



VHF AND UHF TRANSCEIVERS

IC-F3161DT

(IDAS digital VHF transceiver with 10-keypad)

IC-F3161T

(VHF transceiver with 10-keypad)

IC-F3161DS

(IDAS digital VHF transceiver without 10-keypad)

IC-F3161S

(VHF transceiver without 10-keypad)

IC-F4161DT

(IDAS digital UHF transceiver with 10-keypad)

IC-F4161T

(UHF transceiver with 10-keypad)

IC-F4161DS

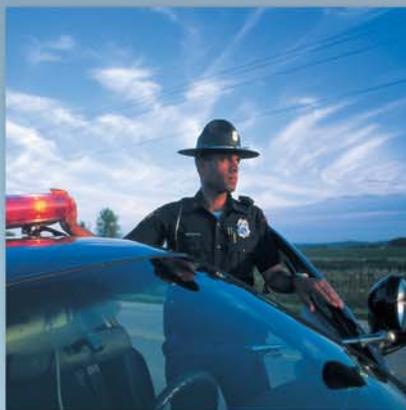
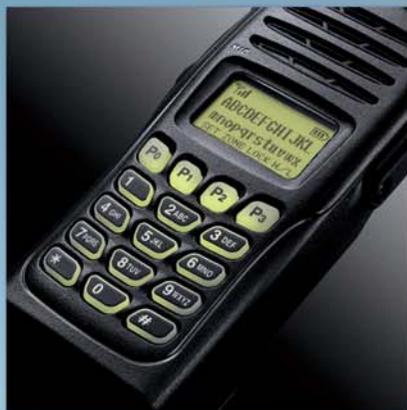
(IDAS digital UHF transceiver without 10-keypad)

IC-F4161S

(UHF transceiver without 10-keypad)



LTR™
Conventional
IDAS™ Digital
IDAS™ Trunking



- 512 ch / 128 zones
- Conventional/LTR™ mode
- IDAS conventional (With UT-126H)
- IDAS Trunking (With UT-126H)
- 2-Tone, 5-Tone CTCSS, DTCS
- VHF 5W UHF 5W output
- 14 hrs. operating time with BP-232H
- Full dot-matrix LCD

Conventional/IDAS™ Digital*/IDAS™ Trunking Multi-Mode Land Mobile!

* With UT-126H installed. Already installed to the IC



▲ IC-F3161DT/T

▲ IC-F4161DS/S

VHF TRANSCEIVERS

IC-F3161DT/T

IDAS digital/analog FM with 10-keypad

IC-F3161DS/S

IDAS digital/analog FM without 10-keypad

UHF TRANSCEIVERS

IC-F4161DT/T

IDAS digital/analog FM with 10-keypad

IC-F4161DS/S

IDAS digital/analog FM without 10-keypad

IP55 dust-protection and water jet resistance

The IC-F3161/D series meets IP55 requirements for dust-protection and water jet resistance. Its durable construction is backed up by the aluminum die-cast chassis and polycarbonate casing, allowing reliable operation under harsh weather and environmental conditions.

Lithium-ion battery pack

The 2300 mAh (typ.) Li-ion battery pack, BP-232H, provides 14 hours* of operating time. The optional battery case BP-240 provides a convenient back up and great reassurance in an emergency.

* Typical operation Tx:Rx:Stand-by=5:5:90, power save on

Most popular signalings built-in

The 2-Tone, 5-Tone, CTCSS, DTCS and MDC signaling capabilities are built-in for group communication or selective calling. The radio can decode ten 2-Tone codes or eight 5-Tone codes on a channel. When a matched tone is received, the following actions are programmable for each code.

- Beep sound
- Bell icon
- Answer back call
- Auto TX
- Radio stun/kill/revive
- Scan

Basic LTR™/conventional mode operation

Both LTR™ trunking and conventional channels are programmable on a radio. Group, selective (DTMF), and phone call are available in LTR™ mode.

MDC 1200 Compatible

The following selective calling and ANI features are available with the built-in MDC signaling.

- PTT ID
- SelCall
- Radio check
- Radio stun/revive
- 500 Aliases
- Status message/request
- Call alert
- Emergency, emergency mic monitoring

Voting scan (Analog mode only)

The voting mode scanning detects the signal strength level of repeater stations and automatically selects the strongest station, useful for roaming between 2 or more repeater sites. Once you program the voting mode to a memory zone, you can easily start voting mode operation by changing the zone setting.

IC-F3161/F4161 "D" versions.

Full dot-matrix LCD

Using a large full dot-matrix LCD (32 × 18 mm), the IC-F3161/D series shows upper and lower case characters clearly. The display setting is selectable from 1 line, 12 characters or 2 lines 24 characters via programming. The bottom row shows assigned functions to the [P0] to [P3] buttons.



Enhanced audio

The IC-F3161/D series employs a BTL amplifier that increases the audio output and the built-in audio compander provides clear, low noise communications.

Lone worker function

When the radio is not operated for a preset period, a beep sounds and a button push is required. If no button is pushed within that preset time, an emergency signal automatically transmits and alerts your co-worker or dispatcher to any potential trouble.

Built-in inversion-type voice scrambler

The built-in inversion type voice scrambler* provides secure conversation as standard. When a more secure system is required, the 32 code non-rolling-type voice scrambler UT-109R and 1020 code rolling type UT-110R are available as an option.

* Inversion type voice scrambler is not compatible with UT-109/UT-110 voice scrambler.

Other features

- 512 memory channel with 128 zones
- 8 DTMF autodial memories
- 2 step reduced power setting
- FM intrinsically safe versions
- Busy, repeater lockout functions
- Escalating alarm
- Mode dependent scan
- Surveillance function temporarily turns off the LED backlight and beep sound
- 5 W output power both in VHF and UHF
- Flash CPU for future upgrade and more...

OPTIONS

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

BATTERY PACKS AND CASE

BP-230N BP-232H BP-240

Battery packs	Type	Capacity	Operating time*	Output power
BP-230N	Rechargeable Li-ion	950 mAh (min.) 980 mAh (typ.)	5.5 hours	5 W
BP-232H	Rechargeable Li-ion	2250 mAh (min.) 2300 mAh (typ.)	14 hours	5 W
BP-240	AAA (LR03) batteries × 6		—	1 W

* Operating time is approximate time (at 20 °C). Tx: Rx: standby=5:5:90. Power save on.

REGULAR CHARGER

BC-171

BC-147S*1

Charges the BP-232H in 10 hours. (approx.).

RAPID CHARGER

BC-160

BC-123S*1

Charges the BP-232H in 3 hours. (approx.).

MULTI-CHARGER

BC-197

BC-157S

Charges up to six BP-232H battery packs in 3.5 hours. (approx.). Charger adapter AD-122 is supplied with the BC-197.

*1 BC-123/BC-147SA for USA plug. SE for Europe plug. SV for Australia plug.

SPEAKER-MICROPHONES

IPX7 IP67 GPS IP57

HM-168 HM-169 HM-170GP HM-159SC

EARPHONES

SP-27 Tube earphone

SP-13 Earphone

AD-52 Required when using any of these earphones

HEADSETS (VS-15C or VS-45C required)

HS-94 Earhook type

HS-95 Behind-the-head type

HS-97 Throat type

PTT CASE/PTT SWITCH CABLE

VS-15C VS-45C

Either VS-15C or VS-45C is required when using any of the headsets.

POWER SUPPLY CABLES

CP-23L For use with BC-160

OPC-656 For use with BC-197

BELT CLIPS

MB-93 Swivel type

MB-94 Alligator type Same as supplied.

MB-94R Alligator type

LEATHER BELT HANGERS

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

CHARGER BRACKET

MB-130

For use with BC-160

INTERNAL UNITS

UT-109R Non-rolling type voice scrambler

UT-110R Rolling type voice scrambler

UT-124R Man down unit

UT-126H NXDN CAI-based IDAS digital unit

- ### STUBBY ANTENNAS
- FA-SC56VS: 150–162 MHz
 - FA-SC57VS: 160–174 MHz
 - FA-SC73US: 450–490 MHz
- ### CUT ANTENNAS
- FA-SC61VC: 136–174 MHz
 - FA-SC61UC: 380–520 MHz
- ### HIGH GAIN ANTENNAS
- FA-SC62V: 150–160 MHz
 - FA-SC63V: 155–165 MHz

- ### ANTENNAS
- FA-SC25V: 136–150 MHz
 - FA-SC55V: 150–174 MHz
 - FA-SC25U: 400–430 MHz
 - FA-SC57U: 430–470 MHz
 - FA-SC72U: 470–520 MHz
 - FA-SC04U: 330–380 MHz
 - FA-SC03U: 380–430 MHz

IDAS™ digital mode ready

DIGITAL

IDAS (Icom Digital Advanced System) is Icom's digital land mobile radio system using the 6.25 kHz narrowband FDMA technology. The IC-F3161 series is compatible with IDAS conventional and IDAS single-site/multi-site trunking using the NXDN™ common air interface. The IC-F3161 series provides 2 optional slots: one optional slot for the UT-126H digital unit and one for an additional option board. The UT-126H is already installed to the IC-F3161/F4161 "D" versions. See the IDAS brochure for details.

SPECIFICATIONS

GENERAL

- Frequency range :
 - IC-F3161T/S, DT/DS 136–174 MHz
 - IC-F4161T/S, DT/DS 400–470 MHz, 450–512 MHz
350–400 MHz (Non-FCC)
- Number of channels : 512 channels/128 zones
- Channel spacing : 12.5 kHz/25 kHz*, 15 kHz/30 kHz*,
6.25 kHz (digital)
- Type of emission Wide : 16K0F3E*,
Narrow 11K0F3E, 11K0F7E, 11K0F7D
8K50F3E, 8K10F1E, 8K10F1D
Digital 4K00F1E, 4K00F1D
- Antenna impedance : 50 Ω
- Usable temperature range : –30 °C to +60 °C; –22 °F to +140 °F
- Power supply requirement : 7.2 V DC nominal
- Current drain (at 7.2 V DC; approx.):
 - Transmit VHF/UHF 1.5 A/1.8 A (at 5 W/5 W)
 - Receive Stand-by 100 mA
 - With UT-126H 150 mA/140 mA (VHF/UHF)
 - Rated output 600 mA
- Dimensions (with BP-232H) : 53 (W) × 136 (H) × 38.5 (D) mm;
(projections are not included) 2.1 (W) × 5.4 (H) × 1.5 (D) in
- Weight (approx.) : 340 g; 12.0 oz (with BP-232H)

TRANSMITTER

- Output power VHF/UHF : 5 W/2 W/1 W (Hi/L2/L1)
- Max. frequency deviation : ±5 kHz (Wide), ±2.5 kHz (Narrow)
- Frequency stability : ±1.0 ppm
- Spurious emissions : 75 dB typ.
- FM Hum and Noise : 46 dB typ. (Wide), 40 dB typ. (Narrow)
- Audio harmonic distortion : 3% typ. (AF 1 kHz, 40% deviation)
- Modulation limiting : 60–100% of max. deviation
- FSK error : 5% max. (Digital)
- Ext. microphone connector : 9-pin multi connector/ 2.2 kΩ

Measurements made in accordance with EIA-152C/204D, TIA-603 for analog.
All stated specifications are subject to change without notice or obligation.

* 25 kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions.

RECEIVER

- Sensitivity FM (W, N) : 0.25 μV typ. (at 12 dB SINAD)
Digital : 0.20 μV typ. (at 5% BER)
- Adjacent channel selectivity : 75 dB typ. (Wide), 68 dB typ. (Narrow)
- Spurious response : 70 dB min.
- Intermodulation : 74 dB typ.
- Hum and noise ratio : 46 dB typ. (Wide), 40 dB typ. (Narrow)
- Audio output power : 500 mW typ.
(at 5% distortion with an 8 Ω load)
- External speaker connector: 9-pin multi connector/ 8 Ω

Applicable U.S. Military Specifications & IP Rating

Icom makes rugged products that have been tested to and passed the following MIL-STD requirements and Ingress Protection standards.

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 IP55 (Dust-protection and water jet resistance)

SUPPLIED ACCESSORIES

(May differ according to version)



• VHF Antenna

• UHF Antenna

• Battery pack, BP-232H

• Belt clip, MB-94

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