



IC-F3600D Series
IC-F4600D Series

VHF AND UHF DIGITAL TRANSCEIVERS

Future-proof Your Professional Communication System



Advanced IDAS™ Digital/Analog Transceiver with Multiple Operating Modes

Rugged Design and Easy Operation Even with Gloves

1.8" Color Display Provides Clear Visibility in Any Condition

Multilingual Display Support for Global Deployment

IP68 Waterproof and MIL-STD-810G for Reliable Performance in Harsh Environments

Up to 45% Faster Charging with USB Type-C™*

* Compared to standard charging. Requires 30 W or higher USB PD charger and cable.

Optional High-Capacity Li-ion Battery Pack (4810 mAh typ.) for Extended Operation

Bluetooth® Classic & LE Capabilities for Hands-Free Communication and Indoor Positioning

AES/DES Encryption* for Secure Communications

* AES encryption requires an optional activation key.

Voice Recording (microSD Card Required)



IC-F4600DT

IC-F3600DS

IDAS™
ICOM DIGITAL ADVANCED SYSTEM

NXDN™

General Features

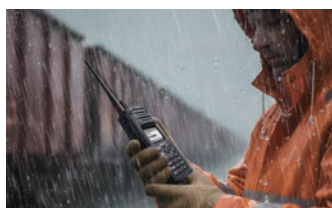
- 136 – 174, 350 – 400, 400 – 520 MHz versions
- RF output power: 7 W (150 – 162 MHz, USA version), 5 W (all other frequencies and versions)
- 1024 Channels / 128 Zones
- High-resolution transreflective color LCD
- Day and night mode display settings
- Display language available in English, French, German, Spanish, Russian, Turkish, Chinese (Simplified and Traditional), and Arabic



- Large buttons and knobs provide confident use even when wearing gloves
- Continuous rotary knob and ON/OFF volume knob
- Quick lever switch on the top panel programmable for various functions such as lock, scrambler/encryption, etc.
- MIL-STD-810 G shock, vibration, temperature and more
- IP68 waterproof (1 m depth water for 1 hour) and dust-tight protection
- Optional BP-316 high-capacity Lithium-Ion battery
- Battery information display



Glove-friendly Operation



IP68 Waterproof and Dust-tight

Operating Mode

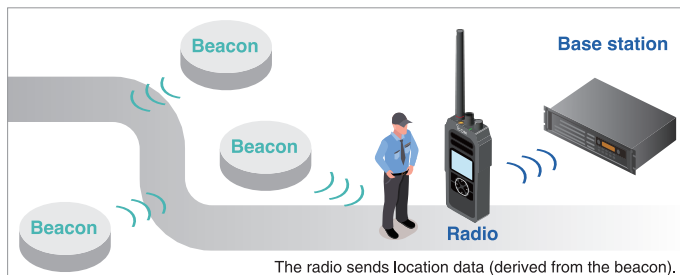
- NXDN™ conventional and multi-site connectivity over IP network
- NXDN™ Type-D single/multi-site trunking*
* License key (ISL-UGMTR) required.
- Very narrow (6.25 kHz) and narrow (12.5 kHz) NXDN™ digital modes
- Analog mode
- Analog/digital mixed operation (conventional mode)

IDAS™ Digital Functions (Voice and Data)

- Over-the-Air Programming (OTAP) function allows remote configuration updates*
* Optional OTAP manager (CS-OTPM1) required.
- Over-the-Air Alias (OAA) sends user name with calls for automatic contact updates
- Over-the-Air Update (OTAU) automatically updates repeater settings without manual reprogramming(NXDN™ Type-D trunking)
- Individual, group and all call
- Late entry for group call
- Status call and polling
- Call alert
- Short data messages (up to 100 characters)
- GNSS/Beacon data can be transmitted with voice call or status call

Advanced Connectivity Features

- Bluetooth® capabilities for wireless audio and data
- Works with 3M™ Peltor™ WS™ 5 series Bluetooth® headsets (PTT operation checked by Icom)
- Bluetooth® LE (Low Energy) functionality provides beacon reception for indoor positioning in areas without GNSS signals*
* Indoor Mapping App is planned for a future release.
The PC control commands may be disclosed upon request, subject to approval.



- USB Type-C™ for ultra-fast charging performance equivalent to USB PD, reducing charging time by up to 45%*
Charging Time (approx.): BP-303N: 2.5 hours, BP-316: 3.5 hours (with USB PD charger)
* Compared to standard charging. Commercially available 30 W or higher USB PD charger and cable required.
- Integrated GNSS receiver compatible with GPS, GLONASS, Galileo, BDS, and QZSS
- microSD card slot

Note: Compatibility with all third-party Bluetooth® devices is not guaranteed.

Security and Safety

- 4-key DES encryption: standard
- 64-key DES encryption: requires CS-KLD2 key loader software
- AES encryption: requires CS-KLD2 key loader software and ISL-AKAES license key
- Digital voice scrambler (low level encryption)
- Analog voice scrambler (inversion)
- Power ON password
- Tactical group temporarily reconfigures user talkgroups
- Remote Kill, Stun and Revive
- Remote monitor
- Emergency key for emergency call
- Emergency detection functions: Man down, Lone worker and Motion/stationary detection functions

Voice and Audio Functions

- 1300 mW high-power audio from Icom custom speaker
- Active Noise Canceling function
- Voice Recording function captures incoming and outgoing calls for later review, storing up to 500 hours with a 32 GB microSD card*. Embedded data includes user IDs, GNSS/Beacon, frequency, AF volume, RSSI in the WAV file, depending on settings.
* A microSD card is required separately.
- TX/RX audio equalizer (Flat, high/mid/low boost, low cut)
- Audio compander (Analog mode)
- Voice announcement (channel number and zone), customizable with user-defined audio files stored on SD card
- VOX function for hands-free operation
- Vibration alert and ringer beep programmable

SPECIFICATIONS

GENERAL		IC-F3600DT/DS		IC-F4600DT/DS	
Frequency coverage (Depending on the version)		136 – 174 MHz		400 – 520 MHz	350 – 400 MHz
Number of channels		1024 channels /128 zones			
Type of emission (Depending on the version)	Analog	16K0F3E*, 14K0F3E (EUR), 11K0F3E (USA), 8K50F3E (Except USA)			16K0F3E, 8K50F3E
	Digital	8K30F1E/D (DN), 4K00F1E/D (DVN)			
Power supply requirement		7.5 V DC nominal			
Current drain (approx.)	Tx	1.5 A (5 W) 1.9 A (7 W, 150 – 162 MHz)		1.7 A (5 W)	
	Rx	620 mA/160 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)		55.4 × 138.0 × 38.1 mm; 2.2 × 5.4 × 1.5 in (with BP-303N)			
Weight (approx.)		219 g; 7.7 oz (main unit)			
		350 g; 12.3 oz (with BP-303N, MB-133 and FA-S81VS)	350 g; 12.3 oz (with BP-303N, MB-133 and FA-S81US)		
TRANSMITTER					
Output power (Hi, L2, L1)	EUR/AUS Versions	5 W, 2 W, 1 W		5 W, 2 W, 1 W	
	USA Version	7 W, 2 W, 1 W (150 – 162 MHz) 5 W, 2 W, 1 W (136 – 149.999, 162.001 – 174 MHz)			
Frequency stability		±1.0 ppm			
Maximum permissible deviation		±5.0 kHz (W), ±4.0 kHz (M), ±2.5 kHz (N)			
Spurious emissions		84 dB typ. (USA)		80 dB typ. (USA)	82 dB typ.
		0.02 μW typ. (≤ 1 GHz), 0.004 μW typ. (> 1 GHz) (EUR/AUS)		0.03 μW typ. (≤ 1 GHz), 0.006 μW typ. (> 1 GHz) (EUR/AUS)	
Adjacent channel power	Digital	64/67 dB typ. (DN/DVN)		64/66 dB typ. (DN/DVN)	
	Analog	86/83 dB typ. (W/N, USA), 86/84/70 dB typ. (W/M/N, EUR/AUS)		77/63 dB typ. (W/N, USA), 77/77/69 dB typ. (W/M/N, EUR/AUS)	79/62 dB typ. (W/N)
FM Hum and noise (without CCITT filter)		63/63 dB typ. (W/N, USA), 65/64/64 dB typ. (W/M/N, EUR/AUS)		68/63 dB typ. (W/N, USA), 65/65/70 dB typ. (W/M/N, EUR/AUS)	64/66 dB typ. (W/N)
Audio harmonic distortion		0.4% typ. (AF 1 kHz 40% deviation)			
FSK error		1% typ. (DVN/DN)			
RECEIVER					
Sensitivity	Digital (1% BER)	–5.7 dBμV emf typ. (DVN), –117 dBm typ. (DN)			–6.8 dBV emf typ. (DVN), –118 dBm typ. (DN)
	Analog (12 dB SINAD)	–121 dBm typ. (W/N, USA)			–121/–122 dBm typ. (W/N)
	Analog (20 dB SINAD)	–5.8/–5.7/–5.7 dBμV emf typ. (W/M/N, EUR/AUS)		–5.8/–5.7/–2.9 dBμV emf typ. (W/M/N, EUR/AUS)	
Adjacent channel selectivity	Digital	72 dB typ. (DVN), –34 dBm typ. (DN)		65 dB typ. (DVN), –41 dBm typ. (DN)	68 dB typ. (DVN), –38 dBm typ. (DN)
	Analog	80/58 dB typ. (W/N, USA), 80/79/78 dB typ. (W/M/N, EUR/AUS)		74/58 dB typ. (W/N, USA), 74/73/72 dB typ. (W/M/N, EUR/AUS)	76/59 dB typ. (W/N)
Spurious response rejection		82 dB typ. (USA), 82 dB typ. (EUR/AUS)		86 dB typ. (USA), 88 dB typ. (EUR/AUS)	80 dB typ.
Hum and noise	Without CCITT filter	55/49 dB typ. (W/N, USA)			
	With CCITT filter	56/55/54 dB typ. (W/M/N, EUR/AUS)		57/55/49 dB typ. (W/M/N, EUR/AUS)	
Intermodulation	Digital	74 dBμV emf. typ. (DVN), –40 dBm typ. (DN)		74 dBμV emf. typ. (DVN), –39 dBm typ. (DN)	
	Analog	78 dB typ. (USA), 72 dB typ. (EUR/AUS)		78 dB typ. (USA), 71 dB typ. (EUR/AUS)	76 dB typ.
Audio output power	Internal SP	1300 mW typical (at 5% distortion, 8 Ω load)			
	External SP	1300 mW typical (with HM-222H at 5% distortion) 1000 mW typical (at 5% distortion, 8 Ω load)			

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

Applicable U.S. Military Specifications

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	IP68 (Dust-tight and waterproof protection)

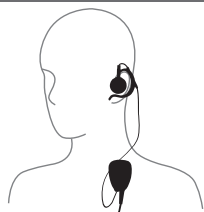
Battery Life

Battery pack	Type	Capacity	Operating time*		
			VHF (7 W)	VHF (5 W)	UHF (5 W)
BP-303N	Li-ion 7.2 V	3120 mAh (typ.), 3070 mAh (min.)	13 hours (Approx.)	13 hours (Approx.)	13 hours (Approx.)
BP-303	Li-ion 7.2 V	3350 mAh (typ.), 3200 mAh (min.)	13 hours (Approx.)	13 hours (Approx.)	13 hours (Approx.)
BP-316	Li-ion 7.2 V	4810 mAh (typ.), 4690 mAh (min.)	19 hours (Approx.)	20 hours (Approx.)	20 hours (Approx.)

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

Supplied accessories: (May differ depending on the transceiver version)	
• BP-303N battery pack	• MB-133 belt clip

SPEAKER MICROPHONES & EARPHONES



HM-222H
High-power
speaker

Water
proof



(3.5 mm plug)

or

AD-135
Earphone
jack adapter



(3.5 mm plug)

+

SP-27
Tube earphone



or

SP-29
Earhook
earphone

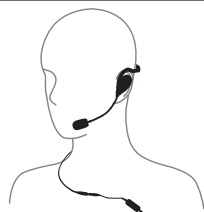


or

SP-40
Earphone



HEADSETS & PTT SWITCH CABLE



HS-94
Earhook type
headset



or

HS-95
Neck-arm type
headset



or

HS-97
Headset with
throat microphone

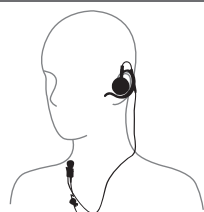


+

VS-5MC
PTT switch cable for manual PTT,
and VOX operation



TIE-CLIP MICROPHONES & EARPHONES



HM-163MC
Tie-clip microphone



(2.5 mm plug)

+

EH-15B
Earphone



or

SP-26
Tube earphone



or

SP-28
Earhook
earphone



BATTERY PACK & BATTERY CASE

BP-303N

Li-Ion battery pack
3070 mAh (min.)
3120 mAh (typ.)
(Same as supplied)

Water
proof



BP-303

Li-Ion battery pack
3200 mAh (min.)
3350 mAh (typ.)

Water
proof



BP-316

Li-Ion battery pack
4690 mAh (min.)
4810 mAh (typ.)

Water
proof



BP-305

Battery case
LR6 (AA) × 5
cells



CHARGERS

BC-271

For charging of BP-303N/BP-303
and BP-316.
(AC adapter BC-216 supplied)



MULTI-CHARGER

BC-272

For charging of BP-303N/BP-303 and BP-316.
(AC adapter BC-276 and
charger adapter AD-153 supplied)



CHARGERS

BC-226

Multi-connectable
rapid charger
for BP-303N/BP-303



(The straight plug type is required)

BC-123S

AC adapter for
single unit



BC-228

AC adapter
(Required for multiple
connections)



(Connectable up to six BC-226)

BC-227

For charging BP-303N/BP-303.
(AC adapter BC-123S supplied)



BC-258 AC adapter
+ **OPC-2480**
USB Type-C™ cable (2 A)



CIGARETTE CABLE

CP-23L

For use with BC-227



BELT CLIPS & HANGERS

MB-133

Belt clip (Same as supplied)

MB-136

Belt clip (Swivel type)

MB-96N

Belt hanger (Swivel type)

MB-96F

Belt hanger (Fixed type)

MB-96FL

Belt hanger (Long type)

OTHER ACCESSORIES

OPC-1870

Zone copy cable.
Handheld to handheld type.

OPC-2362

Zone copy cable.
Handheld to mobile type.

AD-118

ACC adapter. For use with
Hirose plug accessory.

SOFTWARE & ACTIVATION KEYS

CS-OTPM1

OTAP manager software

CS-KLD2

AES/DES key loader software

ISL-UGMTR

NXDN™ Type-D trunking key

ISL-AKAES

AES activation key

ISL-AK25K

25 kHz activation key

ISL-AKSTM

Dealer set mode activation key

ANTENNAS

Standard Antennas

FA-S81V 136 – 150 MHz
FA-S82V 148 – 162 MHz
FA-S83V 160 – 174 MHz
FA-S81U 380 – 430 MHz
FA-S82U 430 – 480 MHz
FA-S83U 470 – 520 MHz
FA-S09U 350 – 400 MHz

Stubby Antennas

FA-S81VS 136 – 150 MHz
FA-S82VS 148 – 162 MHz
FA-S83VS 160 – 174 MHz
FA-S81US 400 – 450 MHz
FA-S82US 450 – 490 MHz

Cut Antennas

FA-S67VC 136 – 174 MHz
FA-S76UC 380 – 520 MHz

Bluetooth® connection has not been tested for all Bluetooth® compatible devices with this product. This does not guarantee that all devices will work with this product.

Icom and the Icom logo are registered trademarks of Icom Incorporated (Japan) in Japan, the United States, the United Kingdom, Germany, France, Spain, Russia, Australia, New Zealand and/or other countries. IDAS and IDAS logo are trademarks of Icom Incorporated. NXDN is a trademark of Icom Incorporated and JVC KENWOOD Corporation. The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Icom Inc. is under license. USB TYPE-C is a trademark of USB Implementers Forum Inc. 3M, Peltor and WS are trademarks of 3M Company. All other trademarks are the properties of their respective holders.

Icom Inc.

1-1-32, Kamiminami, Hirano-ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302

For the latest information, please visit www.icomjapan.com

Icom America Inc.
www.icomamerica.com

Icom (Europe) GmbH
www.icomeurope.com

Icom France s.a.s.
www.icomfrance.com/fr/

Icom Canada
www.icomamerica.com

Icom Spain S.L.
www.icomspain.com

Icom (Australia) Pty. Ltd.
www.icom-australia.com

Icom Brazil
E-mail: sales@icombrasil.com

Icom (UK) Ltd.
www.icomuk.co.uk

Icom Asia Co., Ltd.
www.icomasia.com