



VHF AND UHF DIGITAL/ANALOGUE TRANSCEIVERS

IC-F3102D **IC-F4102D**

VHF transceiver

UHF transceiver

**Everything you expect in a business radio
... Plus Digital!**

iDASTM
ICOM DIGITAL ADVANCED SYSTEM

dPMRTM Mode 1/2 Conventional Mode

Digital/Analogue Mixed Mode Operation

Superb Digital Audio Clarity

Digital Voice Scrambler

**Built-in 2-Tone, 5-Tone,
CTCSS and DTCS (Analogue Mode)**

800mW (typ.) Loud and Intelligible Audio

IP54 and MIL-STD-810 F Rugged Construction

Long Lasting Battery Life

Channel Announcement

5W (VHF), 4W(UHF) RF Output Power

16 Channels

dPMRTM
igital



IP54



More than Just Smooth Digital Migration!

Non-slip, Large PTT



The large PTT button is designed to provide non-slip, confident-click, even wearing gloves.

800mW Loud Audio



The large 45mm speaker delivers up to 800mW* of loud audio! Digital modulation adds distinct clarity to received voices.

* Typical with internal speaker.

Long Lasting Battery Life

Battery pack	Type and capacity	Operating time* (Approx.)
BP-264	Ni-MH 7.2V 1400mAh	12 hours
BP-265	Li-Ion 7.4V 1900mAh (min.) 2000mAh (typ.)	17.5 hours

* Digital mode, Tx: Rx: Standby=5:5:90. Power save function ON.

Channel Announcement

When you rotate the channel knob, the radio announces the channel number. Convenient for making radio adjustments without having to look at the radio.



Bright 3-Color LED

The bright LED shows the operating status: red for transmit, green for listening, or orange for low battery, etc.

Hands-free Operation

Optional headset with plug adapter cable OPC-2004 provides hands-free operation.



Built Military Rugged!

Okay to use in the rain! Tested to IP54 and 11 categories of MIL STD-810 F environmental tests.

Compact and Light Weight

58x111.5x36.5mm
320g/310g with BP-265. (VHF/UHF)

dPMR™ Mode 1/2 Operation

The IC-F3102D series provides basic operation in dPMR Mode 1, 2 conventional mode. It is also compatible with Mode 2 multi-site system. The following dPMR features are programmable.

- PTT ID (TX) • Individual/Group call
- CC (Channel Code)
- Power ON/OFF status call (TX)
- GPS request status call (RX)
- Stun/kill/revive (RX) • Ambience listening (RX)
- Enhanced emergency • Lone worker
- Digital voice scrambler
- GPS (TX only with HM-171GP)

TX: Transmit, RX: Receive

Voting Scan

The voting scan detects the signal strength of the repeater sites and automatically selects the strongest station. This function is useful for roaming between multiple repeater sites. Scan setting can be assigned to the channel knob. (It is recommended to test the voting performance during installation.)

Built-in 2-Tone and 5-Tone (Analogue Mode)

2-Tone and 5-Tone signalings give you selective calling, quiet stand-by and other convenient functions. The radio stun and kill functions disable a radio over the air and the revive function restores the stunned radio.

Other Features (* = analogue only)

- CTCSS/DTCS encoder/decoder*
- BIIS PTT ID transmission*
- DTMF autodial • Low battery alert
- 2-step power save • PC programmable
- Time out timer • Talk around function
- Lone worker function
- Surveillance function
- Forced narrow function*
- Escalating alarm

VHF & UHF DIGITAL/ANALOGUE TRANSCEIVERS

IC-F3102D

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The IC-F3102D: A multitude of advantages because it's IDAS™

Advantage 1

Individual/group Call

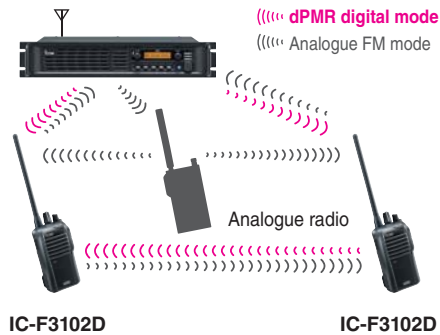
Analogue/Digital



This is a simple and basic setting for those who use the radio mainly for individual and group call. Use the 16-position rotary channel knob to select the appropriate individual or group call. This setting also can be used with analogue 2-tone or 5-tone signalling.

Advantage 2

Digital/Analogue Mixed mode



The IC-F3102D series can receive both analogue and digital mode signals on a single channel and automatically selects the received mode to reply to the received call. It's a smart way to grow into digital radio - at your own pace, as your budget and comfort allow.

Advantage 3

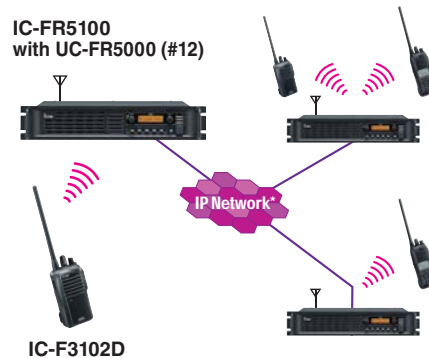
Perfect Group Communication Tool, Large or Small



Mix the basic IC-F3102D series with the advanced IC-F3262D series for efficient group managed systems. Commands like radio stun, kill and revive as well as the caller ID of the IC-F3102D displayed on the administrator's radio provide efficient communication within the group.

Advantage 4

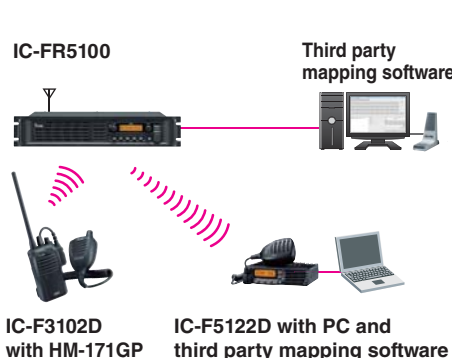
Multi-site System



When using the IC-F3102D series in dPMR Mode 2 multi-site system, the IC-F3102D can communicate with other dPMR radio users working with other repeater sites on the network.

Advantage 5

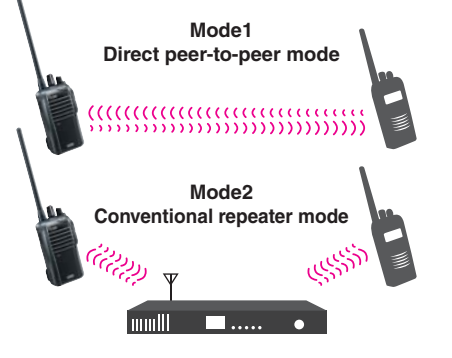
GPS Capability



When used with the optional GPS speaker-microphone, HM-171GP, the IC-F3102D series can transmit accurate position data to other advanced dPMR radios and/or connected PC for use with vehicle management applications.

Advantage 6

Interoperability



The IC-F3102D series complies with the dPMR standard (TS 102 658) for Mode 1 / Mode 2. This means the radio is capable of working with other manufactures' radio or on dPMR systems where the same features have been implemented, and allows users to have a choice of vendors and equipment in the future.

All advantages shown represent possible system configurations. Ask your Icom dealer to configure an IDAS system that works best for you.

*Note: Private IP Network or VPN Tunnels through the Internet with static endpoints.

SPECIFICATIONS

	IC-F3102D	IC-F4102D
GENERAL		
Frequency coverage	136–174MHz	400–470MHz
Number of channels	16 channels	
Type of emission	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/F1D	
Channel spacing	6.25/12.5/20/25kHz	
Power supply requirement	7.5V DC nominal	
Current drain (approx.)		
Tx High	1.3A	1.3A
Rx Max. audio	400mA (Internal SP)	400mA (Internal SP)
Standby	90mA (Digital mode)	100mA (Digital mode)
Antenna impedance	50Ω	
Operating temperature range	–25°C to +55°C (Radio only)	
Dimensions (W×H×D) (Projections not included)	58×111.5×36.5mm (With BP-265)	
Weight (approx.)	150g (Radio only) 320g (With MB-124, BP-265 & Ant.)	150g (Radio only) 310g (With MB-124, BP-265 & Ant.)
TRANSMITTER		
Output power (at 7.2V DC)	5W, 2W, 1W (Hi, L2, L1)	4W, 2W, 1W (Hi, L2, L1)
Max. frequency deviation	± 5.0kHz/±4.0kHz/±2.5kHz (Wide/Middle/Narrow)	
Frequency stability	±1.0ppm	
Spurious emissions	0.25μW (≤ 1GHz) 1.0μW (> 1GHz)	
Residual modulations	56/54/50dB typ. (W/M/N)	56/55/51dB typ. (W/M/N)
Audio harmonic distortion	1.0% typ. (AF 1kHz 40% deviation)	
FSK error	5.0% max.	
Ext. microphone connector	3-conductor 2.5 (d) mm (1/16")/2.2kΩ	
RECEIVER		
Sensitivity (at 20dB SINAD) (at 5% BER)	–4dBμV typ. emf –8dBμV typ. emf	
Adjacent channel selectivity	77/74/71dB typ. (W/M/N)	74/72/67dB typ. (W/M/N)
Spurious response rejection	91dB typ.	80dB typ.
Intermodulation rejection	67dB typ.	
Hum and noise (With CCITT filter)	53/51/48dB typ. (W/M/N)	53/51/47dB typ. (W/M/N)
Audio output power		
Internal SP (With 12Ω load)	800mW typ. (at 5% distortion)	
External SP (With 8Ω load)	400mW typ. (at 5% distortion)	
Ext. speaker connector	2-conductor 3.5 (d) mm (1/8")/8Ω	

Measurements made in accordance with EN 300-086, EN 301-166.

All stated specifications are subject to change without notice or obligation.

Applicable U.S. Military Specifications & IP Rating

Standard	MIL 810F	
	Method	Procedure
Low Pressure	500.4	I, II
High Temperature	501.4	I, II
Low Temperature	502.4	I, II
Temperature Shock	503.4	I
Solar Radiation	505.4	I
Rain Blowing/Drip	506.4	I, III
Humidity	507.4	–
Salt Fog	509.4	–
Dust Blowing	510.4	I
Vibration	514.5	I
Shock	516.5	I, IV

Also meets equivalent MIL-STD-810-C, -D and -E.

Ingress Protection Standard

Dust & Water	IP54 (Dust-protection and water resistant)
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OPTIONS

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

BATTERY PACKS AND CASE



Battery packs	Type and capacity	Operating time* (Approx.)
BP-263	AA (LR6) batteries × 6	–
BP-264	Ni-MH, 7.2V 1400mAh	12 hours
BP-265	Li-Ion, 7.4V 1900mAh (min.) 2000mAh (typ.)	17.5 hours

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

REGULAR CHARGER

For BP-264 (Ni-MH battery)



Charges the BP-264 in 16 hours (approx.).

RAPID CHARGERS

For BP-264 (Ni-MH battery)



Charges the BP-264 in 2 hours (approx.).

RAPID CHARGERS

For BP-265 (Li-Ion battery)



Charges the BP-265 in 2.5 hours (approx.).

MULTI-CHARGER

For BP-264/BP-265



Charges the BP-264 in 16 hours (approx.).

CIGARETTE LIGHTER CABLE & POWER SUPPLY CABLES



CP-23L For use with BC-191 or BC-193
OPC-515L For use with BC-191, BC-192 or BC-193
OPC-656 For use with BC-197

SPEAKER-MICROPHONES



HM-171GP GPS Microphone
HM-158LA
HM-159LA

TUBE EARPHONE



SP-27

CHARGER BRACKET



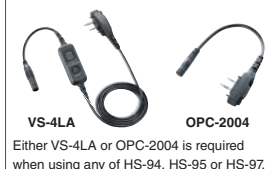
MB-130 For use with BC-191, BC-192 or BC-193

HEADSETS



HS-94 Earhook type
HS-95 Behind-the-head type
HS-97 Throat type

PTT SWITCH CABLE and PLUG ADAPTER CABLE



VS-4LA
OPC-2004
Either VS-4LA or OPC-2004 is required when using any of HS-94, HS-95 or HS-97.

STUBBY ANTENNAS

- 60–80 mm antennas.
- FA-SC56VS : 150–162MHz
- FA-SC57VS : 160–174MHz
- FA-SC73US : 450–490MHz

HIGH GAIN ANTENNAS

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

STANDARD ANTENNAS

- FA-SC25V : 136–150MHz
- FA-SC55V : 150–174MHz
- FA-SC25U : 400–430MHz
- FA-SC57U : 430–470MHz

CUT ANTENNAS

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

CHARGER ADAPTERS

- AD-120 for BP-264
 - AD-121 for BP-265
- Either AD-120 or AD-121 charger adapters are supplied with the BC-197, depending on BC-197's version.

BELT CLIP

- MB-124 Alligator type
- Same as supplied.

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