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

* With UT-126H installed. Already installed to the IC-F3161/D.

**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
- 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.

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**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
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 compressor 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-109R/UT-110R 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.

Options

BATTERY PACKS AND CASE

<table>
<thead>
<tr>
<th>Battery packs</th>
<th>Type</th>
<th>Capacity</th>
<th>Operating time*</th>
<th>Output power</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP-230N</td>
<td>Rechargeable Li-ion</td>
<td>950 mAh (min.)</td>
<td>5.5 hours</td>
<td>5 W</td>
</tr>
<tr>
<td>BP-232H</td>
<td>Rechargeable Li-ion</td>
<td>1250 mAh (min.)</td>
<td>14 hours</td>
<td>5 W</td>
</tr>
<tr>
<td>BP-240</td>
<td>AAA (LR03) batteries x 6</td>
<td>1 W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

REGULAR CHARGER
BC-147S**
Charges the BP-230H in 10 hours. (approx.)

RAPID CHARGER
BC-123S**
Charges the BP-230H in 3 hours. (approx.)

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

HEADSETS (VS-1SC or VS-4SC required)
HS-94 Earhook type
HS-95 Behind-the-head type
HS-97 Throat type

PTT CASE/PTT SWITCH CABLE
VS-1SC
Either VS-1SC or VS-4SC is required when using any of the headsets.

LEATHER BELT HANGERS
MB-96N
MB-96F
MB-96FL

CHARGER BRACKET
MB-130
For use with BC-160

IDAS™ digital mode ready
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**: IC-F3161T/S, DT/DS 512 channels/128 zones, IC-F4161T/S, DT/DS 256 channels/64 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 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/ 8 Ω

### RECEIVER

- **Sensitivity**: FM (W, N) : 0.25 µV typ. (at 12 dB SINAD)
- **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

### TRANSMITTER

- **Frequency range**: 136–174 MHz, 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)

### RECEPTOR

- **Sensitivity**: FM (W, N) : 0.25 µV typ. (at 12 dB SINAD)
- **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

### SUPPLIED ACCESSORIES

- **VHF Antenna**
- **UHF Antenna**
- **Battery pack, BP-232H**
- **Belt clip, MB-94**

### Ingress Protection Standard

- **Dust & Water**: IP55 (Dust-protection and water jet resistance)

### 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.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Method</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Pressure</td>
<td>500.4</td>
<td>I, II</td>
</tr>
<tr>
<td>High Temperature</td>
<td>500.4</td>
<td>I, II</td>
</tr>
<tr>
<td>Low Temperature</td>
<td>500.4</td>
<td>I, II</td>
</tr>
<tr>
<td>Temperature Shock</td>
<td>500.4</td>
<td>I</td>
</tr>
<tr>
<td>Solar Radiation</td>
<td>500.4</td>
<td>I</td>
</tr>
<tr>
<td>Rain Bowling/Cri</td>
<td>500.4</td>
<td>I, III</td>
</tr>
<tr>
<td>Humidity</td>
<td>500.4</td>
<td>I</td>
</tr>
<tr>
<td>Salt Fog</td>
<td>500.4</td>
<td>I</td>
</tr>
<tr>
<td>Dust Blowing</td>
<td>500.4</td>
<td>I</td>
</tr>
<tr>
<td>Vibration</td>
<td>515.4</td>
<td>I</td>
</tr>
<tr>
<td>Shock</td>
<td>516.5</td>
<td>I, IV</td>
</tr>
</tbody>
</table>

Also meets equivalent MIL-STD-810-C. D and E.

**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.

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