



## VHF AND UHF TRANSCEIVERS

### IC-F3162T

(UHF transceiver with 10-keypad)

### IC-F4162T

(UHF transceiver with 10-keypad)

### IC-F3162S

(UHF transceiver without 10-keypad)

### IC-F4162S

(UHF transceiver without 10-keypad)



# iDAS

ICOM DIGITAL ADVANCED SYSTEM



## Complete Analog Conventional IDAS Digital



- 512 ch / 128 zones
- Conventional/BIIS 1200 mode
- IDAS digital (With UT-126H)
- 2-Tone, 5-Tone CTCSS, DTCSS
- VHF 5W, UHF 5W output
- 14 hrs. operating time with BP-232N
- Full dot-matrix LCD

# ADVANCED TECHNOLOGY FOR THE FUTURE



▲ IC-F3162T

▲ IC-F4162S

## VHF TRANSCEIVERS

### IC-F3162T

With 10-keypad

### IC-F3162S

Without 10-keypad

## UHF TRANSCEIVERS

### IC-F4162T

With 10-keypad

### IC-F4162S

Without 10-keypad

### IP55 Dust-protection and water jet resistance

The IC-F3162 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 Li-Ion battery pack, BP-232N, provides 14 hours\* of operating time. Icom's rugged dual-rail guide securely locks the battery to the radio. 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 BISS signaling capabilities are built-in for group communication or selective calling. Also, the IC-F3062 series 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
- Auto TX
- Answer back call
- Scan
- Radio stun/kill/revive

### Wide frequency range and large channel capacity

The IC-F3162 series covers a wide frequency range in one version (VHF 136–174 MHz, UHF 400–470MHz). The 512 memory channel capacity with 128 zones allows you to divide and store a variety of flexible channel groupings. Memory channel selection can be made with a simple rotation of the rotary channel knob. Wide, middle and narrow channel bandwidth (25/20/12.5kHz)\* is also programmable.

\* Programmable 25/12.5kHz or 20/12.5kHz

### Voting mode scanning

The Voting mode scanning detects the S-meter 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.

# UTURE NOW!

## Full dot-matrix LCD

Using a large full dot-matrix LCD (32 × 18 mm), the IC-F3162 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-F3162 series employs a BTL amplifier that increases the audio output and the built-in audio compander provides clear, low noise communications.

## 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, optional voice scrambler UT-109R or UT-110R are available.

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

## BIIS 1200 compatible

The following selective calling and data features are available with the built-in BIIS system.

- 32 abbreviated call memories
- 7 group IDs • 24-status Messages
- Send 12-character SDM (Short Data Message)
- Receive up to 95 characters of free text
- GPS position reporting function with optional HM-170GP

## Other features

- Built-in basic LTR™ trunking capability.
- 8 DTMF autodial memories
- 2 step reduced power setting
- Power on password
- Busy, repeater lockout functions
- Surveillance function temporarily turns off the LED backlight and beep sound
- Powerful 5W output both 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/ 980mAh	7.35 hours	5W
BP-232N	Li-Ion 7.4V/2000mAh	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-147      ▲ BC-171

**BC-171 DESKTOP CHARGER + BC-147 AC ADAPTER**  
Charges the battery pack in 8–10 hours (approx.).

### RAPID CHARGER

▲ BC-145      ▲ BC-160

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

### POWER SUPPLY CABLES

▲ CP-17L      ▲ OPC-515L

**CP-17L CIGARETTE LIGHTER CABLE, OPC-515L DC POWER CABLE**  
For use with the BC-160 or BC-119N. (12–16V DC required).

### 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).

### BELT CLIPS AND LEATHER BELT HANGERS

▲ MB-93      ▲ MB-96F

**MB-93** : Swivel type belt clip.  
**MB-94** : Alligator type. Same as supplied.  
**MB-96N** : Swivel type belt hanger.  
**MB-96F** : Fixed type belt hanger.

### SPEAKER-MICROPHONES

IPX7      IP57      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**: IDAS Digital unit.

### 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-SC56V: 150–162MHz  
• FA-SC57V: 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

The IDAS (Icom Digital Advanced System) is Icom's digital PMR system using the NXDN™ common air interface. It has useful calling features including selective calling, status message, radio stun/kill/revive, etc with spectrum efficient 6.25kHz channel spacing.

The IC-F3162 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.

**DIGITAL**



## SPECIFICATIONS

## GENERAL

- Frequency range :  
IC-F3162T/S 136–174MHz  
IC-F4162T/S 400–470MHz
- Number of channels : 512 channels/128 zones
- Channel spacing : 12.5kHz/20kHz/25kHz  
6.25kHz (with UT-126H)
- PLL channel step : 2.5kHz, 3.125kHz
- Antenna impedance : 50Ω
- Power supply requirement : 7.2V DC nominal
- Current drain (at 7.2V DC; approx.):  
Transmit at 5W/5W 1.5A/1.8A (VHF/UHF)  
Receive Stand-by 100mA  
150mA (with UT-126H)  
Rated output 600mA
- Usable temperature range : –25°C to +55°C
- Dimensions : 53 (W) × 136 (H) × 38.5 (D) mm  
(projections are not included)
- Weight (approx.) : 340g (with BP-232N)

## TRANSMITTER

- Output power : 5W (VHF), 5W (UHF)
- Max. frequency deviation : ±5.0/4.0/2.5kHz (Wide/middle/narrow)
- Frequency error : ±1.0ppm
- Spurious emissions : 0.25μW (≤1GHz)  
1.0μW (>1GHz)
- Adjacent channel power : 70dB min. (Wide, middle)  
60dB min. (Narrow)
- Audio harmonic distortion : 3% typ. (AF 1kHz, 40% deviation)
- Modulation limiting : 60–100% of max. deviation
- Ext. microphone connector: 9-pin multi connector/ 2.2kΩ

Measurements made in accordance with EN 300-086.  
All stated specifications are subject to change without notice or obligation.

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## RECEIVER

- Intermediate frequency : 46.35MHz/2nd 450kHz
- Sensitivity :  
FM –4dBμV typ. (emf, at 20dB SINAD)  
Digital (with UT-126H) –8dBμV typ. (emf, at 5% BER)
- Squelch sensitivity : –4dBμV typ. (emf, at threshold)
- Adjacent channel selectivity : 75/75/68dB typ. (Wide/middle/narrow)
- Spurious response : 70dB min.
- Intermodulation : 67dB typ.
- 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 &amp; 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)



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