ICOM

IC-F52D
IC-F62D

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

IDAS™   ICOM DIGITAL ADVANCED SYSTEM   NXDN™   dPMR digital™

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 sefety

- 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
GENERAL				
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			
Current drain (approx.) — 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)			
TRANSMITTER				
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) 0.25 µW (≤ 1 GHz), 1.0 µW (> 1 GHz) (EUR)		80 dB typ. (USA) 0.25 µW (≤ 1 GHz), 1.0 µW (> 1 GHz) (EUR)	
FM Hum and noise	57 dB typ. (@25 kHz), 55 dB typ. (@12.5 kHz) (USA)		57 dB typ. (@25 kHz), 56 dB typ. (@12.5 kHz) (USA)	
Audio harmonic distortion	0.4% typ. (AF 1kHz 40% deviation)		0.4% typ. (AF 1kHz 40% deviation)	
FSK error	1% typ. (@DVN, DN)		1% typ. (@DVN, DN)	
RECEIVER				
Sensitivity — Analog (12 dB SINAD)	0.23 µV typ.		0.23 µV typ.	
Sensitivity — 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)	
Sensitivity — 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)	
Adjacent channel — 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)	
Adjacent channel — Digital	70 dB typ. (@DVN), 72 dB typ. (@DN)		66 dB typ. (@DVN), 68 dB typ. (@DN)	
Spurious response rejection	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)	
Intermodulation rejection — Digital	73 dBµV emf typ. (@DVN)/−40 dBm typ. (@DN)		73 dBµV emf typ. (@DVN)/−40 dBm typ. (@DN)	
Audio output power — Internal SP / External SP	800 mW typ. (at 5% distortion, 12 Ω load) 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.

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, 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.

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

SP-32   SP-27   SP-29   SP-40   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

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. Charging is possible while wearing the case.
LC-188: Hard type carrying case.

LC-187   LC-188

■ 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.