ICOM

IC-F30GT
(VHF transceiver with keypad)

IC-F40GT
(UHF transceiver with keypad)

IC-F30GS
(VHF transceiver without keypad)

IC-F40GS
(UHF transceiver without keypad)

Rugged
MIL-STD 810

BIIS 1200 Compatible

Intrinsically safe versions available

ch256
IcomIC-F30GT

ch255
IcomIC-F30GS

If you want a durable, versatile, reliable and easy-to-operate portable communications tool, the IC-F30G & IC-F40G series is designed for you. This series is designed for commercial communication or professional use with a host of built-in features, such as multiple tone-signalings, Flash-ROM, high speed PLL*1, Compander function and more. Not only for conventional operation, but also compatible with Trunking systems*2, this series is particularly useful for organizations that have large communications fleets. Icom's technologies guarantee to satisfy your needs.

*1 Except IC-F30GT-L/F30GS-L. *2 Optional unit is required.

VHF AND UHF TRANSCEIVERS

VHF transceiver with keypad
IC-F30GT
VHF transceiver without keypad
IC-F30GS
UHF transceiver with keypad
IC-F40GT
UHF transceiver without keypad
IC-F40GS

ch156
IcomIC-F40GT

ch157
IcomIC-F40GS

▲ IC-F40GT

▲ IC-F40GS

BP-208N AA (LR6) batteries × 6

BP-209N Ni-Cd 7.2V/1100mAh
BP-222N Ni-Cd 7.2V/600mAh

BP-210N Ni-MH 7.2V/1650mAh
BP-210N-FM Ni-MH 7.2V/1650mAh (Intrinsically safe)

BP-211N Li-Ion 7.4V/1800mAh

BATTERY PACKS AND CASE		BP-208N	BP-209N	BP-210N BP-210N-FM	BP-211N	BP-222N
Output Power	VHF	1W (typ.)	5W (typ.)	5W (typ.)	5W (typ.)	5W (typ.)
	UHF	1W (typ.)	4W (typ.)	4W (typ.)	4W (typ.)	4W (typ.)
Battery Life		–	6.5hours	10hours	12hours	3.5hours

Approx. output power and battery life (Tx (Hi): Rx: standby=5:5:90)

BATTERY CHARGER
BC-146 +BC-147A/E

BC-146 DESKTOP CHARGER + **BC-147A/E** AC ADAPTER Charges the battery pack, BP-209N, BP-210N/FM or BP-222N with/without transceiver in 12, 18.5, 6.5 hours (approx.), respectively. An AC adapter, BC-147, is additionally required.

RAPID CHARGER
BC-121N+**AD-101**×(6 pcs.) +**BC-157**

BC-144N+**BC-145A/E/V**

BC-144N DESKTOP CHARGER + **BC-145** AC ADAPTER For rapid charging of battery pack, BP-209N, BP-210N/FM or BP-222N. An AC adapter, BC-145, is supplied with the charger depending on version. Charging time: 1.5 to 2 hours. Cannot charge Li-Ion battery pack, BP-211N.
BC-119N+**AD-101**+**BC-145** rapidly charges BP-211N as well as other battery packs.
BC-121N MULTI-CHARGER + **AD-101** CHARGER ADAPTER + **BC-157** AC ADAPTER For rapid charging of up to 6 battery packs (Six AD-101s are required), BP-209N, BP-210N/FM, BP-211N or BP-222N. An AC adapter, BC-157, may be supplied, depending on version. Charging time: 1.5 to 2 hours.
OPC-656 DC POWER CABLE For use the BC-121N with a DC power supply (12–20V DC).

SPEAKER-MICROPHONES

HM-131SC

EM-80

HM-131SC :Compact and durable body. phone jack and a revolving c
EM-80 :Durable, full-sized microphone
EM-89 :Slim dimensions. Equipped

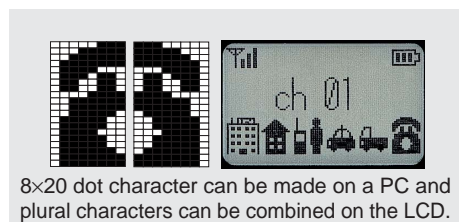## Full built-in tone-signalings

All tone-signalings are built-in such as CTCSS, DTCS, 2-tone/5-tone and DTMF encode/decode, so you don't need to install an optional tone-signaling board. And a wide variety of selective calling systems are available to call specific station(s) or control a repeater. In addition, ANI (Automatic Number Indication) function is available with 2-tone/5-tone and DTMF.

Largest LCD in its class

With the large LCD, a simple sentence of up to 24 full-dot matrix characters provides more smooth communication than previous one word indication. Operational icons, such as antenna (S-meter) or battery life, show various operating status at a glance. Further more, original characters can be made and indicated on the LCD.

8×20 dot character can be made on a PC and plural characters can be combined on the LCD.

Durable construction

The body is compact, yet the polycarbonate panel and one-piece aluminum chassis provides durable construction to have been tested to the MIL STD specifications. You can count on the unit to operate in challenging environments.

BIIS 1200 compatible

The following selective calling and data message features are available with the BIIS* version.
• 32 abbr. memories   • 7 Group IDs
• 12-character SDM (Short Data Message)
• 24-status messages   • RS-232C interface
• Position data transmission with a GPS
  * Except IC-F30GT-L/F30GS-L.

Up to 8 dealer-programmable key assignments

The following functions can be programmed in conventional mode or SmarTrunk mode.
• Channel up/down • Bank up • Call • Beep
• Scan A/B start/stop • Scan Tag add/delete
• Priority A/B • Key lock • Monitor • Scrambler
• C. Tone CH enter • MR-CH 1/2/3/4 • High/Low
• Talk around • ID-MR select • Null (Light)
• Trunking group SW • Tx code enter • Re-dial
• Tx code CH select • Emergency single/repeat
• DTMF autodial • Turbo SpeeDial A/B/C/D
• Special function 1/2 • OPT 1/2/3 momentary
• Compand • Wide/Narrow • Digital button

Advanced PC programming for Microsoft® Windows® 95/98

256 memory Channels

Up to 256 memory Channels with 12 character channel names can be stored with up to 16 banks. The rotary selector allows you to select each bank or memory Channel.

Simultaneously work 2 optional internal units

2 optional units can be installed and will work simultaneously. You can select optional units to suit your needs and to provide versatile usage.

Combination of available internal units

Option Slot 1	With BIIS channel	Option Slot 2		
		UT-109 Voice Scrambler Unit	UT-110 Voice Scrambler Unit	UT-113 Man Down Unit
UT-105*1 SmarTrunk II™ Board	— *2	✔	✔	✔ *3
UT-111*1 LTR® Trunking Board	— *2	✔	✔	✔ *3
UT-109 Voice Scrambler Unit	✔		— *4	✔
UT-110 Voice Scrambler Unit	✔	— *4		✔
UT-113 Man Down Unit	✔	✔	✔	

✔ Available simultaneously
–   Not available
*1 UT-105 and the UT-111 have to be installed in slot 1.
*2 Trunking channels have to be set in a separate bank from a BIIS channel bank.
*3 UT-113 is available in conventional (includes BIIS channel) mode.
*4 UT-109 and UT-110 can not be installed simultaneously.

Low band VHF (66–88MHz) version

Optional antenna (FA-SC12L/13L) is required.

Intrinsically safe version approved by Factory Mutual Research Corp.

Built-in Compander function

Built-in Compander function provides clear audio quality under noisy environments.
* Receiving party must have same function.

Smart design with easy operation

The rounded, compact* design fits comfortably in your palm, and is easy to carry around. The large keypad makes one-hand operation easy.
* Size (W×H×D): 54×139×38mm ; 2⅛×5¹⁵⁄₃₂×1½ in

Multi connector for accessories

The 9-pin multi connector, which use the spring action for close contact, allows you reliable operation with accessories, such as a speaker-microphone or earphone.

Other features

• The red key on the top panel can be an emergency trigger
• Normal and priority scan functions
• Time out timer capability
• Narrow/wide multi-band width and 2-step power save are supported
• Talk around function changes duplex channel to simplex
• VOX capability and more...

HEADSET and PTT/VOX UNIT

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

EM-89

...y. Equipped with an ear-
clip.
ne with internal speaker.
with an earphone jack.

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

OPTIONAL ANTENNAS

① ② ③ ④ ⑤

ANTENNAS	Freq. Range	Ring Color
① FA-SC56VS	146–162MHz	Red
② FA-SC57VS	160–174MHz	Green
③ FA-SC73US	450–490MHz	Red
④ FA-SC12L	66–76MHz	White
⑤ FA-SC13L	76–88MHz	Red

ANTENNAS (Standard type)
FA-SC25V for 136–155MHz
FA-SC55V for 146–174MHz
FA-SC25U for 400–430MHz
FA-SC57U for 440–470MHz
FA-SC72U for 470–520MHz

ANTENNA ADAPTER CONNECTOR
AD-98FSC : BNC-type antenna connector. (For maintenance use only)
BELT CLIPS
MB-103: Alligator type clip. Same as supplied.
MB-86: Swivel belt clip.
LEATHER BELT HANGERS
MB-96N: Swivel type belt hanger.
MB-96F: Fixed type belt hanger. For use with MB-103.
EARPHONE
SP-13 EARPHONE +**AD-52** EARPHONE ADAPTER
INTERFACE CABLE
OPC-966: RS-232C interface cable for connecting with a PC.
INTERNAL UNITS
UT-105: SmarTrunk II™ BOARD: Provides SmarTrunk II™ capabilities.
UT-109: VOICE SCRAMBLER UNIT:
Provides operating security. Up to 32 scrambling codes are available. The scrambling system is not compatible with the UT-110.
UT-110: VOICE SCRAMBLER UNIT:
Up to 1020 (255 codes × 4 groups) scrambling codes are available. The scrambling system is not compatible with the UT-109.
UT-111: LTR® TRUNKING BOARD: Provides LTR® trunking capabilities.
UT-113: MAN DOWN UNIT: Automatically sends an emergency signal when the transceiver is left in horizontal position.

SPECIFICATIONS

GENERAL

- **Frequency range** :
  - IC-F30GT-L/GS-L   66– 88MHz
  - IC-F30GT/GS   136–174MHz
  - IC-F40GT/GS   400–430MHz   440–480MHz
  -      450–490MHz (U.S.A.)   480–512MHz (U.S.A.)
  -      480–520MHz (others)
- **Number of Channels** : Max. 256 Ch/ 16 banks
- **Channel spacing** :
  - IC-F30GT-L/GS-L   25kHz/12.5kHz
  - IC-F30GT/GS   25/30kHz/12.5/15kHz
  -      20kHz/12.5kHz
  - IC-F40GT/GS   25kHz/12.5kHz
  -      20kHz/12.5kHz
- **Antenna impedance** : 50Ω
- **Frequency error** : ±2.5ppm (EIA), ±1.5kHz (ETS)
  - IC-F30GT-L/GS-L   ±10ppm (EIA), ±1.0kHz (ETS)
- **PLL channel step*** : 2.5kHz, 3.125kHz, 5kHz, 6.25kHz, 7.5kHz
  - IC-F30GT-L/GS-L   5kHz, 6.25kHz   (*Depending on version)
- **Power supply requirement** : 7.2V DC (Icom battery pack)
- **Current drain** (at 7.2V DC; approx):

		IC-F30GT-L/GS-L	IC-F30GT/GS	IC-F40GT/GS
Transmit	High	1.8A typ.	1.7A typ.	1.7A typ.
Receive	AF max.	300mA	300mA	300mA
	stand-by	90mA	95mA	95mA

- **Operating temp. range** : −30˚C to +60˚C; −22˚F to +140˚F (EIA)
  - −25˚C to +55˚C (ETS)
- **Dimensions** : 54(W)×139(H)×38(D)mm
  - (projections not included)   2⅛(W)×5¹⁵⁄₃₂(H)×1½(D)in
- **Weight** (with BP-210) : 420g; 14.8 oz

TRANSMITTER

- **Modulation system** : Variable reactance frequency modulation
- **Output power** : 5.0W (IC-F30GT-L/GS-L)
  - (nominal)   5.0W (IC-F30GT/GS)
  -      4.0W (IC-F40GT/GS)
- **Max. freq. deviation** : ± 2.5kHz, ± 5kHz, ± 4kHz
- **Modulation limiting** : 60–100%
- **Audio harmonic distortion** : 3% typ. (1 kHz/40% dev.)
- **Spurious emissions** : −73dB (EIA)
  - Less than 0.25μW (ETS)
- **Adjacent Ch. power** : 60dB (ETS; 12.5 kHz)
  - 70dB (ETS; 25/20 kHz)
- **Residual modulation** : 43dB/45 dB typ. (ETS; 12.5kHz/25/20kHz)
  - IC-F30GT-L/GS-L   50dB/50 dB typ. (ETS; 12.5kHz/25kHz)
- **External MIC connector** : 9-pin multi connector/ 2.2kΩ

INTRINSICALLY SAFE TYPE APPROVAL

FM APPROVED

There are versions that conform to intrinsically safe rating of the FMRC (Factory Mutual Research Corporation). Ask your dealer for details.

Intrinsically safe Class I, II and III, Division 1, Groups C, D, E, F, and G ; Nonincendive Class I, Division 2, Groups A, B, C and D hazardous locations when used with Icom BP-210N-FM battery pack "Max. Temp. T3C at 60°C"

RECEIVER

- **Sensitivity** : 0.25μV typ. (at 12dB SINAD)
  - 0.63μV typ. (at 20dB SINAD; emf)
- **Squelch sensitivity** : 0.25μV (at threshold)
- **Adjacent Ch. selectivity** : 63dB typ. (ETS; 12.5kHz)
  - 73dB typ. (ETS; 25kHz)
- **Spurious response** : 70dB (EIA, ETS)
- **Intermodulation** : 74dB typ. (EIA)
  - 70dB typ. (ETS)
- **Hum and noise ratio** : 40dB/43dB typ. (EIA; 12.5kHz/25/20kHz)
  - 43dB/45dB typ. (ETS; 12.5kHz/25/20kHz)
  - IC-F30GT-L/GS-L   48dB/54dB typ. (EIA; 12.5kHz/25kHz)
  - 50dB/55dB typ. (ETS; 12.5kHz/25kHz)
- **Audio output power** : 0.5W typ. at 5% distortion with an 8Ω load
- **External SP connector** : 9-pin multi connector/ 8Ω

Applicable U.S. Military Specifications

Icom makes rugged products that have been tested to and passed the following MIL-STD requirements and strict environmental standards.

Standard	MIL 810C		MIL 810D		MIL 810E	
	Method	Procedure	Method	Procedure	Method	Procedure
Low Pressure	500.1	I	500.2	I, II	500.3	I, II
High Temp.	501.1	I	501.2	I, II	501.3	I, II
Low Temp.	502.1	I	502.2	I, II	502.3	I, II
Temp. Shock	503.1	I	503.2	I	503.3	I
Solar Radiation	505.1	I	505.2	I	505.3	I
Rain	506.1	I, II	506.2	I, II	506.3	I, II
Humidity	507.1	I, II	507.2	II, III	507.3	II, III
Salt Fog	509.1	I	509.2	I	509.3	I
Dust	510.1	I	510.2	I	510.3	I
Vibration	514.2	VIII, X	514.3	I	514.4	I
Shock	516.2	I, II, IV	516.3	I, IV	516.4	I, IV

Supplied accessories: • Antenna*

▲ VHF antenna

▲ UHF antenna

• Belt clip   • Battery pack, BP-210N

* May differ according to version.
Not supplied for the IC-F30GT-L/GS-L.

Measurements made in accordance with EIA-152C/204D, TIA-603 or ETS 300-086. All stated specifications are typical and subject to change without notice or obligation.

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