 128 Zones
- 14 character dot-matrix display with status icons
- Improved user interface
- Programmable functions and menu items in a language other than English (For example French, Spanish, German, Russian and Turkish)
- Backlit LCD & Keys
- 20-position rotary selector and ON/OFF volume knob
- 800 mW loud and intelligible internal speaker audio
- MIL-STD-810 G shock, vibration, temperature and more
- IP67/66/55/54 waterproof & dust-tight protection
- 29 mm (1.1 inch) slim dimensions (with BP-290 battery pack)
- Intelligent battery information
- License key upgrade (trunking)

### Operating Mode

- NXDN or dPMR Mode 1/2 conventional
- NXDN or dPMR multi-site conventional over IP network
- NXDN Type-D single/multi-site trunking\*  
\* License key (ISL-UGMTR) required.
- dPMR Mode 3 trunking\*  
\* License key (ISL-UGMD3) required.
- 12.5 kHz digital mode (NXDN Conventional)
- Analog mode
- Analog/Digital Mixed Operation

### Digital Functions (Voice and data)

- AMBE+2™ Vocoder
- Over-the-Air Programming (OTAP) function\*  
\* OTAP manager and license key (ISL-OTAPML) required.
- Over-the-Air Alias (OAA) sends own name with a call
- Over-the-Air Update (OTAU) changes the repeater channel data and site code over the air (NXDN Type-D trunking)
- Direct mode communication
- Individual, group and all call
- Late entry for group call
- Status call and polling
- Short Data Messages
- Call alert (NXDN)
- GPS position data (Optional HM-233GP required)
- Transparent data mode

### Analog Functions

- CTCSS and DTCS tone
- 2-Tone, 5-Tone
- MDC functions (depending on version)
- BIIS 1200 (MSK)
- LTR™ trunking (depending on version)
- DTMF autodial

### Security and safety

- Digital voice scrambler (Low level encryption)
- Analog voice scrambler (Inversion)
- Power ON password
- Tactical group temporarily regroup of user groups
- Radio Stun/Revive/Kill
- Remote monitor (NXDN)/Ambience listening (dPMR)
- Emergency key for emergency call
- Man down function
- Lone worker function
- Motion/stationary detection

### Scan Functions

- Priority scan
- Voting scan for site roaming

### Voice/Audio Functions

- Voice announcement (Channel number and zone)
- VOX function for hands-free operation
- Voice recording/playback (up to 8 minutes)
- TX/RX active noise canceller
- TX/RX audio equalizer
- Audio compander (analog)

### Hardwares

- Programmable vibration alert
- Built-in Bluetooth® for wireless audio and data
- Variety of optional audio accessories including speaker-microphones, headsets and earphones
- Optional HM-233GP GPS speaker-microphone
- 14-pin accessory connector
- Wireless radio programming over Bluetooth®

		IC-F52D NXDN Version	IC-F52D dPMR Version	IC-F62D NXDN Version	IC-F62D dPMR Version
<b>GENERAL</b>					
Frequency coverage (* Depending on version)		136–174 MHz	136–174 MHz	350–400, 400–470, 450–520 MHz	400–470 MHz
Number of channels		512 channels /128 zones			
Type of emission (* Depending on version)		16K0F3E*, 14K0F3E, 11K0F3E, 8K50F3E ,8K30F1E/D, 4K00F1E/D	16K0F3E*, 14K0F3E, 8K50F3E, 4K00F1E/D	16K0F3E*, 14K0F3E, 11K0F3E, 8K50F3E ,8K30F1E/D, 4K00F1E/D	16K0F3E*, 14K0F3E, 8K50F3E, 4K00F1E/D
Power supply requirement		7.5 V DC nominal			
Current drain (approx.)	Tx	1.8 A			
	Rx	500 mA /170 mA (Max. audio (internal SP)/Standby)			
Antenna impedance		50 Ω			
Operating temperature range		–30 °C to +60 °C; –22 °F to +140 °F (Radio specifications)			
Dimensions (W × H × D; Projections not included)		56 × 91.5 × 29 mm; 2.2 × 3.6 × 1.1 in (With BP-290)			
Weight (approx.)		125 g; 4.4 oz (main unit)			
		230 g; 8.1 oz (BP-290, MBB-3)			
<b>TRANSMITTER</b>					
Output power (Hi, L2, L1)		5 W, 2 W, 1 W		5 W, 2 W, 1 W	
Frequency stability		±1.0 ppm		±1.0 ppm	
Spurious emissions		80 dB typ. (USA)		80 dB typ. (USA)	
FM Hum and noise		0.25 μW (≤ 1 GHz), 1.0 μW (> 1 GHz) (EUR)		0.25 μW (≤ 1 GHz), 1.0 μW (> 1 GHz) (EUR)	
Audio harmonic distortion		57 dB typ. (@25 kHz), 55 dB typ. (@12.5 kHz) (USA)		57 dB typ. (@25 kHz), 56 dB typ. (@12.5 kHz) (USA)	
FSK error		0.4% typ. (AF 1kHz 40% deviation)		0.4% typ. (AF 1kHz 40% deviation)	
		1% typ. (@DVN, DN)		1% typ. (@DVN, DN)	
<b>RECEIVER</b>					
Sensitivity	Analog (12 dB SINAD)	0.23 μV typ.		0.23 μV typ.	
	Analog (20 dB SINAD)	–4.0 dBμV emf typ. (@25 kHz), –1.4 dBμV emf typ. (@12.5 kHz)		–4.0 dBμV emf typ. (@25 kHz), –1.1 dBμV emf typ. (@12.5 kHz)	
Adjacent channel	Digital (1% BER)	–5.0 dBμV emf typ. (0.28 μV typ.) (@DVN), –3.0 dBμV emf typ. (0.35 μV typ.) (@DN)		–4.0 dBμV emf typ. (0.32 μV typ.) (@DVN), –3.0 dBμV emf typ. (0.35 μV typ.) (@DN)	
	Analog	79 dB typ. (@25/20 kHz), 77 dB typ. (@12.5 kHz)		76 dB typ. (@25/20 kHz), 73 dB typ. (@12.5 kHz)	
Spurious response rejection	Digital	70 dB typ. (@DVN), 72 dB typ. (@DN)		66 dB typ. (@DVN), 68 dB typ. (@DN)	
	Analog	76 dB typ.		78 dB typ.	
Intermodulation rejection	Analog	76 dB typ. (USA) 68 dB typ. (EUR)		74 dB typ. (USA) 68 dB typ. (EUR)	
	Digital	73 dBμV emf typ. (@DVN)/–40 dBm typ. (@DN)		73 dBμV emf typ. (@DVN)/–40 dBm typ. (@DN)	
Audio output power	Internal SP	800 mW typ. (at 5% distortion, 12 Ω load)			
	External SP	1000 mW typ. (at 5% distortion, 8 Ω load)			

Measurements made in accordance with TIA-603, EN300 086, EN301 166, EN300 113. All stated specifications are subject to change without notice or obligation.

\* 25 kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions.  
DVN: Digital Very Narrow (6.25 kHz), DN: Digital Narrow (12.5 kHz). DN is for NXDN version only.

**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	IP67/66/55/54

**Battery Life**

Battery pack	Type	Capacity	Operating time*
BP-290	Li-ion 7.2 V	2010 mAh (typ.), 1910mAh (min.)	13 hours (Approx.)

\* Tx: Rx: standby = 5:5:90 duty cycle. Power save function ON.

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

- Battery pack, BP-290
- Belt clip, MBB-3

■ BATTERY PACK & BATTERY CASE

**BP-290:** Rechargeable Li-ion battery with intelligent reporting. IP67 protection.  
**BP-291:** LR6 (AA) × 5 Battery case. IP54 protection.

■ BATTERY CHARGERS

**BC-226:** Connectable type charger (connects up to six BC-226 units). Charges the BP-290 in 2.7 hours.  
 + **BC-228:** AC adapter. One AC adapter is required for up to six charger units.  
**BC-225:** Intelligent charger. Shows the charging information with the LED lighting. Charges the BP-290 in 2.5 hours (approx.).  
 + **BC-123SA/SE/SV:** AC adapter.  
**RS-BC225:** Intelligent charger software for Windows® PC  
**BC-227:** Compact type desktop charger. Charges the BP-290 in 2.7 hours.  
 + **BC-123SA/SE/SV:** AC adapter.  
**BC-219N:** Desktop charger. Charges the BP-290 in 2.5 hours.  
 + **BC-123SA/SE/SV:** AC adapter.  
**BC-214:** Multi-charger. Charges up to six BP-290 batteries in 2.8 hours (approx.).  
 + **BC-157S:** AC adapter.  
 \* AD-132N charger adapter is supplied with the BC-214, depending on version.



■ POWER SUPPLY CABLES

**CP-23L:** Vehicle charger cable for use with the BC-219N, BC-225 or BC-227.  
**OPC-515L:** DC power cable for use with the BC-219N, BC-225 or BC-227.  
**OPC-656:** DC power cable for use with the BC-214.

■ SPEAKER-MICROPHONES AND EARPHONES

**HM-222:** Speaker microphone with 3.5 mm earphone jack. IP68 protection.  
**HM-233GP:** GPS speaker microphone. IP67 protection.  
**HM-163MC:** Tie-clip microphone with 2.5 mm earphone jack.  
**EH-15B:** Earphone with 2.5 mm plug for use with HM-163MC.  
**SP-26:** Tube earphone with 2.5 mm plug for use with HM-163MC.  
**SP-28:** Earhook type earphone with 2.5 mm plug for use with HM-163MC.  
**SP-32:** Tube earphone adapter for use with EH-15B.  
**SP-27:** Tube earphone with 3.5 mm plug. For use with HM-222 or AD-135.  
**SP-29:** Earhook type earphone with 3.5 mm plug. For use with HM-222 or AD-135.  
**SP-40:** Earphone with 3.5 mm plug. For use with HM-222 or AD-135.



■ HEADSETS & PTT SWITCH CABLE

**HS-94:** Earphone-headset (Use with VS-5MC)  
**HS-95:** Behind-the-head headset (Use with VS-5MC)  
**HS-97:** Throat microphone (Use with VS-5MC)  
**VS-3:** Bluetooth headset  
**VS-5MC:** PTT switch cable with VOX function. VS-5MC is required when using any of HS-94, HS-95 or HS-97



■ BELT CLIPS, BELT HANGERS AND CARRYING CASES

**MBB-3:** Alligator belt clip. Same as supplied.  
**MB-136:** Swivel belt clip.  
**MB-96N:** Swivel type leather belt hanger.  
**MB-96F:** Fixed type leather belt hanger. For use with the MBB-3.  
**MB-96FL:** Long fixed type leather belt hanger. For use with the MBB-3.  
**LC-187:** Hard type carrying case. Charging is possible while wearing the case.  
**LC-188:** Hard type carrying case.



■ OTHER OPTIONS AND CABLES

**AD-135:** 3.5 mm jack earphone adapter for use with any of SP-27, SP-29 or SP-40 earphone.  
**AD-118:** ACC adapter. For use with Hirose plug accessory.  
**OPC-2338:** Programming cable. USB-14-pin type.  
**OPC-1870:** Zone copy cable. Handheld to handheld type.

■ SOFTWARE AND ACTIVATION KEYS

**CS-OTPM1:** OTAP manager software  
**CS-F52D:** Programming software  
**ISL-UGMTR:** NXDN™ Type-D trunking upgrade key  
**ISL-UGMD3:** dPMR™ Mode 3 upgrade key  
**ISL-OTAPML:** OTAP manager license

■ ANTENNAS

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

■ STUBBY ANTENNAS

**FA-SC26VS:** 133–144 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

■ HIGH GAIN ANTENNAS

**FA-SC62V:** 150–160 MHz  
**FA-SC63V:** 155–165 MHz

■ CUT-TYPE ANTENNAS

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

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

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Icom Inc. 1-1-32, Kamiminami, Hirano-Ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013 [www.icom.co.jp/world](http://www.icom.co.jp/world) Count on us!

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 E-mail: [sales@icombrasil.com](mailto:sales@icombrasil.com)

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