

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



IC-F52D

IC-F62D

The IC-F52D series is a next generation IDAS™ handheld radio. It not only inherits technical design advantages from the IC-F3400D series, but also offers state-of-the-art improvements, while 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 for simple 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

### General Features

- 136–174, 350–400, 400–470, 450–512, 450–520 MHz versions
- 512 Channels / 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 and buttons
- Continuous rotary knob and ON/OFF volume knob
- 1300 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)
- Battery information display
- 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. Not available in all regions.
- 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\*  
\* Optional OTAP manager (CS-OTPM1) 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)
- 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



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

### Analog Functions

- CTCSS and DTCS tone
- 2-Tone and 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 reconfigures user talkgroups
- 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 mode)

### Hardware Features

- 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®
- Optional BC-225 intelligent charger and RS-BC225 reader software for BC-225 for battery life cycle management.

		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, 450–512, 450–520 MHz	400–470 MHz
Number of channels		512 channels /128 zones			
Type of emission* (* Depending on version)		16K0F3E**1, 14K0F3E, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D	16K0F3E**1, 14K0F3E, 8K50F3E, 4K00F1E/D	16K0F3E**1, 14K0F3E, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D	16K0F3E**1, 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)		600 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 typical. (USA)		80 dB typical. (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 typical. (@25 kHz), 55 dB typical. (@12.5 kHz) (USA)		57 dB typical. (@25 kHz), 56 dB typical. (@12.5 kHz) (USA)	
FSK error		0.4% typical. (AF 1 kHz 40% deviation)		0.4% typical. (AF 1 kHz 40% deviation)	
		1% typical. (@DVN/DN)		1% typical. (@DVN/DN)	
<b>RECEIVER</b>					
Sensitivity	Analog (12 dB SINAD)	0.23 μV typical.		0.23 μV typical.	
	Analog (20 dB SINAD)	–4.0 dBμV emf typical. (@25/20 kHz), –1.4 dBμV emf typical. (@12.5 kHz)		–4.0 dBμV emf typical. (@25/20 kHz), –1.1 dBμV emf typical. (@12.5 kHz)	
Adjacent channel selectivity	Digital (1% BER)	–5.0 dBμV emf typical. (0.28 μV typical.) (@DVN), –3.0 dBμV emf typical. (0.35 μV typical.) (@DN)		–4.0 dBμV emf typical. (0.32 μV typical.) (@DVN), –3.0 dBμV emf typical. (0.35 μV typical.) (@DN)	
		79 dB typical. (@25/20 kHz), 77 dB typical. (@12.5 kHz)		76 dB typical. (@25/20 kHz), 73 dB typical. (@12.5 kHz)	
Spurious response rejection		70 dB typical. (@DVN), 72 dB typical. (@DN)		66 dB typical. (@DVN), 68 dB typical. (@DN)	
Intermodulation rejection	Analog	76 dB typical. (USA) 68 dB typical. (EUR)		74 dB typical. (USA) 68 dB typical. (EUR)	
	Digital	73 dBμV emf typical. (@DVN), –40 dBm typical. (@DN)		73 dBμV emf typical. (@DVN), –40 dBm typical. (@DN)	
Audio output power	Internal SP External SP	1300 mW typical. (at 5% distortion, 8 Ω load) 1000 mW typical. (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.

\*\* 15 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.), 1910 mAh (min.)	13 hours (Approx.)
BP-294	Li-ion 7.2 V	3150 mAh (typ.), 3050 mAh (min.)	18.5 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

## OPTIONAL ACCESSORIES

# IC-F52D • IC-F62D

### BATTERY PACK AND BATTERY CASE

**BP-290:** Rechargeable Li-ion 7.2 V/1910 mAh (min.), 2010 mAh (typ.). IP67 protection.  
**BP-294:** Rechargeable Li-ion 7.2 V/3050 mAh (min.), 3150 mAh (typ.). 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.



BC-228 BC-226 BC-123S BC-225 BC-219N BC-214 BC-157S

### POWER SUPPLY CABLES

**CP-23L:** Vehicle charger cable for use with the BC-219N 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.



HM-222 HM-233GP HM-163MC EH-15B SP-26 SP-28



SP-32 SP-27 SP-29 SP-40 AD-135

### HEADSETS AND 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.



HS-94 HS-95 HS-97 VS-3 VS-5MC

### 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 for BP-290. Charging is possible while the case is attached.

**LC-190:** Hard type carrying case for BP-294. Charging is possible while the case is attached.

**LC-188:** Hard type carrying case for BP-290.



LC-187 LC-190 LC-188

### OTHER OPTIONS AND CABLES

**AD-135:** 3.5 mm earphone jack 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 trunking upgrade key.

### 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:** 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

### 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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