ICOM

NEW IDAS SERIES

VHF DIGITAL HANDHELD TRANSCEIVERS
IC-F3400DT/DS/D

VHF DIGITAL MOBILE TRANSCEIVERS
IC-F5400D/DS

UHF DIGITAL HANDHELD TRANSCEIVERS
IC-F4400DT/DS/D

UHF DIGITAL MOBILE TRANSCEIVERS
IC-F6400D/DS

LOOK SMART, WORK SMART



iDAS™
ICOM DIGITAL ADVANCED SYSTEM

NXDN™

Photo includes optional antennas.

IDAS™ Takes You To a New Level of "Smart"



Now with the new generation of IDAS, Icom takes you to a new level of "smart". The new IDAS series sports an updated look and design. Its plethora of functions and the attention to hardware details only Icom can provide brings you a solution that makes you look smart and work smart too.

Refinements and enhancements to design, usability and features – combined with the electrical and industrial hardware improvements – further the total reliability of the new IDAS series. This reliability ranges from the "zero adjustment", non-variance production quality of every radio made to a new and stress-free user experience that masks the real complexity behind this multi-protocol platform. Icom's product quality is legendary. Look smart and work smart with the new IDAS series. Using is believing.

Small, Slim and Smart

The compact body is made possible from new engineering techniques including the use of a custom SoC (System-on-a-Chip) and flat sheet keypad. The slim dimensions are also supplemented with reduced power consumption, allowing for a thinner battery pack.

High-Resolution Color LCD

The high-resolution transreflective color LCD enhances the visibility both in natural and indoor lighting. Functions and menu items are clearly labelled with easy to understand icons and characters. The night mode LCD setting is an alternative for use in night time or low lighting conditions.



Day mode



Night mode



Menu icons

Multiple Languages

Functions and menu items can be shown in localized languages. English, French, German, Spanish, Russian and Simplified Chinese fonts are supported. In addition, voice announcements can be recorded and changed for output in the localized language.

License Key Upgrade

The new IDAS radios can add new functions and protocols with license key options. The radios can be upgraded and customized to meet your specific needs.

NXDN™ Trunking Upgrade

The new IDAS radios are compatible with IDAS digital conventional mode and analog FM mode with auto sensing function. The radios can be upgraded to NXDN Type-C trunking or NXDN Type-D multi-site trunking mode with a license key.

DES/AES Encryption with OTAR

For digital communication security, the new IDAS radios provide basic 4-key DES encryption as standard. When used with the optional UT-134 encryption unit, 256-bit AES encryption and the OTAR (Over-the-Air Rekeying) function are available. The OTAR function allows updating of encryption keys over the radio channel.

OTAP and OAA

For efficiency in radio programming, the OTAP (Over-the-Air-Programming) function allows remote change of programming data (for example adding a new repeater) over the radio channel. The OAA (Over-the-Air-Alias) function sends user name over the radio channel and eliminates needs to program the alias table. Successfully manage your fleet with ease.

Built-in Bluetooth®

The built-in Bluetooth module provides remote operation and hands-free communication paired with a third-party Bluetooth headset*. When connected with Bluetooth telemetric devices or PC terminals, data or files can be wirelessly transferred.

* Available functions depend on paired Bluetooth devices.

Digital Voice Recording

The new IDAS radios can record incoming and outgoing communications, and replay recorded communications. When a 32 GB microSD* card is used, a Max. 500 hours recording is possible. The recorded audio is saved in "wav" format and allows replay on the radio or a PC.

* MicroSD card is required separately.



Motion/Stationary Detection Sensors

For emergency situations, the new IDAS radios have an emergency button and five emergency-related functions: man down, motion detection, stationary detection, lone worker and power OFF emergency functions. The motion/stationary sensor sensitivity level is programmable in 10 levels for each function.

* Man down, motion detection and stationary detection for handheld radios only.



Transparent Data/ Text Message

The new IDAS radios can be used as a transparent data modem which transmits various data at 9600 bps over the radio channel using 12.5 kHz channel spacing. Text messages can send up to 100 characters text data message and scrolls the received message on the display.

ANC (Active Noise Canceling)

The ANC assists in providing clear comment. Some specified noise sources (such as sirens or boiler noise) can be canceled.

Audio Equalizer

The Audio equalizer allows you to tailor the audio tone to suit speech characteristics and the language in use. Five types of tone controls – flat, high boost, middle boost, low boost and low cut – are available. The audio auto gain control function controls the speech audio to a constant, regardless of the input magnitudes of the voice or distance of the microphone from the mouth.

GPS Receiver

The position data can be sent with voice call or status call and can be used with an AVL (Automatic Vehicle Location) system. The GPS log functions logs user position data at regular intervals and can be saved to a microSD card. The new IDAS radios can show direction and distance to another radio or specified point, and notifies you with a beep sound if the target is in the specified range.

* For mobile radios, an optional GPS antenna, UX-241, is required separately.

USB Port for PC Connection

The new IDAS radios can be connected to a PC through a USB port for programming radios and accessing the installed microSD card in mass storage mode.

Voice Announcement

The new IDAS radios can notify channel number, zone and channel type with voice announcement. This function is convenient for making radio adjustments without having to look at the radio.

Vibration Alert

When a call from a specific user is received, the new IDAS handheld radios vibrate powerfully enough to be felt through heavy clothing. Vibration patterns are programmable.

IP68 Waterproof and Dustight with AquaQuake™ Function

The new IDAS handheld radios are IP68 waterproof and dust-tight protection (1m depth for 1 hour). They also incorporate an AquaQuake draining function by emitting a vibrating buzz sound.

Multiple Controller Configurations

With a combination with optional separation kits, COMMANDMIC and separation cables, three types of controller configurations are available to suit almost any application or installation that may be required. The intercom function is available between controllers and/or COMMANDMIC.



Detached Controller*
Optional RMK-5
and separation cable required.

A detached controller head with the separated RF unit is a simple to install in almost any vehicle.



Dual Head Controller*
Optional RMK-7, hand microphone
and separation cables required.

Suitable for double cab vehicles. Install the controller head to front and rear seats respectively.



COMMANDMIC™ and Detached Controller*
Optional RMK-5, COMMANDMIC, HM-218
and separation cables required.

The COMMANDMIC is handy for installing a work platform on the rear part of the vehicle.

* Detached Controller, Dual head and COMMANDMIC configurations are for IC-F5400D/IC-F6400D only.

General Features

- 136–174 MHz, 380–470, 450–512 MHz wide frequency coverage
- 1024 memory channels programmable
- IP55 jet water resistant and dust-protection (Mobile radios)
- MIL-STD rugged construction
- 14-pin ACC connector with BTL amplifier output (Handheld radios)
- D-SUB 25-pin ACC connector with programmable functions (Mobile radios)
- Built-in 20 W audio amplifier for connecting with external public address system (Mobile radios)
- VOX (Voice Operated transmission) function
- Internal clock
- High-speed scanning for Voting and multi-site operation
- Tactical group function for temporary regroup user groups
- Normal, priority and voting scan

IDAS™ Features

- IDAS conventional and multi-site conventional
- Type-D single-site trunking and multi-site trunking*
- Type-C trunking*
- Analog/Digital conventional mixed mode operation
- Status • Text message
- Call alert • Radio check
- Radio Stun/Revive/Kill
- Remote monitor

* Type-C and Type-D multi-site trunking are license key upgrade options.

Analog FM Mode Features

- 2-tone, 5-tone, CTCSS and DTCS built-in
- DTMF autodial and DTMF decode
- MDC 1200 compatible
- Basic LTR™ trunking
- Audio compander
- Inversion voice scrambler
- Forced narrow function

Supplied accessories for handheld radios:
(May differ or not supplied according to version)
• Battery pack, BP-283 • Belt clip, MB-133

Supplied accessories for mobile radios:
(May differ or not supplied according to version)
• Hand microphone, HM-220 • DC power cable
• Mounting bracket kit • Microphone hanger

SPECIFICATIONS

		IC-F3400DT/DS/D IC-F4400DT/DS/D	IC-F5400D/DS IC-F6400D/DS
GENERAL			
Frequency range		136–174 MHz	136–174 MHz
		380–470 MHz 450–512 MHz	380–470 MHz 450–512 MHz
Number of channels		1024 channels programmable*1	1024 channels programmable*2
Type of emission (Varies according to version)		16K0F3E*3, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D	16K0F3E, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D
Channel spacing (Varies according to version)		25/15/12.5 kHz*3 (Analog) 12.5/6.25 kHz (Digital)	25/15/12.5 kHz*3 (Analog) 12.5/6.25 kHz (Digital)
Antenna impedance		50 Ω	50 Ω (SO-239)
Power supply requirements		7.5 V DC	13.6 V DC
Current drain (approx.) Tx High Rx Max. audio/Stand-by		1.5 A /1.8 A (VHF/UHF) 500 mA/140 mA	8.8 A typ 0.8 A typ./270 mA typ.
Operating temperature range		–30°C to +60°C; –22°F to +140°F	–30°C to +60°C; –22°F to +140°F
Dimensions (W×H×D) (Projections not included)		53.6×123.5×29.3 mm; 2.11×4.86×1.15 in (With BP-283)	174×55×150 mm; 6.85×2.17×5.91 in
Weight (approx.)		180 g; 6.4 oz (main unit without battery pack and antenna)	1.5 kg; 3.3 lb
TRANSMITTER			
Output power		5 W	50 W/45 W (VHF/UHF)
Frequency error		±1.0 ppm	±1.0 ppm
Spurious emissions		75/80 dB typ. (VHF/UHF)	90 dB/80 dB typ. (VHF/UHF)
FM Hum and noise (Analog)		56 dB typ.	54 dB typ.
Audio harmonic distortion		0.5% typ. (@AF 1 kHz 40% deviation)	0.5% typ. (@AF 1 kHz 40% deviation)
FSK error (Digital)		1% typ.	1% typ.
RECEIVER			
Sensitivity	12 dB SINAD 1% BER	0.23 µV typ. –4 dBµV emf. typ.	0.22 µV/0.25 µV typ. (VHF/UHF) –5/–6 dBµV emf. typ. (D 12.5/D 6.25)
Adjacent channel selectivity	Analog Digital	75/72 dB typ. (W/N) 66 dB typ.	75/72 dB typ. (W/N) 68/65 dB typ. (D 12.5/D 6.25)
Spurious response		76 dB typ.	85 dB typ.
Intermodulation	Analog Digital	74 dB typ. 70 dB typ.	75 dB typ. 70 dB typ.
Audio output power	Internal SP External SP	0.8 W typ. (@5% distortion with 12 Ω) 1.0 W typ. (@5% distortion with 8 Ω)	4.0 W typ. (@5% distortion with 4 Ω) 4.0 W typ. (@5% distortion with 4 Ω)

Measurements made in accordance with TIA-603, EN300 086, EN301 166, EN300 113.
All stated specifications are subject to change without notice or obligation.
*1 IC-F3400D/F4400D (Non-LCD type): Up to 32 selected channels out of 1024 can be allocated to the channel knob.
*2 IC-F5400DS/F6400DS: Due to the segment display, channel indication is possible for up to 99 selected channels out of 1024.
*3 25kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions.

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
Solar Radiation	505.5	I
Rain Blowing/Drip	506.5	I, III
Humidity	507.5	–
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.
* IC-F3400DT/DS/D, IC-F4400DT/DS/D only.

Ingress Protection Standard	
IC-F3400DT/DS/D, IC-F4400DT/DS/D	IP68 (Dust-tight and waterproof protection)
IC-F5400D/DS, IC-F6400D/DS	IP55 (Dust-protection and jet water resistance)







PRODUCTS LINEUP

Handheld Radios



Top view

5W



VHF DIGITAL TRANSCEIVER
IC-F3400DT
UHF DIGITAL TRANSCEIVER
IC-F4400DT

5W



VHF DIGITAL TRANSCEIVER
IC-F3400DS
UHF DIGITAL TRANSCEIVER
IC-F4400DS

5W





VHF DIGITAL TRANSCEIVER
IC-F3400D
UHF DIGITAL TRANSCEIVER
IC-F4400D

Mobile Radios

50W/45W (VHF/UHF)





VHF DIGITAL TRANSCEIVER
IC-F5400D
UHF DIGITAL TRANSCEIVER
IC-F6400D

50W/45W (VHF/UHF)



VHF DIGITAL TRANSCEIVER
IC-F5400DS
UHF DIGITAL TRANSCEIVER
IC-F6400DS

OPTIONS FOR Handheld Radios

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

BATTERY PACKS



BP-283 BP-284

Battery packs	Type	Capacity	Operating time*
BP-283	Rechargeable Li-ion	2010 mAh (typ.) 1910 mAh (min.)	10 hours (Approx.)
BP-284	Rechargeable Li-ion	3210 mAh (typ.) 3070 mAh (min.)	16 hours (Approx.)

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

RAPID CHARGER



BC-123S[*1] **BC-219**

Charges the BP-283/BP-284 in 3/4.5 hours (approx.) respectively.

MULTI-CHARGER



BC-214 **BC-157S**

Charges up to six BP-283/BP-284 battery packs in 3/4.5 hours (approx.) respectively.

SPEAKER-MICROPHONE



HM-222

[*1] BC-123SA for USA plug. SE for Europe plug. SV for Australia plug.

HEADSETS and PTT SWITCH CABLE



HS-94 Earhook type

HS-95 Behind-the-head type

HS-97 Throat type

VS-4MC Required when using any of these headsets

CIGARETTE LIGHTER CABLE & POWER SUPPLY CABLES



CP-23L For use with BC-219

OPC-515L For use with BC-219

OPC-656 For use with BC-214

ACC ADAPTOR



AD-118 For use with Hirose Plug Accessory

AES/DES ENCRYPTION UNIT



UT-134

ZONE COPY CABLES



OPC-1870 Handheld to handheld cable

OPC-2362 Handheld to mobile cable

BELT CLIPS



MB-133 Alligator type. Same as supplied.

MB-136 Swivel type

LEATHER BELT HANGERS



MB-96N **MB-96F** **MB-96FL**

LEATHER CASES



LC-184 For IC-F3400DT/DS, F4400DT/DS

LC-186 For IC-F3400D, F4400D

ANTENNAS

- **FA-S81V**: 136–150 MHz
- **FA-S82V**: 148–160 MHz
- **FA-S83V**: 160–174 MHz
- **FA-S81U**: 380–430 MHz
- **FA-S82U**: 430–480 MHz
- **FA-S83U**: 470–520 MHz

CUT ANTENNAS

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

STUBBY ANTENNAS

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

CHARGER ADAPTER

- **AD-132** for BP-283/BP-284

AD-132 charger adapter is supplied with the BC-214, depending on BC-214's version.

OPTIONS FOR Mobile Radios

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

HAND MICROPHONES



HM-220 Heavy duty microphone

HM-220T Heavy duty microphone with DTMF keypad

HM-221

HM-221T DTMF microphone

DESKTOP MICROPHONE



SM-29

EXTERNAL SPEAKERS



SP-30 20 W rated input

SP-35: 2 m cable
SP-35L: 6 m cable

ZONE COPY CABLE



OPC-2362 Mobile to handheld cable

SEPARATION KIT

RMK-5
For detached controller configuration. Options for IC-F5400D/F6400D only.

DUAL-HEAD SEPARATION KIT

RMK-7
Separation kit and secondary controller for dual head configuration. Options for IC-F5400D/F6400D only.

COMMANDMIC™



HM-218
Secondary remote control microphone for RMK-5. Options for IC-F5400D/F6400D only.

SEPARATION CABLES for RMK-5 or RMK-7

- **OPC-2364**: 1.9 m; 6.2 ft
- **OPC-2365**: 3 m; 9.8 ft
- **OPC-2366**: 5 m; 16.4 ft
- **OPC-2367**: 8 m; 26.2 ft

SEPARATION CABLES for HM-218, COMMANDMIC

- **OPC-2373**: 1.9 m; 6.2 ft
- **OPC-2374**: 8 m; 26.2 ft

Separation cable is required for use with detached controller head or COMMANDMIC separately.

GPS ANTENNA



UX-241

AES/DES ENCRYPTION UNIT



UT-134

RMK-5, RMK-7, HM-218, UT-134, separation cables and Type-C trunking upgrade key will be available later. OTAP, OTAR, audio equalizer and Chinese fonts functions will be available with future firmware upgrade.

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