



VHF AND UHF TRANSCEIVERS

IC-F33GT

(VHF transceiver with 10-keypad)

IC-F43GT

(UHF transceiver with 10-keypad)

IC-F33GS

(VHF transceiver without 10-keypad)

IC-F43GS

(UHF transceiver without 10-keypad)

A new direction in Land Mobile radios

- Large channel capacity
- Wide range frequency coverage
- Lithium-ion battery standard
- Multiple tone signaling capabilities
- Built-in audio compander
- Optional SmarTrunk 3G™, voice scrambler, man down and DTMF decoder units



**BIIS 1200
Compatible**



Icom Inc.

A new direction in Land Mobile radios



The IC-F33G series is suitable for a variety of needs — large or small, mobile or stationary. Whether you are a large-scale construction site, warehouse, hospital or hotel, or a small on the go messenger service, this radio provides the built-in flexibility to handle your communication needs.

Offering advanced features such as wide frequency range, multiple signaling and loud audio, the IC-F33G series is a rugged and reliable 2-way communications tool. This is the new direction in LMR communications.

Lithium-Ion battery pack

Supplied 1150mAh Li-Ion battery pack, BP-231, provides 8/9 hours* of operating time. For longer operating time, use the BP-232 which is rated for a full 15/16 hours*. Li-Ion technology has virtually no memory charging issues. A rugged dual-rail guide securely locks the battery to the radio.

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

Wide frequency range and large channel capacity

The IC-F33G series covers a wide frequency range in one version (VHF 136–174 MHz, UHF 400–470MHz or 450–512 (520) MHz). The 256 memory channel capacity with 16 memory banks allows you to divide and store a variety of flexible channel groupings. Easy memory channel selection with a simple rotation of the rotary channel knob.

Small and lightweight body

The IC-F33G series sheds size and weight compared with previous models, weighing just 285g* (including BP-231) and measuring only 53(W)×120(H)×32.5(D) mm**. The aluminum die-cast chassis and polycarbonate casing combination meets MIL standard specifications.

* 10.0 oz, VHF version ** 2³/₃₂(W)× 4²³/₃₂(H)×1⁹/₃₂(D) in

VHF TRANSCEIVERS

IC-F33GT

With 10-keypad

IC-F33GS

Without 10-keypad

UHF TRANSCEIVERS

IC-F43GT

With 10-keypad

IC-F43GS

Without 10-keypad

Built-in multi-format tone signaling

Use the built-in CTCSS, DTCS, 2-Tone, 5-Tone or BIIS capability to set up your own talk groups and quiet stand-by when others are talking. You can also set up selective calls to individuals or control a repeater.



Multiple 2-Tone, Multiple 5-Tone

Encode or decode up to 10 2-Tone, 8 5-Tone codes on a single memory channel. This is perfect for professionals who require multiple district paging on one channel. When a matched tone is received, the following items are programmable for each code.

- Bell icon
- Answer back
- Stun
- Beep sound
- Auto transmit
- Scan

8 programmable buttons

The [P0]–[P3], [▲], [▼], [Red] and [Monitor] buttons are programmable to meet specific needs. The [Red] button on the top panel can be assigned as an emergency trigger.

Alphanumeric display

The 8-character alphanumeric display shows channel, bank, tone code and scanning channel names on the display. A separate row of operational icons indicate battery, signal strength, RX/TX and other radio conditions.

Audio compander

The built-in audio compander reduces noise components and provides clear reception even in narrow band use.

Built-in voice scrambler

The IC-F33G series includes a built-in inversion type voice scrambler in all models. When a more secure system is required, the optional voice scrambler unit UT-109 or UT-110 is available.

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 8-character SDM (Short Data Message)
- Receive up to 95 characters of free text

Other features

- 8 DTMF autodial memories
- 2 step reduced power setting
- Power saver
- Power on password
- Busy, repeater lockout functions
- Optional SmarTrunk 3G™ unit, UT-117
- Programmable wide and narrow channel bandwidth (25/12.5kHz, 30/15kHz) and more...

OPTIONS

BATTERY PACKS

▲ BP-230 ▲ BP-231 ▲ BP-232

Battery packs	Type and capacity	Operating time* (VHF/UHF)	Output power (VHF/UHF)
BP-230	Li-Ion 7.4V/ 800mAh	6/6 hours	5W/4W
BP-231	Li-Ion 7.4V/1150mAh	9/8 hours	5W/4W
BP-232	Li-Ion 7.4V/2000mAh	16/15 hours	5W/4W

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

RAPID CHARGER

▲ BC-145 ▲ BC-160 ▲ CP-17L ▲ OPC-515L

BC-160 DESKTOP CHARGER + BC-145 AC ADAPTER
Charges the BP-231 in 2 hours (approx.).

BC-119N DESKTOP CHARGER + AD-106 CHARGER ADAPTER + BC-145 AC ADAPTER : Charges the BP-231 in 2 hours (approx.).

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

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-124

BC-121N MULTI-CHARGER + AD-106 CHARGER ADAPTER + BC-124 AC ADAPTER

Rapidly charges up to 6 battery packs (Six AD-106s are required).
Charging time: approx. 2 hours when BP-231 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.

HEADSETS and PTT/VOX UNIT

▲ HS-94 ▲ HS-95 ▲ HS-97 ▲ VS-1L

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-1L: PTT/VOX unit. Required when using these headsets with the transceiver.

SPEAKER-MICROPHONE

HM-131L : Durable body. Equipped with an earphone jack and revolving clip.

SP-13 : EARPHONE
Provides clear audio in noisy environments.

INTERNAL UNITS

UT-105 SmarTrunk II™ Board UT-108 DTMF DECODER UT-109 VOICE SCRAMBLER UNIT UT-113 MAN DOWN UNIT UT-117 SmarTrunk 3G™ Board

UT-105 : Provides SmarTrunk II™ capabilities.

UT-108 : Provides DTMF, Selective call and ANI capabilities.

UT-109 : Up to 32 scrambling codes are available. Version 02 is required.

UT-110 : Up to 1020 scrambling codes are available. Version 02 is required.

UT-113 : Automatically sends an emergency signal when the transceiver is left in a horizontal position for a preset time.

UT-117 : Provides SmarTrunk 3G™ and SmarTrunk II™ capabilities. Enhanced calling features available.

STUBBY ANTENNA

FA-SC73US

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

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

SPECIFICATIONS

GENERAL

- Frequency range :
 - IC-F33GT/GS 136–174MHz (U.S.A. and General)
 - IC-F43GT/GS 400–470MHz (U.S.A. and General)
 - 450–512MHz (U.S.A.)
 - 450–520MHz (General)
- Number of channels : 256 channels/16 banks
- Channel spacing : 12.5kHz/25kHz, 15kHz/30kHz
- PLL channel step : 2.5kHz, 3.125kHz (VHF)
5kHz, 6.25kHz (UHF)
- 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/1.7A (at 5W/4W)
 - Receive stand-by 85mA
 - rated output 300mA
- Dimensions (with BP-231) : 53 (W) ×120 (H) ×32.5 (D) mm;
(projections are not included) 2³/₃₂ (W) ×4²³/₃₂ (H) ×1⁹/₃₂ (D) in
- Weight (approx.) : 285g; 10.0oz (VHF)
(with BP-231 and antenna) 300g; 10.6oz (UHF)

TRANSMITTER

- Output power : 5W (VHF), 4W (UHF)
- Max. frequency deviation : ±5kHz (Wide)
±2.5kHz (Narrow)
- Frequency error : ±2.5ppm
- Spurious emissions : 80dB typ. (VHF)
70dB typ. (UHF)
- Adjacent channel power : 70dB (Wide), 60dB (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 :
3-conductor 2.5 (d) mm (1/10")/2.2kΩ

Measurements made in accordance with EIA/TIA-603. All stated specifications are subject to change without notice or obligation.

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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)
65dB typ. (Narrow)
- Spurious response : 70dB
- Intermodulation : 74dB typ.
- Hum and noise ratio : 45dB typ. (Wide)
40dB typ. (Narrow)
- Audio output power : 500mW typ.
(at 5% distortion with an 8Ω load)
- External speaker connector: 2-conductor 3.5 (d) mm (1/8")/8Ω

Applicable U.S. Military Specifications

Icom makes rugged products that meet MIL-STD requirements and strict environmental standards as follows.

Standard	MIL 810C		MIL 810D		MIL 810E		MIL 810F	
	Method	Proc.	Method	Proc.	Method	Proc.	Method	Proc.
Low Pressure	500.1	I	500.2	I, II	500.3	I, II	500.4	I, II
High Temp.	501.1	I	501.2	I, II	501.3	I, II	501.4	I, II
Low Temp.	502.1	I	502.2	I, II	502.3	I, II	502.4-3	I, II
Temp. Shock	503.1	I	503.2	I	503.3	I	503.4	I
Solar Radiation	505.1	I	505.2	I	505.3	I	505.4	I
Rain	506.1	II	506.2	II	506.3	II	506.4	III
Humidity	507.1	I, II	507.2	II, III	507.3	II, III	507.4	–
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	–
Dust	510.1	I	510.2	I	510.3	I	510.4	I
Vibration	514.2	VIII, X	514.3	I	514.4	I	514.4	I
Shock	516.2	I, II, V	516.3	I, IV	516.4	I, IV	516.5	I, IV

SUPPLIED ACCESSORIES

(May differ according to version)



- Belt clip, MB-94
- Unit cover
- Battery pack, BP-231

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