



VHF AND UHF DIGITAL/ANALOGUE TRANSCEIVERS

**IC-F3102D** **IC-F4102D**

VHF transceiver

UHF transceiver

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

**IDAS™**  
ICOM DIGITAL ADVANCED SYSTEM

**IDAS™ conventional & IDAS™ single-site trunking**

**Digital/Analogue mixed mode operation**

**Superb digital audio clarity**

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

**MDC PTT ID & MDC emergency call (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**



Limited functions.

# 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

\* Conventional 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)

## IDAS™ digital mode operation

The IC-F3102D series provides basic operation in NXDN™ CAI-based IDAS digital mode. It is also compatible with IDAS multi-site conventional and IDAS single-site trunking. The following IDAS features are programmable.

- PTT ID (TX)
- Individual/Group call (TX)
- Block decode
- RAN (Radio Access Number)
- Radio check (RX)
- Stun/kill/revive (RX)
- Call alert (RX)
- Remote monitor (RX)
- Emergency (TX)
- Digital voice scrambler
- GPS (TX only with HM-171GP)

TX: Transmit, RX: Receive

## 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.

## Scan features

The priority scan allows you to monitor one or two priority channels while scanning other non-priority channels. The transmit channel and talk back functions allow you to make a quick response while scanning.

## Other features (\* = analogue only)

- CTCSS/DTCS encoder/decoder\*
- BIIS PTT ID transmission\*
- MDC PTT ID and emergency\*
- 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\*

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# IC-F3102D

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

## Advantage 1

### Individual/group call

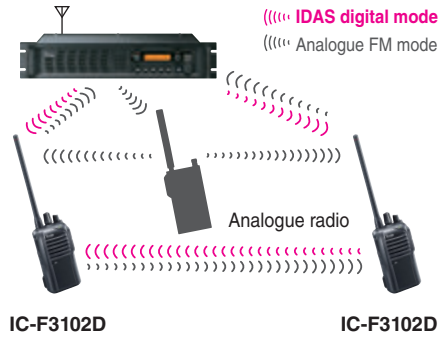
Analogue/Digital



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, while the talk back timer remains. It's a smart way to grow into digital radio - at your own pace, as your budget and comfort allow.

## Advantage 3

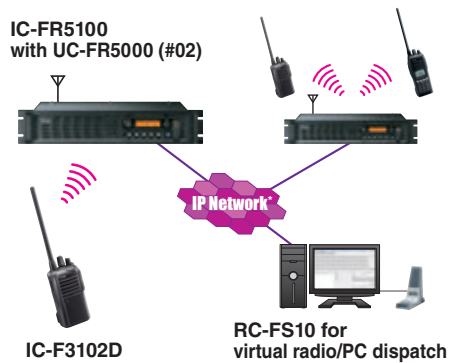
### Perfect group communication tool, large or small



Mix the basic IC-F3102D series with the advanced IC-F3162D series (NXDN™ CAI-based) 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

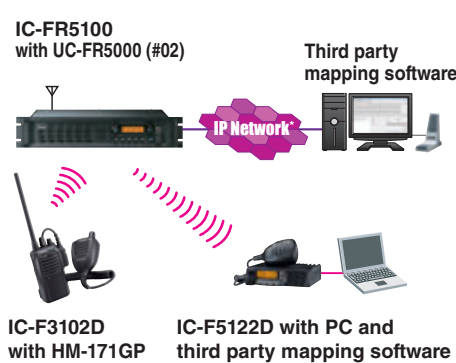
### Multi-site conventional mode



When using the IC-F3102D series in IDAS multi-site conventional mode, the IC-F3102D can communicate with other IDAS radio users working with other repeater sites and/or virtual radio/PC dispatch stations on the IDAS 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 IDAS radios and/or connected PC for use with vehicle management applications.

## Advantage 6

### IDAS single-site trunking



The IC-F3102D series can be used in an IDAS single-site trunking system. The IDAS trunking system is a distributed system with no dedicated control channel, so more voice traffic channels are available for increased system capacity.

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
<b>GENERAL</b>		
Frequency coverage	136–174MHz	400–470MHz
Number of channels	16 channels	
Type of emission	16K0F3E, 14K0F3E, 8K50F3E, 4K00F1E/F1D	
Channel spacing	6.25/12.5/20kHz, 6.25/12.5/25kHz	
PLL channel step	2.5/3.125kHz	
Power supply requirement	7.5V DC nominal	
Current drain (approx.)		
Tx High	1.3A	1.3A
Rx Max. audio Standby	400mA (Internal SP) 90mA (Digital mode)	400mA (Internal SP) 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.)
<b>TRANSMITTER</b>		
Output power (at 7.5V DC)	5W, 2W, 1W (Hi, L2, L1)	4W, 2W, 1W (Hi, L2, L1)
Max. frequency deviation	±5.0kHz/±4.0kHz/±2.5kHz (W/M/N)	
Frequency stability	±1.0ppm	
Spurious emissions	0.25µV (≤1GHz) 1.0µV (>1GHz)	
Residual modulation	45/43/40dB min. (W/M/N)	
Audio harmonic distortion (AF 1kHz 40% deviation)	1% typ.	
FSK error	5% max.	
Ext. microphone connector	3-conductor 2.5 (d) mm (1/16")/2.2kΩ	
<b>RECEIVER</b>		
Sensitivity (at 20dB SINAD) (at 5% BER)	–4dBµV typ. (emf) –8dBµV typ. (emf)	–4dBµV typ. (emf) –8dBµV typ. (emf)
Adjacent channel selectivity	70/70/60dB min. (W/M/N)	
Spurious response rejection	91dB typ.	80dB typ.
Intermodulation rejection	65dB min.	
Hum and noise	45/43/40dB min. (W/M/N)	
Audio output power (at 5% distortion)		
Internal SP (With 12Ω load)	800mW typ.	
External SP (With 8Ω load)	400mW typ.	
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)

## OPTIONS

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

**Battery packs and case**

**BP-263**  
Battery case  
6 × AA (LR6)

**BP-264**  
1400mAh  
Ni-MH battery

**BP-265**  
2000mAh (typ.)  
Li-Ion battery  
1900mAh (min.)

**2-hour/2.5-hour rapid chargers**

**BC-191**  
for BP-264  
Ni-MH battery

**BC-193**  
for BP-265  
Li-Ion battery

**BC-123S<sup>1</sup>**  
for use with BC-191  
or BC-192

**16-hour regular charger for BP-264 (Ni-MH battery)**

**BC-147S<sup>1</sup>**      **BC-192**

**6 unit multi-charger for BP-264/BP-265**

**BC-157S**  
**BC-197**

<sup>1</sup> BC-123SA/BC-147SA for 120V AC. SE for 230V AC. SV for 240V AC.

**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-158L**      **HM-159L**

**Headsets & plug adapter cable**

**HS-94**  
Earhook type

**HS-95**  
Behind-the-head type

**HS-97**  
Throat type

**OPC-2004**  
Required when using any of these headsets

**Tube earphone**

**SP-27**

**STUBBY ANTENNAS**  
60–80 mm antennas.

- **FA-SC56VS** : 150–162MHz
- **FA-SC57VS** : 160–174MHz
- **FA-SC73US** : 450–490MHz

**CUT ANTENNAS**

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

**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

**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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## Icom Inc.

1-1-32, Kami-minami, 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!

### Icom America Inc.

2380 116th Avenue NE,  
Bellevue, WA 98004, U.S.A.  
Phone : +1 (425) 454-8155  
Fax : +1 (425) 454-1509  
E-mail : [sales@icomamerica.com](mailto:sales@icomamerica.com)  
URL : <http://www.icomamerica.com>

### Icom New Zealand

146A Harris Road, East Tamaki,  
Auckland, New Zealand  
Phone : +64 (09) 274 4062  
Fax : +64 (09) 274 4708  
E-mail : [inquiries@icom.co.nz](mailto:inquiries@icom.co.nz)  
URL : <http://www.icom.co.nz>

### Icom (UK) Ltd.

Blacksloe House, Altira Park,  
Herne Bay, Kent, CT6 6GZ, U.K.  
Phone : +44 (01227) 741741  
Fax : +44 (01227) 741742  
E-mail : [info@icomuk.co.uk](mailto:info@icomuk.co.uk)  
URL : <http://www.icomuk.co.uk>

### Asia Icom Inc.

6F No. 68, Sec. 1 Cheng-Teh Road,  
Taipei, Taiwan, R.O.C.  
Phone : +886 (02) 2559 1899  
Fax : +886 (02) 2559 1874  
E-mail : [sales@asia-icom.com](mailto:sales@asia-icom.com)  
URL : <http://www.asia-icom.com>

### Icom Canada

Glenwood Centre #150-6165 Highway 17,  
Delta, B.C., V4K 5B8, Canada  
Phone : +1 (604) 952-4266  
Fax : +1 (604) 952-0090  
E-mail : [info@icomcanada.com](mailto:info@icomcanada.com)  
URL : <http://www.icomcanada.com>

### Icom (Europe) GmbH

Communication Equipment  
Auf der Krautweide 24  
65812 Bad Soden am Taunus, Germany  
Phone : +49 (6196) 76685-0  
Fax : +49 (6196) 76685-50  
E-mail : [info@icom-europe.com](mailto:info@icom-europe.com)  
URL : <http://www.icomeurope.com>

### Icom France s.a.s.

Zac de la Plaine,  
1 Rue Brindejonc des Moulinaux, BP 45804,  
31505 Toulouse Cedex 5, France  
Phone : +33 (5) 61 36 03 03  
Fax : +33 (5) 61 36 03 00  
E-mail : [icom@icom-france.com](mailto:icom@icom-france.com)  
URL : <http://www.icom-france.com>

### Beijing Icom Ltd.

10C07, Long Silver Mansion, No.88, Yong Ding  
Road, Haidian District, Beijing, 100039, China  
Phone : +86 (010) 5889 5391/5392/5393  
Fax : +86 (010) 5889 5395  
E-mail : [bjicom@bjicom.com](mailto:bjicom@bjicom.com)  
URL : <http://www.bjicom.com>

### Icom (Australia) Pty. Ltd.

Unit 1 / 103 Garden Road,  
Clayton, VIC 3168 Australia  
Phone : +61 (03) 9549 7500  
Fax : +61 (03) 9549 7505  
E-mail : [sales@icom.net.au](mailto:sales@icom.net.au)  
URL : <http://www.icom.net.au>

### Icom Spain S.L.

Ctra. Rubi, No. 88 "Edificio Can Castanyer"  
Bajos A 08174, Sant Cugat del Valles,  
Barcelona, Spain  
Phone : +34 (93) 590 26 70  
Fax : +34 (93) 589 04 46  
E-mail : [icom@icomspain.com](mailto:icom@icomspain.com)  
URL : <http://www.icomspain.com>

### Icom Polska

81-850 Sopot, ul. 3 Maja 54, Poland  
Phone : +48 (58) 550 7135  
Fax : +48 (58) 551 0484  
E-mail : [icompolkska@icompolkska.com.pl](mailto:icompolkska@icompolkska.com.pl)  
URL : <http://www.icompolkska.com.pl>



0845 600 4 900

[www.ninehundred.co.uk](http://www.ninehundred.co.uk)  
[sales@ninehundred.co.uk](mailto:sales@ninehundred.co.uk)