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.
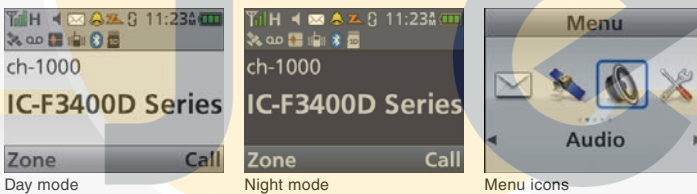
Small, Slim and Smart

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.

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.

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.

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.

AquaQuake™ Draining Function

By emitting a vibrating buzz sound, the AquaQuake draining function clears water from the speaker grill and maintains clear audio. (Handheld radios)

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.

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

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

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

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

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

- 136–174MHz, 380–470, 450–512MHz wide frequency coverage
- 1024 memory channels with 128 zones
- 32 memory channels (IC-F3400D series only)
- IP68 waterproof and dust-tight protection (1m depth for 1 hour) (Handheld radios)
- 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 20W 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

GENERAL

		IC-F3400DT/DS/D IC-F4400DT/DS/D	IC-F5400D/DS IC-F6400D/DS
Frequency range		136–174MHz	136–174MHz
		380–470MHz 450–512MHz	380–470MHz 450–512MHz
Number of channels		1024 channels /128 zones (IC-F3400DT/DS) 32 channels/2 zones (IC-F3400D)	1024 channels /128 zones
Type of emission (Varies according to version)		16K0F3E, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D	16K0F3E, 11K0F3E, 8K50F3E, 8K30F1E/D, 4K00F1E/D
Channel spacing (Varies according to version)		25/15/12.5 kHz (Analog) 12.5/6.25 kHz (Digital)	25/15/12.5 kHz (Analog) 12.5/6.25 kHz (Digital)
Antenna impedance		50Ω	50Ω (SO-239)
Power supply requirements		7.5V DC	13.6V DC

Current drain (approx.)
  Tx High
  Rx Max. audio/Stand-by
		1.5A /1.8A (VHF/UHF)
		550mA/140mA
			8.8A typ
			0.8A typ./270mA 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)	174×55×176 mm; 6.85×2.17×6.93 in
Weight (approx.)		170g; 6 oz (main unit without battery pack and antenna)	1.5 kg; 3.3 lb

TRANSMITTER

		IC-F3400DT/DS/D IC-F4400DT/DS/D	IC-F5400D/DS IC-F6400D/DS
Output power		5W	50W/45W (VHF/UHF)
Frequency error		±1.0ppm	±1.0ppm
Spurious emissions		75dB typ.	90dB/80dB typ. (VHF/UHF)
FM Hum and noise (Analog)		54dB typ.	54dB typ.
Audio harmonic distortion		0.5% typ. (@AF 1kHz 40% deviation)	0.5% typ. (@AF 1kHz 40% deviation)
FSK error (Digital)		1% typ.	1% typ.

RECEIVER

		IC-F3400DT/DS/D IC-F4400DT/DS/D	IC-F5400D/DS IC-F6400D/DS
Sensitivity	12dB SINAD	0.24µV typ.	0.22µV/0.25µV typ. (VHF/UHF)
	1% BER	−11/−6dBµV emf. typ. (D 12.5/D 6.25)	−11/−6dBµV emf. typ. (D 12.5/D 6.25)
Adjacent channel selectivity	Analog	75/72dB typ. (W/N)	75/72dB typ. (W/N)
	Digital	65/65dB typ. (D 12.5/D 6.25)	65/65dB typ. (D 12.5/D 6.25)
Spurious response		80dB typ.	85dB typ.
Intermodulation	Analog	75/75dB typ. (W/N)	78/78dB typ. (W/N)
	Digital	70/70dB typ. (D 12.5/D 6.25)	70/70dB typ. (D 12.5/D 6.25)
Audio output power	Internal SP	0.8W typ. (@5% distortion with 12Ω)	4.0W typ. (@5% distortion with 4Ω)
	External SP	0.9W typ. (@5% distortion with 8Ω)	4.0W typ. (@5% distortion with 4Ω)

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

5W

5W

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

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

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

IP68 IP68

BP-283   BP-284

Battery packs	Type	Capacity	Operating time*
BP-283	Li-ion 7.2V	2010mAh (typ.) 1910mAh (min.)	10 hours (Approx.)
BP-284	Li-ion 7.2V	3210mAh (typ.) 3070mAh (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.

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

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

IP68

HM-222

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

CUT ANTENNAS
• **FA-S67VC**: 136–174MHz
• **FA-S67UC**: 380–520MHz

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

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

IP54   IP54   IP55   IP55

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
20W rated input

SP-35: 2m cable
SP-35L: 6m 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™

IP55

HM-218
Secondary remote control microphone for RMK-5. Options for IC-F5400D/F6400D only.
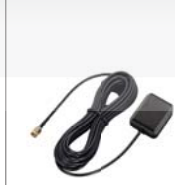
SEPARATION CABLES for RMK-5 or RMK-7
• **OPC-2364**: 1.9m; 6.2ft
• **OPC-2365**: 3m; 9.8ft
• **OPC-2366**: 5m; 16.4ft
• **OPC-2365**: 8m; 26.2ft

SEPARATION CABLES for HM-218, COMMANDMIC
• **OPC-2373**: 1.9m; 6.2ft
• **OPC-2374**: 8m; 26.2ft

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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