ICOM

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)

Rugged MIL-STD 810

MDC 1200 Compatible

IP55

iDAS™
ICOM DIGITAL ADVANCED SYSTEM

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 ouput
- 14 hrs. operating time with BP-232N
- Full dot-matrix LCD

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

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

▲ **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 supplied 2000mAh (typ.) Li-Ion battery pack, BP-232N, 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 mode scanning

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.

ng*/LTR™ –

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
- Power on password
- Busy, repeater lockout functions
- Escalating alarm
- Mode dependent scan
- Surveillance function temporarily turns off the LED backlight and beep sound
- Powerful 5W output 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-232N   ▲ BP-240

Battery packs	Type and capacity	Operating time*	Output power
BP-230N	Li-Ion 7.4V 950mAh (min.) 980mAh (typ.)	7.35 hours	5W
BP-232N	Li-Ion 7.4V 1900mAh (min.) 2000mAh (typ.)	14 hours	5W
BP-240	AAA (LR03) batteries × 6	–	1W

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

REGULAR CHARGER

BC-147A   BC-171

BC-171 DESKTOP CHARGER + **BC-147***1 AC ADAPTER
Charges the BP-232N in 10 hours. (approx.).
*1 BC-145/BC-147SA for 120V AC. SE for 230V AC. SV for 240V AC.

RAPID CHARGER

BC-145A   BC-160

BC-160 DESKTOP CHARGER + **BC-145***1 AC ADAPTER
Charges the BP-232N in 3 hrs. (approx.).
BC-119N + **AD-106** + **BC-145***1 is also available.

BELT CLIPS

MB-93   MB-94

MB-93 : Swivel type. A fast and easy way to remove the transceiver from your belt.
MB-94 : Alligator type. Same as supplied.

MULTI-CHARGER

BC-121N+AD-106 (6 pcs.)   OPC-656   BC-157

BC-121N MULTI-CHARGER + **AD-106** CHARGER ADAPTER + **BC-157** AC ADAPTER
Rapidly charges up to 6 battery packs (Six AD-106s are required).
Charging time: 3 hours (approx.) when BP-232N is attached.
OPC-656 DC POWER CABLE :For use with the BC-121N. (12–20V DC required).

LEATHER BELT HANGERS

MB-96N   MB-96F

MB-96N: Swivel type belt hanger. Swivel joint of the MB-93 supplied.
MB-96F : Fixed type belt hanger. For use with MB-94.

SPEAKER-MICROPHONES

IPX7   IPX7   GPS IP57

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

HM-168 : Compact type speaker-microphone. Equivalent to IPX7.
HM-169 : Rugged type speaker-microphone. Equivalent to IP57.
HM-170GP : GPS speaker-microphone. Equivalent to IP57.
HM-159SC : Full size durable speaker microphone with revolving clip.
HM-131SC : Compact type speaker microphone.

INTERNAL UNITS

UT-109R   UT-110R   UT-124R   UT-126H

UT-109R: Non-rolling type voice scrambler.
UT-110R: Rolling type voice scrambler.
UT-124R: Man down unit. Automatically sends an emergency signal when the transceiver is left in a horizontal position for a preset time.
UT-126H: Digital unit. Provides IDAS digital capability.

HEADSETS AND PTT/VOX UNIT

HS-94   HS-95   HS-97   VS-1SC

HS-94: Earhook headset with flexible boom microphone.
HS-95: Behind-the-head headset with flexible boom microphone.
HS-97: Throat microphone fits around your neck and picks up speech vibration.
VS-1SC: PTT/VOX unit. Required when using these headsets.

EARPHONE

AD-52   SP-13

SP-13: EARPHONE.
AD-52: EARPHONE ADAPTER
Provides clear audio even in noisy environments.

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

CUT ANTENNAS
- **FA-SC61VC** : 136–174MHz
- **FA-SC61UC** : 380–520MHz
Cut the antenna element to tune to a specific center frequency.

ANTENNAS
- **FA-SC25V** : 136–150MHz
- **FA-SC55V** : 150–174MHz
- **FA-SC25U** : 400–430MHz
- **FA-SC57U** : 430–470MHz
- **FA-SC72U** : 470–520MHz

IDAS™ system digital mode ready   DIGITAL

The IDAS (Icom Digital Advanced System) is Icom's digital conventional and trunking system using the NXDN™ common air interface. It has useful calling features including selective calling, status message, radio stun/kill/revive, etc.

The IC-F3161 series provides 2 optional slots: one optional slot for the UT-126H digital unit and one for an additional option board. See the IDAS brochure for details.

SPECIFICATIONS

GENERAL

- Frequency range   :
  - IC-F3161T/S   136–174MHz
  - IC-F4161T/S   400–470MHz
  -                      450–512MHz
- Number of channels   : 512 channels/128 zones
- Channel spacing   : 12.5kHz/25kHz, 15kHz/30kHz, 6.25kHz (option)
- PLL channel step   : 2.5kHz, 3.125kHz
- Antenna impedance   : 50Ω
- Usable temperature range : –30˚C to +60˚C; –22°F to +140°F
- Power supply requirement : 7.2V DC
- Current drain (at 7.2V DC; approx.):
  - Transmit VHF/UHF   1.5A/1.8A (at 5W/5W)
  - Receive   stand-by   100mA
  -                       150mA (With UT-126H)
  - rated output   600mA
- Dimensions (with BP-232N) : 53 (W) ×136 (H) ×38.5 (D) mm;
  (projections are not included) $2^3\!/_{32}$ (W) ×$5^{11}\!/_{32}$ (H)×$1^{17}\!/_{32}$ (D) in
- Weight (approx.)   : 340g; 12.0oz (with BP-232N)

TRANSMITTER

- Output power   : 5W (VHF), 5W (UHF)
- Max. frequency deviation : ±5kHz (Wide)
  -                        ±2.5kHz (Narrow)
- Frequency error   : ±1.0ppm
- Spurious emissions   : 75dB typ.
- Adjacent channel power : 80dB typ. (Wide), 70dB typ.(Narrow)
- FM Hum and Noise   : 46dB typ. (Wide), 40dB typ. (Narrow)
- Audio harmonic distortion : 3% typ. (AF 1kHz, 40% deviation)
- Modulation limiting   : 60–100% of max. deviation
- External microphone connector :
  - 9-pin multi connector/ 2.2kΩ

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

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RECEIVER

- Intermediate frequency : 46.35MHz/450kHz (1st/2nd)
- Sensitivity   FM (W, N) : 0.25μV typ. (at 12dB SINAD)
  -              Digital   : 0.20μV typ. (at 5% BER)
- Squelch sensitivity   : 0.25μV typ. (at threshold)
- Adjacent channel selectivity : 75dB typ. (Wide), 68dB typ. (Narrow)
- Spurious response   : 70dB min.
- Intermodulation   : 74dB typ.
- Hum and noise ratio   : 46dB typ. (Wide), 40dB typ. (Narrow)
- Audio output power   : 500mW typ.
  -                        (at 5% distortion with an 8Ω load)
- External speaker connector: 9-pin multi connector/ 8Ω

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	502.4-3	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-232N
- Belt clip, MB-94