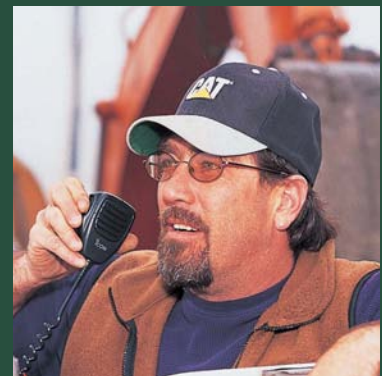




# PROFESSIONAL COMMUNICATIONS



**HARD WORKING RADIOS**

Icom Inc.

## VHF HANDHELD TRANSCEIVERS

IC-F70DT IC-F70T  
IC-F70DS IC-F70S

## UHF HANDHELD TRANSCEIVERS

IC-F80DT IC-F80T  
IC-F80DS IC-F80S

**FCC** : IC-F70DT/DS, IC-F80DT/DS (P25 Digital Versions),  
IC-F70T/S, IC-F80T/S (Analog FM Versions)



# THE SMART MIGRA FROM ANALOG TO P25 DIGITAL RADIO

Digital migration is now an inevitable trend for commercial users. Intelligently, the IC-F70D, F1721D and F1821D series of programmable P25 digital and FM mode per channel allows. P25 digital software can be reserved for future upgrade, built-in multiple tone signalings and rugged waterproof\* construction. IC-F70D, F1721D and F1821D are the smart choice for commercial users.  
\* IC-F70 and F80 only.

## Interoperability (P25 feature)

The IC-F70D, F1721D and F1821D series ensure interoperability with other manufacturer's P25 digital radios in conventional mode. The radios are programmable digital and/or analog FM modes per channel.

## Upgrade to digital option\* (P25 feature)

The IC-F70D, F1721D and F1821D series are available in two digital versions. One version is P25 compliant out of the box. The other version is an analog only radio that is future upgradeable to P25 digital compatibility. (\* Upgrade software available later.)

## Flash Upgradeable\* (P25 feature)

Enables future enhancements such as AES/DES digital encryption capability to be uploaded from a PC.

(\* AES/DES digital encryption will be available in the near future.)

## IPX7 waterproof protection

The IC-F70/F80 series has waterproof\* construction that is sealed with waterproof gaskets. The water removal design from the speaker grill keeps the communication clear, no matter what the elements are.

\* 1m depth for 30 minutes.





# ATION AN APCO D SYSTEM



IC-F1721D, F1821D, F2721D, F2821D  
IC-F70DT/DS, F80DT/DS only.

ial radio. To use your existing analog radio resources in-  
fer an ideal solution for analog to digital migration. Pro-  
you to seamlessly add to a current FM radio network. The  
depending on the version. The rich FM features such as  
instruction ensure a flexible, long life radio for you. The IC-  
urrent –and future –public safety communication needs.

## Dot matrix, multi-function LCD

The IC-F70/D, F1721/D and F1821/D series have a large dot matrix display to show information with high resolution characters. The display setting is programmable to show one line and 12 characters, or two lines and 24 characters. In addition, the IC-F70/D series shows the functions assigned to the [P] buttons at the bottom of the display.

## Built-in versatile tone signaling

Use the built-in CTCSS, DTCS, 2-Tone, 5-Tone or BIIS capability to set up your own talk groups, and have your radio standby quietly when other groups are talking. Up to 10 2-Tone, 8 5-Tone codes can be decoded on a single memory channel. When a matched tone is received, the various items such as beep sound, bell icon and auto transmit are programmable for each code.

## VHF MOBILE TRANSCEIVERS

IC-F1721D IC-F1721  
IC-F1821D IC-F1821

## UHF MOBILE TRANSCEIVERS

IC-F2721D IC-F2721  
IC-F2821D IC-F2821

**FCC** : IC-F1721D, F1821D, F2721D, F2821D (P25 Digital Versions)  
IC-F1721, F1821, F2721, F2821 (Analog FM Versions)

## Other features

- Large capacity Li-Ion battery pack for IC-F70/D series
- Heavy-duty microphone, HM-148 is supplied with IC-F1721/D, F1821/D series
- Built-in audio compander
- 256 memory channels and 32 zones
- Built-in Voice Operated Transmission (VOX) capability (IC-F70/D series only)

### Supplied Accessories (May differ according to version)

- IC-F70T/S, IC-F70DT/DS, IC-F80T/S, F80DT/DS
- Battery pack, BP-235 • Belt clip, MB-94 • Antenna
- IC-F1721/D, IC-F2721/D, IC-F1821/D, F2821/D
- Hand microphone, HM-148 • DC power cable • Microphone hanger
- Mounting bracket kit • Key assign stickers • External speaker, SP-22\*
- \* IC-F1821/D, F2821/D only.



▲ IC-F1721D, F2721D (Non-keypad version).

▲ IC-F1821D, F2821D (10 keypad version).

VHF HANDHELD TRANSCEIVERS  
**IC-F50 IC-F51**

UHF HANDHELD TRANSCEIVERS  
**IC-F60 IC-F61**

**FCC** : IC-F50, IC-F60

**ETS** : IC-F51, IC-F61



# SUPERIOR WATERPROOF PROTECTION

*The IC-F50 series offers a compact waterproof package that is easy to use. This radio keeps you in contact in nearly any environment.*

## IPX7 Waterproof Protection

The gasket sealed waterproof housing provides superior waterproof protection, equivalent to IPX7\*. (\* 1m depth for 30 minutes.)

## Built-in Multiple Tone Signalings

Use the built-in CTCSS, DTCSS, 2-Tone and 5-Tone capability to set up your own talk groups or control a repeater.

## FM Intrinsically Safe Versions



Versions of the IC-F50/F60 are available that conform to the intrinsically safe rating of the FMRC (Factory Mutual Research Corporation).

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-227FM battery pack "Max. Temp. T3C at 40°C"  
Approved accessories: Speaker-microphone, HM-138.

## ATEX Intrinsically Safe Versions



Versions of the IC-F51 which display the "Ex" marking conform to the ATEX Directive 94/9/EC.

The approval rating for these models is II2G EEx ib IIA T3. When the transceiver is used in a hazardous area, the BP-227AX must be attached, and it is recommended that either the jack cover or HM-138 is attached for the speaker-microphone connector.

## Other Features

- Rolling type voice scrambler equivalent to the UT-110 is built-in depending on version
- Inversion type voice scrambler is built-in to all versions
- Large capacity Li-Ion battery pack as standard
- Wide frequency coverage in one version
- Wide, middle and narrow channel\* spacing (25/12.5kHz or 20/12.5kHz) is programmable
- 56(W)×97(H)×36.4(D) mm compact rugged body

### Supplied Accessories

(May differ according to version)

- Battery pack, BP-227
- Belt clip, MB-98
- Antenna



## VHF HANDHELD TRANSCEIVERS

IC-F30GT IC-F30GS  
IC-F31GT IC-F31GS

## UHF HANDHELD TRANSCEIVERS

IC-F40GT IC-F40GS  
IC-F41GT IC-F41GS

**FCC** : IC-F30GT/GS, IC-F40GT/GS

**ETS** : IC-F31GT/GS, IC-F41GT/GS

Meets  
**MIL-STD 810**

▼ IC-F40GS

▼ IC-F30GT



# THE PROFESSIONAL CHOICE FOR YOUR BUSINESS

*Designed and built for advanced communication needs, these handhelds satisfy your demands with a host of features such as built-in multiple signalings, Flash ROM and a high-speed PLL. Two optional slots support numerous extension capabilities, making these radios indispensable in any situation.*

## 256 memory channels and large LCD

Up to 256 memory channels with 12 character channel names, tone settings, scrambler\* setting etc. can be stored in up to 16 banks. Short messages of up to 24 characters (full-dot matrix), can be displayed on the LCD for efficient and timely communication.

\* Optional UT-109 or UT-110 Voice Scrambler units are required.

## Full built-in tone-signalings

Encoder/decoder is built-in for all major signalings, such as CTCSS, DTCS, 2-Tone, 5-Tone and DTMF with ANI functions. A wide variety of selective calling operations are available to call specified station(s) or control a repeater.

## Durable construction

The body is compact, yet the polycarbonate panel and one-piece aluminum chassis provides durable construction to meet MIL-STD grade C, D and E for shock and vibration.

## 2 optional units work simultaneously

Two optional units can be utilized simultaneously from voice scrambler units, Man Down unit, or SmarTrunk II™ and LTR® Trunking systems to suit your needs.

\* See "Function comparison and internal unit options" for available connections.

## Intrinsically safe versions



Versions are available that conform to the intrinsically safe rating of the FMRC (Factory Mutual Research Corporation).

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-210FM battery pack "Max. Temp. T3C at 60°C"

## Other features

- Built-in Comander function provides clear audio
- 10 scan lists with normal and priority scan settings
- BIIS version available
- VOX capability for hands-free operation
- Wide and narrow channel spacing and more...

### Supplied Accessories

• Battery pack, BP-210N

(May differ according to version)

• Belt clip, MB-103

• Antenna



## VHF HANDHELD TRANSCEIVERS

IC-F33GT IC-F33GS  
IC-F34GT IC-F34GS

## UHF HANDHELD TRANSCEIVERS

IC-F43GT IC-F43GS  
IC-F44GT IC-F44GS

**FCC** : IC-F33GT/GS, IC-F43GT/GS

**ETS** : IC-F34GT/GS, IC-F44GT/GS



# A NEW DIRECTION IN LMR/PMR COMMUNICATIONS

*The IC-F33G series is suitable for a variety of needs — large or small, mobile or stationary. 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.*

## 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. (\* VHF version only)

## Lithium-Ion battery pack

The large capacity 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: Standby=5:5:90, power save on.

## Multiple 5-Tone, Multiple 2-Tone

The IC-F33G series can encode and decode up to 10 2-Tone codes or 32/8\* 5-Tone on a single memory channel. This is perfect for professionals who require multiple district paging on one channel.

\* Encode/decode

## Other features

- Optional boards UT-117/UT-117S SmarTrunk 3G™ are available
- Wide frequency coverage and wide, middle and narrow channel spacing programmable

### Supplied Accessories (May differ according to version)

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



VHF HANDHELD TRANSCEIVERS  
**IC-F3GT IC-F3GS**

UHF HANDHELD TRANSCEIVERS  
**IC-F4GT IC-F4GS**

ETS

FCC

Meets  
**MIL-STD 810**



# SIMPLE, ADVANCED MULTIPLE SYSTEM RADIO

*The IC-F3G series of portable transceivers are highly reputable commercials with superior performance and features. Icom's technology provides you with the reliability and communication quality you expect.*

## Trunking capabilities

Compatible with the SmarTrunk II™, or the LTR® trunking systems when the optional UT-105 for SmarTrunk II™, or UT-111 for LTR® trunking is installed.

## Man down function\*

Provides a measure of safety when working in hazardous environments, etc., automatically sending an emergency signal when the transceiver is left in the horizontal position for a pre-set time.

\*Optional UT-113 MAN DOWN UNIT is required.

## Operating security

Optional voice scrambler units, UT-109 and UT-110, for secure communications are available.

## Supports multiple, flexible selective call

CTCSS/DTCS encoder/decoder with user programmable CTCSS, DTCS capabilities, DTMF and 2-Tone/5-Tone encoder are built-in. The optional UT-96 (for 2-Tone/5-Tone), or UT-108 (for DTMF) allows decode with ANI functions. In addition, special tone code for group and individual calls, and other features are available.

## Wide/Narrow channel spacing\*

25kHz and 12.5kHz channel spacing is programmable.

\* Depending on version.

### Supplied Accessories

• Battery pack, BP-210N

(May differ according to version)

• Belt clip, MB-103

• Antenna



## VHF HANDHELD TRANSCEIVERS

IC-F14 IC-F14S  
IC-F15 IC-F15S

## UHF HANDHELD TRANSCEIVERS

IC-F24 IC-F24S  
IC-F25 IC-F25S

**FCC** : IC-F14/F14S, IC-F24/F24S

**ETS** : IC-F15/F15S, IC-F25/F25S

# BUILT TO LAST, BUILT TO WORK!

The IC-F14/S series is designed to provide simple operation for everyone but is a powerful and reliable tool for your daily business. Its very durable construction is resistant to shock and vibration. The IC-F14/S series will easily exceed your expectations.

## Tough and reliable construction

The IC-F14/S series is built around an aluminum die-cast chassis and covered with a tough polycarbonate casing. This radio is built to last. Its dual slide rail securely locks the battery to the radio. The belt clip is clamped between the radio and the battery, making it nearly impossible to knock loose.

## Simple operation

Having only 3 buttons, volume and channel knobs, the IC-F14/S series does not require special training to use. Positive button action for sure operation even when wearing gloves, allows you to get down to the business of communicating without fuss.

## Optional board

The IC-F14/S series has an expansion socket for adding an optional board. Voice scrambler, man down and DTMF decoder features are available, depending on the installed board.

## Other features

- Wide frequency coverage in one version
- Multiple 2-Tone, Multiple 5-Tone
- Lithium-Ion battery standard
- Wide/middle/narrow capability, and more...

### Supplied Accessories (May differ according to version)

- Battery pack, BP-231 • Belt clip, MB-94 • Antenna • Option sheet

- Simple controls, easy to use
- 2-Tone, 5-Tone, CTCSS and DTCS encoder and decoder are built-in
- DTMF autodial
- Compact and light weight body
- 16 channels rotary type and Max. 4 channel simple toggle type
- Wide/narrow channel spacing capability

### Supplied Accessories (May differ according to version)

- Battery pack, BP-210N • Belt clip, MB-103 • Antenna

VHF TRANSCEIVERS

**IC-F11/S**

UHF TRANSCEIVERS

**IC-F21/S**

**FCC**

VHF TRANSCEIVERS

**IC-F12/S**

UHF TRANSCEIVERS

**IC-F22/S**

**ETS**





VHF LOW BAND HANDHELD TRANSCEIVERS  
**IC-F30GT-L**  
**IC-F30GS-L**  
**IC-F31GT-L**  
**IC-F31GS-L**

# THE PROFESSIONAL CHOICE FOR VHF LOW BAND

**ETS** : IC-F31GT-L, IC-F31GS-L

Meets  
**MIL-STD 810**



▼ IC-F30GS-L

▼ IC-F30GT-L

*The IC-F30GT-L/GS-L series inherit not only the rounded stylish design and durable construction, but also the multiple features from the IC-F30GT/GS series. This VHF low band transceiver will satisfy communication needs with a host of advanced features and a high-grade quality.*

## VHF Low band VHF version

The IC-F30GT-L/GS-L covers VHF low band, 66–88MHz, extends the possibilities of communication. The optional antennas, FA-SC12L (66–76MHz) and FA-SC13L (76–88MHz) must be purchased separately depending on operating frequency.

## 256 memory channels and large LCD

Up to 256 memory channels with 12 character channel names, tone settings, scrambler\* setting etc. can be stored in up to 16 banks. Short messages of up to 24 characters (full-dot matrix), can be displayed on the LCD for efficient and timely communication.

\* Optional UT-109 or UT-110 Voice Scrambler units are required.

## Full built-in tone-signalings

Encoder/decoder is built-in for all major signalings, such as CTCSS, DTCSS, 2-Tone, 5-Tone and DTMF with ANI functions. A wide variety of selective calling operations are available to call specified station(s) or control a repeater.

## Other features

- Built-in Componder function provides clear audio
- 2 optional units work simultaneously \* See "Function comparison and internal unit options" for available connections.
- VOX capability for hands-free operation and more...

### Supplied Accessories (May differ according to version)

- Battery pack, BP-210N
- Belt clip, MB-103



VHF MOBILE TRANSCEIVERS  
**IC-F1710**  
**IC-F1810**  
 UHF MOBILE TRANSCEIVERS  
**IC-F2710**  
**IC-F2810**

# VERSATILE, MULTI-FUNCTION MOBILE

ETS



▲ IC-F1810, F2810 (10 keypad version).

*Timely information and precise instructions are indispensable for today's public safety services. The IC-F1710/F1810 series are designed to support these critical missions with reliable communications and versatile features.*

## Detachable front panel\*

With the optional remote control kit, RMK-2 and separation cable, the front panel of the IC-F1710/F1810 series can be detached from the main unit. It allows you flexible installation even in limited installation space.

\*Optional RMK-2 and OPC-609 are required.

## Dot matrix, multi-function LCD

The IC-F1710/F1810 series has a large dot matrix display to show information with high resolution characters. The display setting is programmable to show one line and 12 characters, or two lines and 24 characters.

## Built-in versatile tone signaling

Use the built-in CTCSS, DTCS, 2-Tone, 5-Tone or BIIS capability to set up your own talk groups, and have your radio standby quietly when other groups are talking. Up to 10 2-Tone, 8 5-Tone codes can be decoded on a single memory channel. When a matched tone is received, the various items such as beep sound, bell icon and auto transmit are programmable for each code.

## Rugged construction

The IC-F1710/F1810 series has durable construction resistant to shock and vibration and provides reliable operation under harsh conditions.

## Other features

- Ample 256 memory channels and 32 zones
- 10 keypad and external speaker model, IC-F1810/F2810 and non-keypad and front mount speaker model, IC-F1710/F2810
- Built-in audio compander
- Optional Voice Scrambler UT-109/UT-110, and more...

**Supplied Accessories** (May differ according to version)

• Hand microphone, HM-100N	• DC power cable	• Microphone hanger
• Mounting bracket kit	• Key assign stickers	
• External speaker, SP-22* (* IC-F1810, F2810 only.)		



▲ IC-F1710, F2710 (Non-keypad version).



## VHF MOBILE TRANSCEIVERS

**IC-F510** (25W) **IC-F520** (25W)  
**IC-F521** (50W)

## UHF MOBILE TRANSCEIVERS

**IC-F610** (25W) **IC-F620** (25W)  
**IC-F621** (45W)

# A FLEXIBLE YET SIMPLE TOOL FOR B&I USERS



**ETS** : IC-F510, IC-F610

**FCC** : IC-F520/F521, IC-F620/F621



*With 256 channel capacity and built-in flexible tone signaling, these mobiles meet the demanding needs of today's professionals. B&I users will appreciate the flexible, yet simple design of these MIL SPEC rugged mobiles — from conventional to expanded trunking operation.*

## Flexible selective calling

CTCSS, DTCS, 2-tone and 5-tone encoder/decoder and DTMF encoder are built-in. These signalings are applicable to a wide variety of selective calling systems to call specific station(s) or control a repeater. The ANI function is available with 2-tone/5-tone and DTMF decoder\*. \* Optional UT-108 is required.

## 256 memory channels

With 256 channels separated into 16 memory banks and identifiable by a 10-character alphanumeric LCD, you can quickly access pre-programmed contingency frequency plans — ideal for wide area, cross-municipality communications!

## Face the speaker in the direction you need

The IC-F520/F620 series lets you simply rotate the chassis to face the speaker in the direction you need while the control head remains right side up.

## Flash ROM CPU advantage

## Trunking capability

Compatible with the SmarTrunkII™, or the LTR® trunking system. Optional UT-105 for SmarTrunkII™, or UT-111 for LTR® trunking is required.

## Other features

- Built-in audio compander
- Backlit keypad
- Independent AF volume knob
- Optional voice scrambler, UT-109 or UT-110
- Selectable channel spacing (12.5/15kHz/25/30kHz)
- Stun and power-on password function

### Supplied Accessories (May differ according to version)

- Hand microphone, HM-100N
- DC power cable
- Microphone hanger
- Mounting bracket kit
- Key assign stickers





## VHF MOBILE TRANSCEIVERS

**IC-F110** (25W) **IC-F121** (50W)

**IC-F111** (50W)

## UHF MOBILE TRANSCEIVERS

**IC-F210** (25W) **IC-F221** (45W)

**IC-F211** (45W)

# SIMPLE, POWERFUL COMMUNICATIONS



**ETS** : IC-F110, IC-F210

**FCC** : IC-F121, IC-F221



*Today's mobile workers need to get information and respond to it immediately, at any time, from any place. Icom's mobile radios meet and exceed these demands with advanced but simple operation.*

### 8-character alphanumeric display

The alphanumeric LCD indicates channel, bank name and decoded text, etc. Various status icons for such functions as an S-meter and output power, etc., enhance the array of information available to the user.

### 128 channels with 8 memory banks

Up to 128 channels with 8-character channel names can be stored and divided into 8 banks for flexible channel management.

### Advanced 2-Tone/5-Tone systems

2-Tone, 5-Tone, CTCSS, and DTCS encoder/decoder are equipped as standard. Multiple 2-Tone/5-Tone codes are programmable on a channel.

### Trunking capabilities

Compatible with the SmarTrunk II™, or the LTR® trunking systems, when the optional UT-105 for SmarTrunk II™, or UT-111 for LTR® trunking is installed.

### Independent volume knob and 4W (typ.) front-mounted speaker

### Other features

- Selectable wide/narrow channel spacing per channel
- Optional Voice scrambler UT-109/UT-110 available
- Hook scan function and Hook scan on/off button programmable
- 8 autodialing memories for DTMF and optional decoder UT-108
- 10 scanning lists, normal/priority scan and more...

#### Supplied Accessories

(May differ according to version)

- Hand microphone, HM-100N
- DC power cable
- Microphone hanger
- Mounting bracket kit
- Key assign stickers



## VHF MOBILE TRANSCEIVERS

**IC-F110S** (25W) **IC-F121S** (50W)

**IC-F111S** (50W)

## UHF MOBILE TRANSCEIVERS

**IC-F210S** (25W) **IC-F221S** (45W)

**IC-F211S** (45W)

# PRACTICAL COMMUNICATIONS SUPPORTER



**ETS** : IC-F110S, IC-F210S

**FCC** : IC-F121S, IC-F221S



*These mobile radios provide the operating simplicity to keep your eyes on the road—not the front panel! But don't let the lack of display fool you, there are enough features and functions to meet most commercial demands.*

### Simple operation with up to 8 channels

4 large programmable buttons with LED indicators maximizes use of all functions. An independent volume knob adds to the all-round ergonomic design based on simplicity.

### Advanced 2-Tone/5-Tone systems

2-Tone, 5-Tone, CTCSS, and DTCS encoder/decoder are equipped as standard. Multiple 2-Tone/5-Tone codes are programmable on a channel. When an optional UT-108 is installed, DTMF decoder and ANI functions are also available.

### Optional voice scrambler

Optional voice scrambler units, UT-109 or UT-110 allow you to operating security. The UT-109 includes up to 32 scrambling codes and the UT-110 includes up to 1020 (4 group × 255 code) scrambling codes with a divided frequency rolling system.

### Independent volume knob and 4W (typ.) front-mounted speaker

### Other features

- Selectable wide/narrow channel spacing
- Key backlight for easy nighttime operation
- Hook scan function and Hook scan on/off button programmable
- 24-digit DTMF autodial memory
- 2.5kHz Channel Step (depending on version, VHF only)
- Programmable LED lighting, and more...

#### Supplied Accessories (May differ according to version)

- Hand microphone, HM-100N
- DC power cable
- Microphone hanger
- Mounting bracket kit
- Key assign stickers



## HF TRANSCEIVER IC-F7000

# ADVANCED HF COMMUNICATION MADE EASY

Meets

**MIL-STD 810**

AS/NZS 4770-2000: Australia version



The IC-F7000 is an HF land mobile transceiver especially designed for long distance communications. The IC-F7000's advanced functions and features make HF LMR operation simple and efficient for user's whether you are a skilled operator or not.

### Selective call capabilities

The selective call uses a unique calling address like a telephone number and allows you to make a call directly to a desired station or group. The following selective calls can be made.

- Selcall/Selective beacon call
- GPS position/beacon call\*<sup>1</sup>
- Page call (Up to 64-characters)
- Telcall\*<sup>2</sup>
- Status call
- Emergency call
- RFDS call (Royal Flying Doctor Service)\*<sup>3</sup>

\*<sup>1</sup> External GPS receiver is required.

\*<sup>2</sup> Please consult with a telephone interconnect service provider for details.

\*<sup>3</sup> Australia version only.

### ALE (Automatic Link Establishment) capabilities

The ALE function will check frequency propagation and strength to automatically select the highest quality signal for the best communication possible. The ALE system meets with the basic requirements of MIL-STD 188-141-B. Available ALE features are as follows.

- ALE individual/net call
- ALE sounding
- ALE AMD (Automatic Message Display; Up to 90-characters).

### Flexible configuration

The controller and speaker are separated from the main (RF) unit for flexible installation. A 6m separation cable is attached to the controller. The main unit is only 72mm (2<sup>7</sup>/<sub>32</sub> in) in height, so there is almost no limit to the places where the IC-F7000 can be set-up.

### 125W (PEP) of transmit power

The IC-F7000 has a stable 125W\* of output power— enough for nation wide long distance communications.

\* 100W only for Australia version and for 4MHz bands and above for General version.

### Automatic tuning antenna

The AT230 automatic tuning antenna\* is recommended for use with the IC-F7000. The AT230 fully covers 2–30MHz. It is also easily installed to a vehicle. \* Made by Moonraker Australia Pty. Ltd.

### Other features

- Wide band coverage receiver—0.5 to 29.9999MHz
- Full dot-matrix display
- Built-in DSP filter for flexible filter selection. Optional filter is not required
- PC Remote control using the NMEA 0183 format
- GPS input (NMEA0183 version 3.01)
- External 32MHz reference input for accurate tuning
- Voice, S-meter and Call mute
- 120 ALE IDs, 100 Selcall IDs and 100 telephone numbers

#### Supplied Accessories (May differ according to version)

- Hand microphone, HM-146
- External speaker, SP-25
- Remote controller, RC-26
- Microphone hanger
- DC power cable
- ACC plugs (8-pin DIN)
- Tuner connector kit
- Mounting bracket kits
- Spare fuses



VHF FM REPEATERS  
**IC-FR3000** (50W)  
**IC-FR3100** (25W)

UHF FM REPEATERS  
**IC-FR4000** (50W)  
**IC-FR4100** (25W)

# ADVANCED POWERFUL REPEATERS



**FCC** : IC-FR3000, IC-FR4000  
**ETS** : IC-FR3100, IC-FR4100



*Icom's new generation repeaters have been designed as advanced heavy duty performers to support all types of commercial radio applications. A host of standard features and guaranteed Icom performance means you'll need to look no further to satisfy your communication needs.*

## 50 Watt full duty cycle operation

This repeater looks as good as it performs. A rugged heatsink, large cooling fans and a high performance power module provide the repeater with a continuous 50W\* at full duty cycle operation.  
 \* 50W for IC-FR3000/FR4000. 25W for IC-FR3100/FR4100.

## Automatic battery backup system

The repeater has a built-in power supply unit. The AC power source is arranged to suit either 100–120V or 220–240V (depending on version). A built-in backup system supports automatic switching to an external power supply (13.6V or 13.2V DC) if the AC power supply fails.

## Multiple CTCSS & DTCS tone memories with multiple memory channels

Up to 16 CTCSS/DTCS tones (TX/RX tones respectively) can be programmed in a channel. This feature allows you to share a channel with multiple user groups. You can also give priority/exclusive use to a specified group simply by programming different tones to another memory channel. Ideal for many different applications.

## 2-Tone, 5-Tone, DTMF encoder/decoder

Multiple signaling systems are equipped as standard. These systems are fully compatible with Icom F-series radios.

## Internal space for duplexer and isolator

The repeater has an internal space to install a duplexer and isolator\*. The controls of the duplexer are accessible from the front of the repeater without disassembly. Faster and easier maintenance and adjustment is possible.

\* Ask your dealer for details about available duplexers and isolators.

## Other features

- Telephone interconnect capability
- DTMF remote control capability
- Optional wall mount bracket, MB-77 and 19 inch rack mount bracket, MB-78 providing easy maintenance
- Master/Slave backup operation by connecting two repeaters
- Self check function checks for internal errors and alerts with a beep sound or with a phone call
- Accessory connector (D-sub 25-pin) on the rear panel for trunking controller including LTR®, PassPort, SmarTrunkII™ and MPT1327
- Compatible with VEGA tone remote control system
- Optional Voice Scrambler UT-109 or UT-110
- CW ID transmitter (DTMF or 5-Tone also selectable)
- Password and kill/stun function for security
- 16-digit alphanumeric display

**Supplied Accessories** (May differ according to version)  
 • AC power cable • Spare fuses

## UHF MPT HANDHELD RADIOS

**MPT Version**

**IC-F40GT IC-F40GS**  
**IC-F41GT IC-F41GS**

**ETS** : IC-F41GT/GS (MT Version) (Not available in the USA.)

▼ Setting example of data communication using the optional OPC-966.



▼ IC-F40GS  
(MT Version)

▼ IC-F40GT  
(MT Version)



# SOPHISTICATED MPT TRUNKING FOR COMPLETE CUSTOMER

*Icom's MPT trunking mobile and portable radios. From wide reliable communications over MPT trunking networks and easily edit/input settings for individual or entire features from call back memories to MAP27 interface technology at your fingertips.*

## Compatible with MPT1327/1343 networks

Dispatcher, individual, group, emergency, priority and telephone\* (PSTN and PABX) calls are available via voice or status calls.

\* Trunking network must be connected to PSTN/PABX.

## Ease of use

An alphanumeric display, audible tones, 15 call back memories and backlit keypad provide simple operation. The handheld and mobile radios provide complimentary operation and functions to each other.

## Short Data Message (SDM)

With the DTMF keypad\*, short data messages can be sent directly. 32 status call codes are also available.

\* Optional HM-100TN is required for mobile radios;

Keypad versions (IC-F40GT/F41GT) only for handheld radio.

## Map 27 data capability

MAP 27 data interface allows wireless data communication by connecting a PC or other terminals with an RS-232C interface.

## Conventional CTCSS operation

32 conventional channels with CTCSS signaling are available for operation capabilities even in out of service areas.





# R MIZATION



## UHF MPT MOBILE RADIOS MPT Version IC-F610 IC-F620

From small groups to large scale fleets, these radios provide... Flexible PC programming allows you to quickly... fleets of radios immediately. Also, a host of advanced... puts the power of cutting edge communications tech-

### Invertible chassis

The chassis of the mobile radios is invertible from the front panel. The speaker can be set to face you, allowing clear audio at all times.

### Other features

- 40 phone memory banks with alphanumeric names
- Optional voice scrambler, UT-109
- 5-digit routing code for abbreviation dialling
- Built-in audio compander
- Own and 3rd party divert calls
- Flash ROM CPU for easy firmware upgrade capability
- Rewritable system messages
- Advanced PC programming capability, and more...

**Supplied Accessories** (May differ according to version)

- IC-F40GT/GS, IC-F41GT/GS MT Version
- Battery pack, BP-210N
- Belt clip, MB-103
- Antenna
- IC-F610, IC-F620 MT Version
- Hand microphone, HM-100N
- DC power cable
- Microphone hanger
- Mounting bracket kit
- Key assign stickers

**ETS** : IC-F610 (MT Version) (Not available in the USA.)

▼ Setting example of data communication using the optional OPC-822.



IC-F610 (MT Version)  
▼

The above photo includes the optional DTMF MIC, HM-100TN.



UHF LTR/PassPort HANDHELD RADIO

LTR/PassPort Version

IC-F43TR

Compliant with NTS Release 2.4

FCC



# THE IDEAL SUBSCRIBER UNITS FOR UHF SM ES MR OPERATIONS

Many of today's Community Repeater and Specialized emerging business opportunities in UHF trunking. Also, network solutions are an effective strategy for the IC-F620/F621TR are the perfect subscriber units for the basic LTR® and PassPort are all built-in to maximize your

## Multiple modes

Conventional, basic LTR® and PassPort are built-in. Conventional operation and talk-around are both available from the front panel during LTR® and PassPort operation.

## LTR Features and Select Call

The IC-F621TR and the IC-F43TR offer maximum flexibility to program up to 50 systems or up to 250 groups per system. All basic LTR® features, including direct phone calling and wide-narrow channel spacing are available. The IC-F621TR offers an optional DTMF microphone, HM-100TN, allowing for direct dialing, while the IC-F43TR has a keypad version available.

## PassPort Features — NTS Release 2.4

The PassPort protocol offers multi-site network trunking. The built-in receive signal strength indicator (RSSI) enables seamless roaming under the PassPort protocol. This series automatically registers with the nearest site without solely relying on the BER (Bit Error Rate), which slows down the registration process.



# RIBER R AND S

## LTR PassPort

UHF LTR/PassPort MOBILE RADIOS

**LTR/PassPort Version**

**IC-F620TR** (25W)

**IC-F621TR** (45W)

Compliant with NTS Release 2.4

and Mobile Radio (SMR) operators are considering the new Enhanced Specialized Mobile Radio (ESMR) traditional dispatch market. The Icom IC-F43TR and this strong and viable market. Conventional operation, your existing system's potential.

FCC

### Wide Bandwidth, Plenty of Power

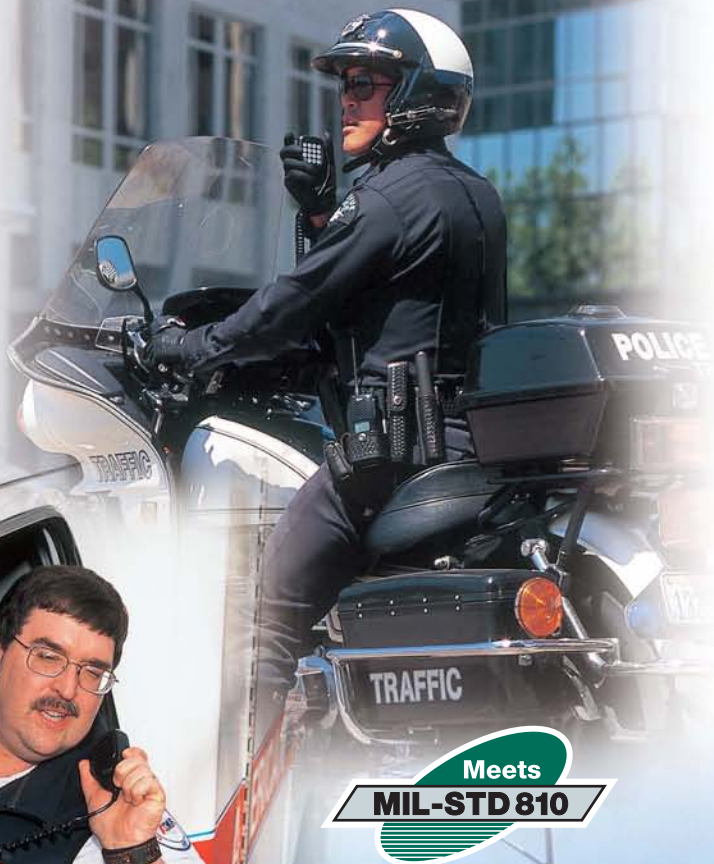
With limited spectrum available, this series offers wide band coverage. The IC-F621TR offers two versions that cover 400–430 MHz and 440–490 MHz. The IC-F43TR offers two versions that cover 400–470 MHz and 450–512 MHz. And all versions provide switchable 12.5/25 kHz width by channel. Because the mobile IC-F621TR offers a full 45 watts of power, use it in conjunction with the portable IC-F43TR and receive more out of your system's footprint.

### Other features

- MIL grade durability, meets MIL-810
- Multiple scan mode
- Advanced PC programming capability
- Dynamic Talk Around
- Built-in compander (IC-F43TR only)
- Optional voice scrambler UT-109 available
- Dead beat disable, ASID text, site lock, and more...

#### Supplied Accessories (May differ according to version)

- IC-F43TR
  - Battery pack, BP-232
  - Belt clip, MB-94
  - Antenna
- IC-F620TR, IC-F621TR
  - Hand microphone, HM-100N
  - DC power cable
  - Microphone hanger
  - Mounting bracket kit
  - Key assign stickers



Meets  
**MIL-STD 810**





# OPTIONS FOR HANDHELD TRANSCEIVERS

MODEL NAME	BATTERY PACKS							BATTERY CASES	
	BP-209N (Ni-Cd) 7.2V/1100mAh BP-222N (Ni-Cd) 7.2V/600mAh	BP-210N (Ni-MH) 7.2V/1650mAh BP-210N-FM (Intrinsically safe)	BP-211N (Li-Ion) 7.4V/1800mAh (Charge with BC-119N /BC-121N and AD-101)	BP-227 (Li-Ion) 7.2V/1700mAh BP-227FM BP-227AX (Intrinsically safe)	BP-230 (Li-Ion) 7.4V/800mAh BP-231 (Li-Ion) 7.4V/1150mAh	BP-232 (Li-Ion) 7.4V/2000mAh	BP-235 (Li-Ion) 7.4V/1600mAh BP-236 (Li-Ion) 7.4V/2400mAh	BP-208N AA(LR6) × 6 cells	BP-226 AA(LR6)×5 cells Equivalent to IPX4 water resistance.
IC-F70T/S, IC-F80T/S IC-F70DT/DS, IC-F80DT/DS				✓		✓		✓	
IC-F50, IC-F60 IC-F51, IC-F61	✓	✓	✓	✓				✓	
IC-F30GT/GS, IC-F40GT/GS IC-F31GT/GS, IC-F41GT/GS	✓	✓	✓		✓	✓	✓		
IC-F33GT/GS, IC-F43GT/GS IC-F34GT/GS, IC-F44GT/GS	✓		✓		✓	✓	✓		
IC-F3GT/GS, IC-F4GT/GS	✓	(BP-210N only)	✓				✓		
IC-F14/S, IC-F24/S IC-F15/S, IC-F25/S					✓	✓			
IC-F11/S, IC-F21/S IC-F12/S, IC-F22/S	✓	(BP-210N only)	✓				✓		
IC-F30GT-L/GS-L IC-F31GT-L/GS-L	✓	(BP-210N only)	✓				✓		
IC-F40GT/GS MT Version IC-F41GT/GS MT Version	✓	(BP-210N only)	✓				✓		
IC-F43TR					✓	✓			

MODEL NAME	BATTERY CASES			CHARGERS					
	BP-237 AA(LR6)×6 cells Equivalent to IPX4 water resistance.	BP-240 AAA(LR03)×6 cells	BC-119N Rapid charger	BC-121N Rapid multicharger	BC-144N Rapid charger	BC-146 Regular charger	BC-152 Regular charger	BC-160 Rapid charger	
IC-F70T/S, IC-F80T/S IC-F70DT/DS, IC-F80DT/DS	✓		✓	✓					
IC-F50, IC-F60 IC-F51, IC-F61			(AD-110 is required)	(AD-110 is required)			✓		
IC-F30GT/GS, IC-F40GT/GS IC-F31GT/GS, IC-F41GT/GS			(AD-100 is required)	(AD-100 is required)					
IC-F33GT/GS, IC-F43GT/GS IC-F34GT/GS, IC-F44GT/GS		✓	(AD-94 or AD-101 is required)	(AD-94 or AD-101 is required)	✓	✓			
IC-F3GT/GS, IC-F4GT/GS			(AD-106 is required)	(AD-106 is required)				✓	
IC-F14/S, IC-F24/S IC-F15/S, IC-F25/S		✓	(AD-94 or AD-101 is required)	(AD-94 or AD-101 is required)	✓	✓			
IC-F11/S, IC-F21/S IC-F12/S, IC-F22/S			(AD-106 is required)	(AD-106 is required)				✓	
IC-F30GT-L/GS-L IC-F31GT-L/GS-L			(AD-94 or AD-101 is required)	(AD-94 or AD-101 is required)	✓	✓			
IC-F40GT/GS MT Version IC-F41GT/GS MT Version			(AD-94 or AD-101 is required)	(AD-94 or AD-101 is required)	✓	✓			
IC-F43TR		✓	(AD-106 is required)	(AD-106 is required)				✓	

MODEL NAME	CHARGER ADAPTERS					AC ADAPTERS		
	AD-94	AD-100	AD-101	AD-106	AD-110	BC-124 12V/7A	BC-145 16V/1A	BC-147 12V/200mA
IC-F70T/S, IC-F80T/S IC-F70DT/DS, IC-F80DT/DS					✓	✓	✓	
IC-F50, IC-F60 IC-F51, IC-F61		(Use with BC-119N/BC-121N)				✓	✓	✓
IC-F30GT/GS, IC-F40GT/GS IC-F31GT/GS, IC-F41GT/GS	(Use with BC-119N/BC-121N)		(Use with BC-119N/BC-121N)			✓	✓	✓
IC-F33GT/GS, IC-F43GT/GS IC-F34GT/GS, IC-F44GT/GS				(Use with BC-119N/BC-121N)		✓	✓	✓
IC-F3GT/GS, IC-F4GT/GS	(Use with BC-119N/BC-121N)		(Use with BC-119N/BC-121N)			✓	✓	✓
IC-F14/S, IC-F24/S IC-F15/S, IC-F25/S				(Use with BC-119N/BC-121N)		✓	✓	
IC-F11/S, IC-F21/S IC-F12/S, IC-F22/S	(Use with BC-119N/BC-121N)		(Use with BC-119N/BC-121N)			✓	✓	✓
IC-F30GT-L/GS-L IC-F31GT-L/GS-L	(Use with BC-119N/BC-121N)		(Use with BC-119N/BC-121N)			✓	✓	✓
IC-F40GT/GS MT Version IC-F41GT/GS MT Version	(Use with BC-119N/BC-121N)		(Use with BC-119N/BC-121N)			✓	✓	✓
IC-F43TR				(Use with BC-119N/BC-121N)		✓	✓	✓

: Applicable
  : Not applicable

# OPTIONS FOR HANDHELD TRANSCEIVERS

MODEL NAME	SPEAKER-MICROPHONES					HEADSETS			
	EM-80	EM-89	HM-46L	HM-131L/SC	HM-138 Waterproof	HS-51	HS-94 Earhook type with boom microphone	HS-95 Behind-the-head type	HS-97 Throat microphone type
IC-F70T/S, IC-F80T/S IC-F70DT/DS, IC-F80DT/DS IC-F50, IC-F60 IC-F51, IC-F61					✓		✓ (Use with VS-1SC)	✓ (Use with VS-1SC)	✓ (Use with VS-1SC)
IC-F30GT/GS, IC-F40GT/GS IC-F31GT/GS, IC-F41GT/GS IC-F33GT/GS, IC-F43GT/GS IC-F34GT/GS, IC-F44GT/GS	✓	✓		✓ (Use HM-131SC)	✓		✓ (Use with VS-1SC)	✓ (Use with VS-1SC)	✓ (Use with VS-1SC)
IC-F3GT/GS, IC-F4GT/GS			✓	✓ (Use HM-131L)		✓ (UHF only U.S.A. and Canada)	✓ (Use with VS-1L)	✓ (Use with VS-1L)	✓ (Use with VS-1L)
IC-F14/S, IC-F24/S IC-F15/S, IC-F25/S				✓ (Use HM-131L)			✓ (Use with VS-1L)	✓ (Use with VS-1L)	✓ (Use with VS-1L)
IC-F11/S, IC-F21/S IC-F12/S, IC-F22/S			✓		✓		✓ (Use with VS-1L)	✓ (Use with VS-1L)	✓ (Use with VS-1L)
IC-F30GT-L/GS-L IC-F31GT-L/GS-L	✓	✓		✓ (Use HM-131SC)			✓ (Use with VS-1SC)	✓ (Use with VS-1SC)	✓ (Use with VS-1SC)
IC-F40GT/GS MT Version IC-F41GT/GS MT Version	✓	✓		✓ (Use HM-131SC)			✓ (Use with VS-1SC)	✓ (Use with VS-1SC)	✓ (Use with VS-1SC)
IC-F43TR			✓	✓ (Use HM-131L)		✓	✓ (Use with VS-1L)	✓ (Use with VS-1L)	✓ (Use with VS-1L)

MODEL NAME	VOX/PTT CASE	EARPHONE	EARPHONE ADAPTER	BELT CLIPS				
	VS-1L/SC	SP-13	AD-52	MB-86 Swivel type	MB-93 Swivel type	MB-94 Alligator type	MB-98 Alligator type	MB-103 Alligator type
IC-F70T/S, IC-F80T/S IC-F70DT/DS, IC-F80DT/DS IC-F50, IC-F60 IC-F51, IC-F61	✓ (Use VS-1SC)			✓	✓	✓		
IC-F30GT/GS, IC-F40GT/GS IC-F31GT/GS, IC-F41GT/GS IC-F33GT/GS, IC-F43GT/GS IC-F34GT/GS, IC-F44GT/GS	✓ (Use VS-1SC)	✓ (Use with AD-52)	✓	✓	✓	✓	✓	✓
IC-F3GT/GS, IC-F4GT/GS	✓ (Use VS-1L)	✓		✓	✓	✓		
IC-F14/S, IC-F24/S IC-F15/S, IC-F25/S	✓ (Use VS-1L)	✓		✓	✓	✓		
IC-F11/S, IC-F21/S IC-F12/S, IC-F22/S	✓ (Use VS-1L)	✓		✓	✓	✓		
IC-F30GT-L/GS-L IC-F31GT-L/GS-L	✓ (Use VS-1SC)	✓ (Use with AD-52)	✓	✓	✓	✓	✓	✓
IC-F40GT/GS MT Version IC-F41GT/GS MT Version	✓ (Use VS-1SC)	✓ (Use with AD-52)	✓	✓	✓	✓	✓	✓
IC-F43TR	✓ (Use VS-1L)	✓			✓	✓		

MODEL NAME	LEATHER BELT HANGERS	CIGARETTE LIGHTER CABLES	DC POWER CABLES	INTERFACE CABLE	ANTENNA ADAPTER
	MB-96N Swivel type. MB-86 and MB-93 swivel joints supplied.	CP-17L	OPC-515L	OPC-966 PC to transceiver	AD-98FSC For measuring equipment connection only.
IC-F70T/S, IC-F80T/S IC-F70DT/DS, IC-F80DT/DS IC-F50, IC-F60 IC-F51, IC-F61	✓	✓	✓	✓	✓
IC-F30GT/GS, IC-F40GT/GS IC-F31GT/GS, IC-F41GT/GS IC-F33GT/GS, IC-F43GT/GS IC-F34GT/GS, IC-F44GT/GS	✓	✓	✓	✓	✓
IC-F3GT/GS, IC-F4GT/GS	✓	✓	✓	✓	✓
IC-F14/S, IC-F24/S IC-F15/S, IC-F25/S	✓	✓	✓	✓	✓
IC-F11/S, IC-F21/S IC-F12/S, IC-F22/S	✓	✓	✓	✓	✓
IC-F30GT-L/GS-L IC-F31GT-L/GS-L	✓	✓	✓	✓	✓
IC-F40GT/GS MT Version IC-F41GT/GS MT Version	✓	✓	✓	✓	✓
IC-F43TR	✓	✓	✓	✓	✓

: Applicable
  : Not applicable



# OPTIONS FOR HANDHELD TRANSCEIVERS

MODEL NAME	ANTENNAS					STUBBY ANTENNAS			
	FA-SC12L 66-76MHz FA-SC13L 76-88MHz	FA-SC25V 136-150MHz FA-SC55V 146-174MHz	FA-SC25U 400-430MHz FA-SC57U 430-470MHz FA-SC72U 470-520MHz	FA-S24V 136-155MHz FA-S59V 150-174MHz	FA-S27U 400-470MHz FA-S56U 450-520MHz FA-S74U 490-520MHz	FA-SC56VS 150-162MHz FA-SC57VS 160-174MHz	FA-SC73US 450-490MHz		
IC-F70T/S, IC-F80T/S IC-F70DT/DS, IC-F80DT/DS IC-F50, IC-F60 IC-F51, IC-F61		✓	✓			✓	✓		
IC-F30GT/GS, IC-F40GT/GS IC-F31GT/GS, IC-F41GT/GS		✓	✓	(IC-F50, IC-F51)	(IC-F60, IC-F61)	✓	✓		
IC-F33GT/GS, IC-F43GT/GS IC-F34GT/GS, IC-F44GT/GS		✓	✓			✓	✓		
IC-F3GT/GS, IC-F4GT/GS		✓	✓			✓	✓		
IC-F14/S, IC-F24/S IC-F15/S, IC-F25/S		✓	✓			✓	✓		
IC-F11/S, IC-F21/S IC-F12/S, IC-F22/S		✓	✓			✓	✓		
IC-F30GT-L/GS-L IC-F31GT-L/GS-L	✓								
IC-F40GT/GS MT Version IC-F41GT/GS MT Version			✓				✓		
IC-F43TR			✓				✓		


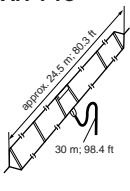




# OPTIONS FOR MOBILE TRANSCEIVERS AND REPEATERS

MODEL NAME	SEPARATION KIT AND CABLES			ACC CABLE	INTERFACE CABLE	DC POWER CABLES		HAND MICROPHONES	
	RMK-2	OPC-607 (3m; 9.8ft) OPC-608 (8m; 26.2ft)	OPC-609 (1.9m; 6.2ft)	OPC-617	OPC-822 PC to transceiver	OPC-346 OPC-1132 (3m; 9.8ft)	OPC-347 (7m; 23ft)	HM-100N	HM-100TN Includes DTMF keypad.
IC-F1721/D, IC-F2721/D IC-F1821/D, IC-F2821/D	✓	✓	✓	✓		✓	✓	✓	✓
IC-F1710, IC-F2710 IC-F1810, IC-F2810	✓		✓	✓		✓	✓	✓	✓
IC-F510, IC-F610 IC-F520/F521, IC-F620/F621			✓	✓	(BITS Version only)	✓	✓	✓	✓
IC-F110, IC-F210 IC-F121, IC-F221			✓	✓		✓	✓	✓	✓
IC-F110S, IC-F210S IC-F121S, IC-F221S			✓	✓		✓	✓	✓	✓
IC-F610 MT Version IC-F620 MT Version			✓	✓	✓	✓	✓	✓	✓
IC-F620TR IC-F621TR			✓	✓		✓	✓	✓	✓
IC-FR3000, IC-FR4000 IC-FR3100, IC-FR4100								✓	✓

MODEL NAME	HAND MICROPHONES	DESKTOP MICROPHONE	EXTERNAL SPEAKERS			MOUNTING BRACKETS	
	HM-148 Heavy-duty type.	SM-25	SP-5	SP-10	SP-22	MB-77 WALL MOUNT BRACKET	MB-78 19" RACK MOUNT BRACKET
IC-F1721/D, IC-F2721/D IC-F1821/D, IC-F2821/D	✓	✓	✓	✓	✓		
IC-F1710, IC-F2710 IC-F1810, IC-F2810		✓	✓	✓	✓		
IC-F510, IC-F610 IC-F520/F521, IC-F620/F621		✓	✓	✓	✓		
IC-F110, IC-F210 IC-F121, IC-F221		✓	✓	✓	✓		
IC-F110S, IC-F210S IC-F121S, IC-F221S		✓	✓	✓	✓		
IC-F610 MT Version IC-F620 MT Version		✓	✓	✓	✓		
IC-F620TR IC-F621TR		✓	✓	✓	✓		
IC-FR3000, IC-FR4000 IC-FR3100, IC-FR4100		✓				✓	✓

: Applicable
  : Not applicable

# OPTIONS FOR HF TRANSCEIVERS

	ANTENNA ELEMENT	FOLDED DIPOLE ANTENNA	ANTENNA MATCHERS		ANTENNA TUNERS	
MODEL NAME	AH-2b	AH-710	MN-100	MN-100L	AT-130	AT-140
						
IC-F7000	✓	✓	✓	✓	✓	✓

	SHIELDED CONTROL CABLES	HAND MICROPHONE	EXTERNAL SPEAKER	REMOTE CONTROLLER	
MODEL NAME	OPC-1286 (10m; 32.8ft)	OPC-1287 (5m; 16.4ft)	HM-146	SP-25	RC-26
					
IC-F7000	✓ (Use with AT-140)	✓ (Use with AT230)	✓	✓	✓



# SPECIFICATIONS FOR HF TRANSCEIVERS

		IC-F7000		
GENERAL	Frequency coverage	Rx	0.5–29.999MHz (Continuous)	
		Tx	1.6–29.999MHz* (* Some frequency ranges are not guaranteed)	
	Number of channels		400 regular channels, 100 ALE channels	
	Type of emissions		J3E (USB, LSB), J2B (AFSK), F1B (FSK), A1A (CW), A3E (AM) * J3E and A3E only at default for Australia version	
	Power supply requirements		13.8V DC (10.8–15.6V DC)	
	Current drain	Tx High		17/12A* <sup>1</sup> (at 2-Tone/Voice Max. power)
		Rx Max.		3.0A
	Dimensions (W×H×D) (projections not included)	Main unit		240×72×239; 9 <sup>7</sup> / <sub>16</sub> ×22 <sup>7</sup> / <sub>32</sub> ×9 <sup>13</sup> / <sub>32</sub> (mm; in)
Controller unit			150×50×51; 5 <sup>29</sup> / <sub>32</sub> ×1 <sup>31</sup> / <sub>32</sub> ×2 (mm; in)	
Weight (approx.)	Main unit		4.6kg; 10.1lb	
	Controller unit		220g; 7.7oz	
TX	RF output power	Australia	100/50/10W PEP	
		General	125/50/10W PEP (1.6–3.99MHz) 100/50/10W PEP (4–29.9MHz)	
	Spurious emissions		–43dB –40dB (General version for 3.5–3.99MHz range)	
RX	Sensitivity (at 20dB SINAD)	J3E	25.1µV emf, 12.6µV (0.5–1.59MHz) 1.0µV emf, 0.5µV (1.6–29.9MHz)	
		A3E	200µV emf, 100µV (0.5–1.59MHz)	
	Squelch sensitivity	J3E	10µV/32mV (threshold/tight; at 13.8MHz)	
		A3E	32µV/320mV (threshold/tight; at 1.0MHz)	
	Spurious response rejection		70dB	
AF output power (at 10% dist.)		4.0W		

\*<sup>1</sup> at 125W between 1.6–3.99MHz



# SPECIFICATIONS FOR HANDHELD TRANSCEIVERS

		IC-F70T/S IC-F70DT/DS	IC-F80T/S IC-F80DT/DS	IC-F50 IC-F51	IC-F60 IC-F61	IC-F30GT/GS IC-F31GT/GS	IC-F40GT/GS IC-F41GT/GS	
GENERAL	Frequency coverage (Unit: MHz) (Varies according to version)	136–174	400–470 450–520	136–174	400–470 450–512 (U.S.A.) 450–520 (Others)	136–174	400–430 440–480 450–490 (U.S.A.) 480–512 (U.S.A.) 480–520 (Others)	
	Number of channels	256 ch/32 zones		128 ch/8 banks		256 ch/16 banks		
	Channel spacing (Unit: kHz) (Varies according to version)	12.5/25 or 15/30	12.5/25	12.5/25, 15/30 or 12.5/20/25	12.5/25 or 12.5/20/25	12.5/25, 15/30 or 12.5/20	12.5/25 or 12.5/20	
	PLL channel step (Unit: kHz)	2.5, 3, 1.25	5, 6, 2.5	2.5, 3, 1.25	5, 6, 2.5	2.5, 3, 1.25 or 5, 6, 2.5	5, 6, 2.5, 7.5	
	Current drain	Tx High	2.2A	2.4A	1.5A	1.5A	1.7A (typ.)	1.7A (typ.)
		Rx Stand-by	150mA	150mA	85mA	85mA	95mA	95mA
		Max. audio	450mA	450mA	300mA	300mA	300mA	300mA
Dimensions (projections not included; W×H×D)	58.6×152×38 mm 2 <sup>3</sup> / <sub>16</sub> ×5 <sup>3</sup> / <sub>32</sub> ×1 <sup>1</sup> / <sub>2</sub> in		56×97×36.4 mm 2 <sup>1</sup> / <sub>32</sub> ×3 <sup>1</sup> / <sub>16</sub> ×1 <sup>1</sup> / <sub>16</sub> in		54×139×38 mm 2 <sup>1</sup> / <sub>8</sub> ×5 <sup>1</sup> / <sub>32</sub> ×1 <sup>1</sup> / <sub>2</sub> in			
Weight (approx.)	400g; 14.1oz (with BP-235)		280g; 9.9oz (with BP-227)		420g; 14.8oz (with BP-210N)			
TX	RF output power (High)	5W	4W	5W*1	4W	5W	4W	
	Spurious emissions	70dB (typ.)		70dB (min.), 0.25μW		73dB (typ.), 0.25μW		
	Adjacent channel power	U.S.A. (W/N)	70/60dB (min.)		70/60dB (min.)		70/60dB	
Europe (W/M/N)		–		70/70/60dB (min.)		70/70/60dB		
RX	Sensitivity	at 12dB SINAD	0.25μV (typ.)	0.25μV (typ.)	0.25μV (typ.)	0.25μV (typ.)		
		at 20dB SINAD (emf)	–		–4dBμV (typ.)	–4dBμV (typ.)		
	Adjacent channel selectivity	U.S.A. (W/N)	80/73dB (typ.)	78/70dB (typ.)	75/65dB (typ.)	73/63dB (typ.)		
		Europe (W/M/N)	–		75/73/65dB (typ.)	73/73/63dB (typ.)		
	Spurious response rejection	80dB (typ.)	75dB (typ.)	70dB		70dB		
Intermodulation rejection	75dB (typ.)		74dB (typ.; U.S.A.), 67dB (typ.; Euro)		74dB (typ.; U.S.A.), 70dB (typ.; Euro)			
AF output power (at 5% distortion)	500mW (typ.) with an 8Ω load		500mW (typ.) with an 8Ω load		500mW with an 8Ω load			

\*1 1W for ATEX version.

		IC-F33GT/GS IC-F34GT/GS	IC-F43GT/GS IC-F44GT/GS	IC-F3GT/GS	IC-F4GT/GS	IC-F14/S IC-F15/S	IC-F24/S IC-F25/S	
GENERAL	Frequency coverage (Unit: MHz) (Varies according to version)	136–174	400–470 450–512 (U.S.A.) 450–520 (Others)	136–150 146–174	400–430 400–470 470–500 490–512 (U.S.A.) 490–520 (Others)	136–174	400–470 450–512 (U.S.A.) 450–520 (Others)	
	Number of channels	256 ch/16 banks		Total 40 or 100 channels (Varies according to version)		16 4 (Max.; S type)		
	Channel spacing (Unit: kHz) (Varies according to version)	12.5/25, 15/30 or 12.5/20/25	12.5/25 or 12.5/20/25	12.5/25 12.5, 20 or 25		12.5/25, 15/30 or 12.5/20/25	12.5/25 or 12.5/20/25	
	PLL channel step (Unit: kHz)	2.5, 3, 1.25	5, 6, 2.5	5, 6, 2.5, 7.5		2.5, 3, 1.25	5, 6, 2.5	
	Current drain	Tx High	1.5A	1.7A	1.6A	1.55A	1.5A	1.6A
		Rx Stand-by	85mA	85mA	70mA	70mA	70mA	70mA
		Max. audio	300mA	300mA	250mA	250mA	300mA	300mA
Dimensions (projections not included; W×H×D)	53×120×32.5 mm 2 <sup>1</sup> / <sub>32</sub> ×4 <sup>2</sup> / <sub>32</sub> ×1 <sup>1</sup> / <sub>32</sub> in		54×132×35 mm 2 <sup>1</sup> / <sub>8</sub> ×5 <sup>1</sup> / <sub>16</sub> ×1 <sup>1</sup> / <sub>32</sub> in		53×120×38 mm 2 <sup>1</sup> / <sub>32</sub> ×4 <sup>2</sup> / <sub>32</sub> ×1 <sup>1</sup> / <sub>2</sub> in			
Weight (approx.)	285g; 10.0oz (with BP-231)	300g; 10.6oz (with BP-231)	370g; 13.1oz (with BP-209N)		260g; 9.2oz (with BP-231)			
TX	RF output power (High)	5W	4W	5W	4W	5W	4W	
	Spurious emissions	80dBc (typ.), 0.25μW		73dB (typ.), 0.25μW		80dB (typ.), 0.25μW		
	Adjacent channel power	U.S.A. (W/N)	70/60dB (typ.)		70/60dB (typ.)		80/70dB (typ.)	75/68dB (typ.)
Europe (W/M/N)		70/70/60dB		70/70/60dB		80/80/70dB (typ.)	75/73/68dB (typ.)	
RX	Sensitivity	at 12dB SINAD	0.25μV (typ.)	0.25μV (typ.)	0.3μV (typ.)	0.25μV (typ.)		
		at 20dB SINAD (emf)	–4dBμV (typ.)		–4dBμV (typ.)	–4dBμV (typ.)		
	Adjacent channel selectivity	U.S.A. (W/N)	75/65dB (typ.)		75/65dB (typ.)		75/65dB (typ.)	
		Europe (W/M/N)	75/75/65dB (typ.)	73/73/63dB (typ.)	70/70/60dB		75/75/65dB (typ.)	75/73/65dB (typ.)
	Spurious response rejection	70dB		70dB (typ.; U.S.A.), 70dB (Euro)		70dB		
Intermodulation rejection	74dB (typ. U.S.A.), 67dB (typ. Euro)		70dB (typ.; U.S.A.), 65dB (Euro)		74dB (typ. U.S.A.), 67dB (typ. Euro)			
AF output power (at 5% distortion)	500mW (typ.) with an 8Ω load		500mW (typ.) with an 8Ω load		500mW (typ.) with an 8Ω load			

# SPECIFICATIONS FOR HANDHELD TRANSCEIVERS

		IC-F11/S IC-F12/S	IC-F21/S IC-F22/S	IC-F30GT-L/GS-L IC-F31GT-L/GS-L	IC-F40GT/GS MT Version IC-F41GT/GS MT Version	IC-F43TR	
GENERAL	Frequency coverage (Unit: MHz) (Varies according to version)	146–174	400–430 440–470	66–88	350–390 400–430 440–480	400–470 450–512	
	Number of channels	16 4 (Max.; S type)		256 ch/16 banks	32 (conventional)	250 (conventional)	
	Channel spacing (Unit: kHz) (Varies according to version)	12.5/25 or 12.5/20		12.5/25 or 12.5/20	12.5/25 or 12.5/20	12.5/25	
	PLL channel step (Unit: kHz)	2.5, 3.125	5, 6.25	5, 6.25	5, 6.25, 7.5	5, 6.25	
	Current drain	Tx High	1.6A	1.6A	1.8A (typ.)	1.7A (typ.)	1.7A
		Rx Stand-by	70mA	70mA	90mA	95mA	85mA
	Max. audio	250mA	250mA	300mA	300mA	300mA	
Dimensions (projections not included; W×H×D)	54×128×37 mm 2½×5½×1½ in		54×139×38 mm 2½×5½×1½ in	54×139×38 mm 2½×5½×1½ in	53×120×36.5 mm 2½×4¾×1¼ in		
Weight (approx.)	310g; 10.9oz (with BP-209N)		420g; 14.8oz (with BP-210N)	420g; 14.8oz (with BP-210N)	320g; 11.3oz (with BP-232)		
TX	RF output power (High)	5W	4W	5W	4W	4W	
	Spurious emissions	73dBc (typ.), 0.25µW		73dB (typ.), 0.25µW	73dB (typ.), 0.25µW	70dB (typ.)	
	Adjacent channel power	U.S.A. (W/N)	70/60dB (typ.)		70/60dB	70/60dB	70/60dB
Europe (W/M/N)		70/70/60dB		70/70/60dB	70/70/60dB	–	
RX	Sensitivity at 12dB SINAD	0.25µV (typ.)		0.25µV (typ.)	0.25µV (typ.)	0.25µV (typ.)	
		–4dBµV (typ.)		–4dBµV (typ.)	–4dBµV (typ.)	–	
	Adjacent channel selectivity	U.S.A. (W/N)	70/65dB (typ.)		80/70dB (typ.)	73/63dB (typ.)	75/65dB (typ.)
		Europe (W/M/N)	70/70/60dB		80/75/70dB (typ.)	73/73/63dB (typ.)	–
	Spurious response rejection	70dB (typ.; U.S.A.), 70dB (Euro)		70dB	70dB	70dB	
Intermodulation rejection	70dB (typ.; U.S.A.), 65dB (Euro)		74dB (typ.; U.S.A.), 70dB (typ.; Euro)	74dB (typ.; U.S.A.); 70dB (typ.; Euro)	74dB (typ.)		
AF output power (at 5% distortion)	500mW (typ.) with an 8Ω load		500mW with an 8Ω load	500mW (typ.) with an 8Ω load	500mW (typ.) with an 8Ω load		

# FUNCTION COMPARISON AND INTERNAL UNIT OPTIONS

		IC-F70T/S IC-F70DT/DS IC-F80T/S IC-F80DT/DS	IC-F50 IC-F51 IC-F60 IC-F61	IC-F30GT/GS IC-F31GT/GS IC-F40GT/GS IC-F41GT/GS	IC-F33GT/GS IC-F34GT/GS IC-F43GT/GS IC-F44GT/GS	IC-F3GT/GS IC-F4GT/GS	IC-F14/S IC-F15/S IC-F24/S IC-F25/S	IC-F11/S IC-F12/S IC-F21/S IC-F22/S	IC-F30GT-L IC-F30GS-L IC-F31GT-L IC-F31GS-L	IC-F40GT/GS MT Version IC-F41GT/GS MT Version	IC-F43TR
Number of option slots		1	–	2	1	1	1	–	2	2	1
CTCSS/ DTCS	encoder	✓	✓	✓	✓	✓	✓	✓	✓	✓ (CTCSS only)	✓
	decoder	✓	✓	✓	✓	✓	✓	✓	✓	✓ (CTCSS only)	✓
2-Tone	encoder	✓	✓	✓	✓	✓	✓	✓	✓	–	–
	decoder	✓	✓	✓	✓	UT-96	✓	✓	✓	–	–
5-Tone	encoder	✓	✓	✓	✓	✓	✓	✓	✓	–	–
	decoder	✓	✓	✓	✓	UT-96	✓	✓	✓	–	–
DTMF autodial		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DTMF decoder		✓ <sup>*7</sup>	✓ <sup>*7</sup>	✓ <sup>*7</sup>	UT-108	UT-108	UT-108	✓ <sup>*7</sup>	✓ <sup>*7</sup>	–	UT-108
Voice Scrambler	Inversion	✓	✓	–	✓	–	–	–	–	–	✓
	Non-rolling	UT-109 (Version 01)	✓ <sup>*1</sup>	UT-109 <sup>*2</sup> (Version 02)	UT-109 (Version 02)	UT-109 (Version 01)	UT-109 (Version 01)	–	UT-109 <sup>*2</sup> (Version 02)	UT-109 <sup>*2</sup> (Version 02)	UT-109 (Version 02)
	Rolling	UT-110 (Version 01)	✓ <sup>*1</sup>	UT-110 <sup>*2</sup> (Version 02)	UT-110 (Version 02)	UT-110 (Version 01)	UT-110 (Version 01)	–	UT-110 <sup>*2</sup> (Version 02)	UT-110 <sup>*2</sup> (Version 02)	UT-110 <sup>*2</sup> (Version 02)
APCO P25 digital		✓	–	–	–	–	–	–	–	–	–
BIIS 1200		✓	✓	✓ <sup>*4</sup>	✓	–	–	–	–	–	–
MPT 1327		–	–	–	–	–	–	–	–	✓	–
SmarTrunk II™		–	–	UT-105 <sup>*5</sup>	UT-105	UT-105	–	–	UT-105 <sup>*5</sup>	–	–
SmarTrunk 3G™		–	–	–	UT-117/S	–	–	–	–	–	–
LTR® trunking		UT-111	–	UT-111 <sup>*5</sup>	–	UT-111	–	–	UT-111 <sup>*5</sup>	–	✓
PassPort		–	–	–	–	–	–	–	–	–	✓
Man Down function		–	–	UT-113 <sup>*3</sup>	UT-113	UT-113	UT-113	–	UT-113 <sup>*3</sup>	–	UT-113
Intrinsically safe		–	✓ <sup>*1</sup>	✓ <sup>*1</sup>	–	–	–	–	–	–	–

\*1 Depending on version. \*2 UT-109 and UT-110 cannot be installed simultaneously. \*3 Man Down function is only available in conventional mode when used with UT-105 or UT-111. \*4 BIIS Version only. \*5 UT-105 and UT-111 must be installed in option slot 1, so cannot be installed simultaneously. \*6 Available in conventional mode only. \*7 Possible as a kind of 5-Tone format.

✓ : Available      UT-96 : Required internal unit (Eg. UT-96)      – : Not available



# SPECIFICATIONS FOR MOBILE TRANSCEIVERS

		IC-F1810 IC-F1821 IC-F1821D	IC-F2810 IC-F2821 IC-F2821D	IC-F1710 IC-F1721 IC-F1721D	IC-F2710 IC-F2721 IC-F2721D	IC-F510 IC-F520 IC-F521	IC-F610 IC-F620 IC-F621	
GENERAL	Frequency coverage (Unit: MHz) (Varies according to version)	136–174	400–470 450–512 (USA) 450–520 (Other)	136–174	400–470 450–512 (USA) 450–520 (Other)	136–174	400–430 (F610/F620) 440–490 480–520 (F610) 480–512 (F620)	
	Number of channels	256 ch/32 zones		256 ch/32 zones		256 ch/16 banks		
	Channel spacing (Unit: kHz) (Varies according to version)	12.5/25, 15/30 or 12.5/20/25	12.5/25 or 12.5/20/25	12.5/25, 15/30 or 12.5/20/25	12.5/25 or 12.5/20/25	12.5/25, 15/30 or 12.5/20	12.5/25 or 12.5/20	
	PLL channel step (Unit: kHz)	2.5, 3.125		5, 6.25		2.5, 3.125		5, 6.25
	Current drain	Tx High	14/7A (50/25W)	14/7A (45/25W)	14/7A (50/25W)	14/7A (45/25W)	14/7A (50/25W)	13/7A (45/25W)
		Rx Stand-by	600mA	600mA	600mA	600mA	300mA	300mA
		Max. audio	1.2A	1.2A	1.2A	1.2A	1.2A	1.2A
Dimensions (unit: mm; inch) (projections not included; W×H×D)	175×45×170 ; 6 <sup>7</sup> / <sub>16</sub> ×1 <sup>25</sup> / <sub>32</sub> ×6 <sup>11</sup> / <sub>16</sub>		175×45×170 ; 6 <sup>7</sup> / <sub>16</sub> ×1 <sup>25</sup> / <sub>32</sub> ×6 <sup>11</sup> / <sub>16</sub>		140×40×170 ; 5 <sup>1</sup> / <sub>2</sub> ×1 <sup>9</sup> / <sub>16</sub> ×6 <sup>11</sup> / <sub>16</sub>			
Weight (approx.)	1.5kg; 3.3lb		1.5kg; 3.3lb		1.2kg; 2.6lb			
TX	RF output power (High)	50W (F1821/D) 25W (F1810)	45W (F2821/D) 25W (F2810)	50W (F1721/D) 25W (F1710)	45W (F2721/D) 25W (F2710)	50W (F521) 25W (F510/F520)	45W (F621) 25W (F610/F620)	
	Spurious emissions	75dB (typ.); 0.25μW		75dB (typ.); 0.25μW		70dB (typ.); 0.25μW		
	Adjacent channel power	U.S.A. (W/N)	70/60dB		70/60dB		70/60dB	
Europe (W/M/N)		70/70/60dB		70/70/60dB		70/70/60dB		
RX	Sensitivity	at 12dB SINAD	0.25μV (typ.)	0.3μV (typ.)	0.25μV (typ.)	0.3μV (typ.)	0.25μV (typ.)	
		at 20dB SINAD (emf)	–4dBμV (typ.)	–4dBμV (typ.)	–4dBμV (typ.)	–4dBμV (typ.)	–4dBμV (typ.)	
	Adjacent channel selectivity	U.S.A. (W/N)	80/75dB (typ.)		80/75dB (typ.)		75/65dB (typ.)	
		Europe (W/M/N)	80/80/75dB (typ.)		80/80/75dB (typ.)		75/75/65dB (typ.)	
	Spurious response rejection	80dB (typ.)		80dB (typ.)		75dB		
	Intermodulation rejection	77/75dB (typ. W/N; U.S.A.), 70dB (Euro)		77/75dB (typ. W/N; U.S.A.), 70dB (Euro)		74dB (typ.; U.S.A.), 67dB (typ.; Euro)		
AF output power (at 5% distortion)	22W (typ.) with a 4Ω load (External audio)		4W (typ.) with a 4Ω load		4W (typ.) with a 4Ω load			

		IC-F110 IC-F111 IC-F121	IC-F210 IC-F211 IC-F221	IC-F110S IC-F111S IC-F121S	IC-F210S IC-F211S IC-F221S	IC-F610 MT Version IC-F620 MT Version	IC-F620TR IC-F621TR	
GENERAL	Frequency coverage (Unit: MHz) (Varies according to version)	136–174	400–430 (F210, F211) 440–490	136–174	400–430 (F210S, F211S) 440–490	400–430 440–490	400–430 440–490	
	Number of channels	128 ch/8 banks		8 ch/2 banks		32 (conventional)	250 (conventional)	
	Channel spacing (Unit: kHz) (Varies according to version)	12.5/25, 15/30 or 12.5/20	12.5/25 or 12.5/20	12.5/25, 15/30 or 12.5/20	12.5/25 or 12.5/20	12.5/25 or 12.5/20	12.5/25	
	PLL channel step (Unit: kHz)	2.5, 3.125		5, 6.25		5, 6.25		5, 6.25
	Current drain	Tx High	14/7A (50/25W)	13/7A (45/25W)	14/7A (50/25W)	13/7A (45/25W)	7A	13/7A (45/25W)
		Rx Stand-by	300mA	300mA	300mA	300mA	300mA	300mA
		Max. audio	1.2A	1.2A	1.2A	1.2A	1.2A	1.2A
Dimensions (unit: mm; inch) (projections not included; W×H×D)	45, 50W: 150×40×167.5; 5 <sup>29</sup> / <sub>32</sub> ×1 <sup>9</sup> / <sub>16</sub> ×6 <sup>19</sup> / <sub>32</sub> 25W: 150×40×117.5; 5 <sup>29</sup> / <sub>32</sub> ×1 <sup>9</sup> / <sub>16</sub> ×4 <sup>9</sup> / <sub>16</sub>		45, 50W: 150×40×167.5; 5 <sup>29</sup> / <sub>32</sub> ×1 <sup>9</sup> / <sub>16</sub> ×6 <sup>19</sup> / <sub>32</sub> 25W: 150×40×117.5; 5 <sup>29</sup> / <sub>32</sub> ×1 <sup>9</sup> / <sub>16</sub> ×4 <sup>9</sup> / <sub>16</sub>		140×40×170 mm 5 <sup>1</sup> / <sub>2</sub> ×1 <sup>9</sup> / <sub>16</sub> ×6 <sup>11</sup> / <sub>16</sub> in		140×40×170 mm 5 <sup>1</sup> / <sub>2</sub> ×1 <sup>9</sup> / <sub>16</sub> ×6 <sup>11</sup> / <sub>16</sub> in	
Weight (approx.)	45, 50W: 1.1kg; 2.4lb 25W: 800g; 1.7lb		45, 50W: 1.1kg; 2.4lb 25W: 800g; 1.7lb		1.2kg; 2.6lb		1.2kg; 2.6lb	
TX	RF output power (High)	50W (IC-F111, F121) 25W (IC-F110)	45W (IC-F211, F221) 25W (IC-F210)	50W (IC-F111S, F121S) 25W (IC-F110S)	45W (IC-F211S, F221S) 25W (IC-F210S)	25W	45W (IC-F621TR) 25W (IC-F620TR)	
	Spurious emissions	70dB (typ.); 0.25μW		70dB (typ.); 0.25μW		70dB (typ.); 0.25μW		
	Adjacent channel power	U.S.A. (W/N)	70/60dB		70/60dB		70/60dB	
Europe (W/M/N)		70/70/60dB		70/70/60dB		70/70/60dB		
RX	Sensitivity	at 12dB SINAD	0.25μV (typ.)	0.25μV (typ.)	0.25μV (typ.)	0.25μV (typ.)	0.25μV (typ.)	
		at 20dB SINAD (emf)	–4dBμV (typ.)	–4dBμV (typ.)	–4dBμV (typ.)	–4dBμV (typ.)	–	
	Adjacent channel selectivity	U.S.A. (W/N)	75/65dB (typ.)		75/65dB (typ.)		75/65dB (typ.)	
		Europe (W/M/N)	75/75/65dB (typ.)		75/75/65dB (typ.)		75/75/65dB (typ.)	
	Spurious response rejection	75dB		75dB		75dB		
	Intermodulation rejection	74dB (typ.; U.S.A.), 67dB (typ.; Euro)		74dB (typ.; U.S.A.), 67dB (typ.; Euro)		75dB (typ.; USA), 67dB (typ.; Euro)		75dB (typ.)
AF output power (at 5% distortion)	4W (typ.) with a 4Ω load		4W (typ.) with a 4Ω load		4W (typ.) with a 4Ω load		4W (typ.) with a 4Ω load	

# SPECIFICATIONS FOR REPEATERS

		IC-FR3000 IC-FR3100	IC-FR4000 IC-FR4100	
GENERAL	Frequency coverage (Unit: MHz) (Varies according to version)	150–174 148–172 (FR3000)	400–430 430–450 450–480	
	Number of channels	32		
	Channel spacing (Unit: kHz) (Varies according to version)	12.5/25 or 12.5/20		
	PLL channel step (Unit: kHz)	2.5*1, 5, 6.25		
	Current drain	Tx High	15/10A*2 (50/25W)	20/12A*2 (50/25W)
		Stand-by	1A*2 (typ.)	
		Max. audio	2A*2 (typ.)	
Dimensions (unit: mm; inch) (projections not included; W×H×D)	410×110×360 mm 16 <sup>2</sup> / <sub>32</sub> ×4 <sup>1</sup> / <sub>32</sub> ×14 <sup>3</sup> / <sub>16</sub> in			
Weight (approx.)	12kg; 26.4lb			
TX	RF output power (High)	50W (FR3000/FR4000) 25W (FR3100/FR4100)		
	Spurious emissions	70dB, 0.25μW		
	Adjacent channel power	U.S.A. (W/N)	70/60dB	
Europe (W/M/N)		70/70/60dB		
RX	Sensitivity	at 12dB SINAD	0.25μV (typ.)	
		at 20dB SINAD (emf)	±0dBμV (typ.)	
	Adjacent channel selectivity	U.S.A. (W/N)	70/60dB	
		Europe (W/M/N)	70/70/60dB	
	Spurious response rejection	70dB		
	Intermodulation rejection	70dB		
AF output power (at 5% distortion)	2.5W (typ.) with a 4Ω load			

\*1 IC-FR3000 repeater operation only. \*2 at 13.6V/13.2V DC.










# FUNCTION COMPARISON AND INTERNAL UNIT OPTIONS

	IC-F1810 IC-F1821 IC-F1821D IC-F2810 IC-F2821 IC-F2821D	IC-F1710 IC-F1721 IC-F1721D IC-F2710 IC-F2721 IC-F2721D	IC-F510 IC-F520 IC-F521 IC-F610 IC-F620 IC-F621	IC-F110 IC-F111 IC-F121 IC-F210 IC-F211 IC-F221	IC-F110S IC-F111S IC-F121S IC-F210S IC-F211S IC-F221S	IC-F610 MT Version IC-F620 MT Version	IC-F620TR IC-F621TR	IC-FR3000 IC-FR3100 IC-FR4000 IC-FR4100	
Number of option slots	1	1	1	1	1	1	1	1	
CTCSS/ DTCS	encoder	✓	✓	✓	✓	✓	(CTCSS only)	✓	
	decoder	✓	✓	✓	✓	✓	(CTCSS only)	✓	
2-Tone	encoder	✓	✓	✓	✓	✓	-	✓	
	decoder	✓	✓	✓	✓	✓	-	✓	
5-Tone	encoder	✓	✓	✓	✓	✓	-	✓	
	decoder	✓	✓	✓	✓	✓	-	✓	
DTMF autodial	✓	✓	✓	✓	✓	✓	✓	✓	
DTMF decoder	✓*6	✓*6	UT-108	UT-108	UT-108	-	UT-108*3	✓	
Voice Scrambler	Inversion	✓	✓	-	-	-	-	-	
	Non-rolling	UT-109 (Version 02)	UT-109 (Version 02)	UT-109 (Version 02)	UT-109 (Version 02)	UT-109 (Version 02)	UT-109 (Version 02)	UT-109 (Version 02)	UT-109 (Version 01)
	Rolling	UT-110 (Version 02)	UT-110 (Version 02)	UT-110 (Version 02)	UT-110 (Version 02)	UT-110 (Version 02)	UT-110*4 (Version 02)	UT-110*4 (Version 02)	UT-110 (Version 01)
APCO P25 digital	✓*1	✓*1	-	-	-	-	-	-	
BIIS 1200	✓	✓	✓*2	-	-	-	-	-	
MPT 1327	-	-	-	-	-	✓	-	✓*5	
SmarTrunk II™	-	-	UT-105	UT-105	-	-	-	✓*5	
SmarTrunk 3G™	-	-	UT-117/S	-	-	-	-	✓*5	
LTR® trunking	UT-111	UT-111	UT-111	UT-111	-	-	✓	✓*5	
PassPort	-	-	-	-	-	-	✓	✓*5	

\*1 Depending on version. \*2 BIIS Version only. \*3 Already installed. \*4 Available in conventional mode only.

\*5 External controller required. \*6 Possible as a kind of 5-Tone format.

✓ : Available    **UT-108** : Required internal unit (Eg. UT-108)    - : Not available

UT-96	UT-105	UT-108
5-TONE UNIT 	SmarTrunk II™ LOGIC BOARD 	DTMF DECODER 
UT-109	UT-110	UT-111
VOICE SCRAMBLER UNIT 	VOICE SCRAMBLER UNIT 	LTR® TRUNKING UNIT 
UT-113	UT-117	UT-117S
MAN DOWN UNIT 	SmarTrunk 3G™ LOGIC BOARD 	SmarTrunk 3G™ LOGIC BOARD with Voice Scrambler 

# BATTERY PACKS AND CHARGERS

Battery packs	BP-235	BP-236	BP-227 BP-227FM BP-227AX	BP-230	BP-231	BP-232	BP-209N	BP-210N BP-210N-FM	BP-222N	BP-211N
Transceivers	IC-F70DT/DS, F70T/S IC-F80DT/DS, F80T/S		IC-F50, F51 IC-F60, F61	IC-F33GT/GS, F34GT/GS, IC-F43GT/GS, F44GT/GS, F43TR IC-F14/S, F15/S, F24/S, F25/S			IC-F30GT/GS, F31GT/GS, F40GT/GS, F41GT/GS, IC-F30GT-L/GS-L, F31GT-L/GS-L IC-F3GT/GS, F4GT/GS, IC-F11/S, F12/S, F21/S, F22/S			
Rapid charger	BC-119N+ BC-145 + AD-110		BC-119N + BC-145 + AD-100	BC-119N + BC-145 + AD-106 or BC-160 + BC-145			BC-119N + BC-145 + AD-101 (or AD-94) or BC-144N + BC-145			BC-119N + BC-145 + AD-101
Regular charger	N/A		BC-152 + BC-147	N/A			BC-146 + BC-147			N/A
Multi charger	BC-121N+ BC-124 + AD-110*2		BC-121N + BC-124 + AD-100*2	BC-121N + BC-124 + AD-106*2			BC-121N + BC-124 + AD-101 (or AD-94)*2			BC-121N + BC-124 + AD-101*2
Operating time*1 (Tx:Rx:Stand-by=5:5:90)	8 hours	12 hours	10 hours	6 hours (with IC-F33GT)	9 hours (with IC-F33GT)	16 hours (with IC-F33GT)	7 hours (with IC-F30GT)	11 hours (with IC-F30GT)	4.5 hours (with IC-F21)	12 hours (with IC-F30GT)

\*1 As a rough value

\*2 Six charger adapters are required.

## ADDITIONAL SPECIFICATIONS AND FEATURES



### Applicable U.S. Military Specifications

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

Standard	Low Pressure Storage (Altitude)	Low Pressure Operation (Altitude)	High Temperature Storage	High Temperature Operation	Low Temperature Storage	Low Temperature Operation	Temperature Shock	Solar Radiation	Rain Blowing	Rain Drip	Humidity Induced	Humidity Aggravate	Salt Fog	Dust Blowing	Vibration	Shock Functional	Shock Transit Drop
MIL-810 C Method, Procedure	500.1, I	500.2, II	501.1, I	501.2, II	502.1, I	502.2, II	503.1, I	505.1, I	506.1, I	506.1, II	507.1, I	507.1, II	509.1, I	510.1, I	514.2, VIII, X	516.2, I	516.2, II, IV
MIL-810 D Method, Procedure	500.2, I	500.3, II	501.2, I	501.3, II	502.2, I	502.3, II	503.2, I	505.2, I	506.2, I	506.2, III	507.2, II	507.2, III	509.2, I	510.2, I	514.3, I	516.3, I	516.3, IV
MIL-810 E Method, Procedure	500.3, I	500.4, II	501.3, I	501.4, II	502.3, I	502.4, II	503.3, I	505.3, I	506.3, I	506.3, III	507.3, II	507.3, III	509.3, I	510.3, I	514.4, I	516.4, I	516.4, IV
MIL-810 F Method, Procedure	500.4, I	500.4, II	501.4, I	501.4, II	502.4, I	502.4, II	503.4, I	505.4, I	506.4, I	506.4, III	507.4, I	507.4, I	509.4	510.4, I	514.5, I	516.5, I	516.5, IV
IC-F50, IC-F60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F51, IC-F61	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F30GT/GS, IC-F40GT/GS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F31GT/GS, IC-F41GT/GS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F33GT/GS, IC-F43GT/GS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F34GT/GS, IC-F44GT/GS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F3GT/GS, IC-F4GT/GS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F11/S, IC-F21/S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F12/S, IC-F22/S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F30GT-L/GS-L	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F31GT-L/GS-L	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F40GT/GS MT Version	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F41GT/GS MT Version	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F43TR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F510, IC-F610	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F520/F521, IC-F620/F621	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F110/S, IC-F210/S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F111/S, IC-F211/S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F121/S, IC-F221/S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F610 MT Version	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F620 MT Version	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F620TR, IC-F621TR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IC-F7000															✓	✓	✓
IC-FR3000, IC-FR4000 IC-FR3100, IC-FR4100			✓	✓	✓	✓	✓								✓	✓	✓

The IC-F30G, F3G and F40G MT version were tested to MIL-810 C, D, and E requirements only. The tests for the IC-F70/F80, F14/S, F24/S and IC-F1700/F1800 series are still under evaluation.

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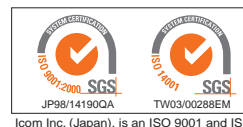
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Icom Inc. (Japan), is an ISO 9001 and ISO 14001 certification acquired company.

00YS0061

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Printed in Japan