ICOM

VHF AND UHF TRANSCEIVERS

# IC-F3163T
(UHF transceiver with 10-keypad)

# IC-F4163T
(UHF transceiver with 10-keypad)

# IC-F3163S
(UHF transceiver without 10-keypad)

# IC-F4163S
(UHF transceiver without 10-keypad)

Rugged MIL-STD 810

MDC 1200 Compatible

BIIS 1200 Compatible

IP55

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, DTCS
- VHF 5W, UHF 5W output
- 14 hrs. operating time with BP-232N
- Full dot-matrix LCD

# LTR®/Conventional/Digital* – Multi-Mod

* With UT-126H installed.

▲ IC-F3163T ▲ IC-F4163S

## VHF TRANSCEIVERS

**IC-F3163T**
With 10-keypad

**IC-F3163S**
Without 10-keypad

## UHF TRANSCEIVERS

**IC-F4163T**
With 10-keypad

**IC-F4163S**
Without 10-keypad

### Basic LTR™/Conventional mode operation

Both conventional and LTR™ mode channels are programmable in a radio. MDC signaling is also available on LTR™ mode.

### IP55 Dust-protection and water jet resistance

The IC-F3163 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

Supplied 2000mAh 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 built-in 2-Tone and 5-Tone capabilities allow you to send a tone code with your call and decode multiple tone code on a channel. 40 pairs of CTCSS/DTCS memory channels are also available.

### 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

### 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

### Wide frequency range

The IC-F3163 series covers a wide frequency range in one version (VHF 136–174 MHz, UHF 400–470MHz or 450–520 MHz).

# e Land Mobile

## Full dot-matrix LCD

Using a large full dot-matrix LCD (32 × 18 mm), the IC-F3163 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.

## 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.

## Enhanced audio

The IC-F3163 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-109R/UT-110R voice scrambler.

## Other features

- 512 memory channel with 128 zones
- 8 DTMF autodial memories
- 2 step reduced power setting
- Busy, repeater lockout functions
- Lone worker function
- Escalating alarm
- Mode dependent scan
- Surveillance function temporarily turns off the LED backlight and beep sound
- Powerful 5W output both VHF and UHF
- Power on password 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

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

**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 digital mode ready

DIGITAL

The IDAS (Icom Digital Advanced System) is Icom's digital LMR 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-F3163 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-F3063T/S 136–174MHz
  IC-F4063T/S 400–470MHz
  450–520MHz
- Number of channels : 512 channels/128 zones
- Channel spacing : 12.5kHz/25kHz,
  6.25kHz (With UT-126H)
- PLL channel step : 2.5kHz, 3.125kHz
- Antenna impedance : 50Ω
- Usable temperature range : –30˚C to +60˚C
- 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)
- Weight (approx.) : 340g (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

### RECEIVER

- Intermediate frequency : 1st 46.35MHz
  2nd 450kHz
- Sensitivity : 0.25μV typ. (at 12dB SINAD)
- 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) |

**All stated specifications are subject to change without notice or obligation.**

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### SUPPLIED ACCESSORIES (May differ according to version)

Icom Inc. 1-1-32, Kami-minami, Hirano-ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013 URL: http://www.icom.co.jp/world/index.html Count on us!

Icom America Inc. Icom New Zealand Icom (UK) Ltd. Asia Icom Inc.
Icom Canada Icom (Europe) GmbH Icom France S.A.R.L. Beijing Icom Ltd.
Icom (Australia) Pty. Ltd. Icom (Italia) S.r.l. Icom (Espana) S.L. Icom (Russia) Ltd.

TE (PNG)

HEAD OFFICE - PORT MORESBY
CAMERON ROAD, WAIGANI
[T]: +675 325 6322
[F]: +675 325 0350
EMAIL: INFO@TEPNG.COM

BRANCH OFFICE - LAE
LAURABADA AVENUE, LAE
[T]: +675 472 6262
[F]: +675 472 1323
EMAIL: LAE@TEPNG.COM

VISIT OUR WEBSITE: WWW.TEPNG.COM