



NEW PRODUCT INFORMATION

VHF AND UHF
TRANSCEIVERS

IC-F5061	(50W VHF-USA)	IC-F6061	(45W UHF-USA)
IC-F5062	(25W VHF-Europe)	IC-F6062	(25W UHF-Europe)
IC-F5063	(25W VHF-Export)	IC-F6063	(25W UHF-Export)



The above photo includes optional RMK-3 and OPC-608.

Icom proudly announces the debut of the new mobile transceiver, IC-F5060/F6060 series. This series is designed as a complementary model to the handheld IC-F3060 series, and has many attractive features that are suited to the local government, public safety, utility companies and B&I markets. Features such as full-dot matrix LCD, detachable front panel, multiple signalings, trunking mode and voice scrambler, and it is the first Icom mobile radio compatible with the 6.25kHz digital mode.

MAJOR SELLING POINTS

- Detachable front panel with optional RMK-3 and separation cable*
- Dot-matrix, multi-function LCD*
- Multiple signalling modes built-in*
2-Tone, 5-Tone (including DTMF), CTCSS, DTCS, BIIS 1200, MDC 1200 and basic LTR®
- Optional 6.25kHz digital unit, UT-119H compatible*
- Enhanced scanning features*
- Built-in inversion type voice scrambler and optional high security voice scrambler*
- Complementary mobile model to our handheld IC-F3060 series.*

FEATURES

Detachable front panel

The optional RMK-3 and separation cable* allow you to detach the front panel from the main unit and make it into the remote control head. It provides variety of mounting possibilities and is easy to install in various vehicle types.

* Optional RMK-3 and one of either OPC-607/608/609 are required.

Dot matrix, multi-function LCD

A dot matrix LCD is employed for the function display. Up to 24 characters can be displayed with the option of 1 or 2 line display. LCD backlighting is standard.

Front mounted loud speaker

The IC-F5060 series has a front mounted speaker. With the speaker facing the operator, audio sounds can be clearly heard without impediment during operation.

512 memory channels, 128 memory zones

Up to 512 memory channels can be divided into 128 memory zones and allows you quick access to the intended channel. Each memory channel stores a variety of settings, such as output power, tone frequency, scan list and so on. Wide, middle, narrow channel spacing is programmable per channel.

Durable construction

The solid die-cast chassis and polycarbonate front panel are resistant to shock and vibration. The remote control unit is water resistant construction, equivalent to IP54, providing reliable operation in harsh condition.

Most popular analog signalings built-in

The IC-F5060 series has 2-Tone, 5-Tone, DTMF, CTCSS, DTCS, BIIS1200*, MDC 1200 and basic LTR® signaling capabilities as standard for group communication or selective calling.

Basic LTR® mode operation

The IC-F5060 has built-in LTR® mode capability, so an optional board (UT-111) is no longer required. The IC-F5060 series provides LTR®/conventional mixed mode operation.

MDC 1200 compatible

The following selective calling and ANI features are available with the built-in MDC signaling.

- PTT ID
- Radio check
- Caller ID
- Selective call
- Emergency, emergency mic monitoring
- Radio stun/revive
- 500 Aliases
- Status/message
- Call alert
- Call log

BIIS 1200 compatible

The following selective calling and data message features are available.

- Up to 95-character SDM (Short Data Message)
- 8 SDM transmit memories (Up to 12-characters each)
- 24-status messages
- Own ID and 7 Group IDs registration
- Digital ANI (Automatic Number Identification)
- Max. 6 received SDM and message history and max. 3 received call history capability
- Alphanumeric memories show memory name, instead of calling number
- Position data transmission with a GPS receiver

Multiple 2-Tone, 5-Tone signalings

The IC-F5060 series can decode ten 2-Tone codes or eight 5-Tone codes on a channel. When a matched tone is received, many actions are programmable for each code such as beep sounds, bell icons, answer back calls, external out, ringer sound, stun/kill radio, scans and so on. Also, 40 pairs of CTCSS/DTCS memory channels are available.

6.25kHz digital mode ready

A first in the LMR market. With the optional UT-119H, the IC-F5060 series provides 6.25kHz digital narrow mode communication which meets the FCC 6.25kHz emission mask requirements for narrow banding. It increases efficiency of channel allocation and use of spectrum.

The IC-F5060 series has one optional slot for the digital unit and one for other optional units. So a two option units combination, such as voice scrambler and digital unit, is possible.



FEATURES

Enhanced Scanning features

New scanning features are added allowing easier migration from other brand radios to the Icom radio.

Scanning list and scanning type

The IC-F5060 series has 17 scanning list memories. Each scanning list consists of memory channels to be scanned and scanning type setting. Scanning type setting is selectable from 3 types. The voting scanning (one of the scanning type settings) detects the S-meter level of repeater stations and automatically selects the strongest station. Primary scan and secondary scan channels are also programmable.

Slave mode scan

In the normal mode scan, a user can select a scanning list independent to the channel setting. However, in the slave mode setting, the memory channel contains the scanning list selection. When user changes the operating channel, the scanning list automatically changes following the channel setting.

It is convenient when the user changes an operating channel or moves to a different operating area, they don't have to change the scanning setting.

Tx channel setting

The Tx channel which the radio works when user pushes the PTT button while scanning can be programmable per scanning list. Start channel, last detected channel, priority and preprogrammed channel are selectable. In addition, display setting while scanning is also programmable.

Talk back function

While scanning stops or resumes after a preset time, the talk back function allows the user to send a message on the channel detected during scanning, prior to the Tx channel setting. The talk back timer beep alerts you of the end of the talk back time with a beep sound. The user can easily make a quick response with this function.

Nuisance delete ... User can temporary skip a busy channel from the scanning list.

Monitor key action ... User can stop a scan when pushing the monitor button.

Voice scrambler

The IC-F5060 series has a built-in inversion type voice scrambler in all versions. When more secure voice scrambler system is required, the optional UT-109R/UT-110R is also available.

Other features

- Audio compander is built-in
- Ignition sensing line (pig tail)
- Microphone hanger action programmable (Scan, monitor, priority channel)
- Power on password
- Convenient key assign sticker is supplied
- HM-152 or HM-148 heavy duty microphone supplied (depending on version)
- ±1.0ppm frequency stability
- Embedded ESN
- D-SUB 25 pin ACC connector for connecting various external devices.
- Back to back repeater connection between the F5060 series radios

Function comparison with current 'F' series mobile transceivers

Model Name	IC-F5061/F5062/F5063 IC-F6060/F6062/F6063	IC-F1810, F1821/D IC-F2810, F2821/D	IC-F1710, F1721/D IC-F2710, F2721/D	IC-F510, F521 IC-F610, F621
Frequency coverage (Unit: MHz)	136-174 400-470, 450-520	136-174 400-470, 450-520	136-174 400-470, 450-520	136-174 400-430, 440-490, 480-512, 480-520
PLL channel steps	2.5/3.125kHz	2.5/3.125kHz	2.5/3.125kHz	2.5/3.125kHz (VHF) 5/6.25kHz (UHF)
Number of channels	512 channels/128 zones	256 channels/32 zones	256 channels/32 zones	256 channels/16 banks
Output power (USA/Euro)	50W*/25W	50W*/25W	50W*/25W	50W*/25W
Size (W×H×D)	160×45×150mm	175×45×170mm	175×45×170mm	140×40×170mm
Weight (approx.)	1310g	1500g	1500g	1200g
Channel comment	12 characters × 1 or 2 lines	12 characters × 1 or 2 lines	12 characters × 1 or 2 lines	10 characters
Controller head separation	Yes with RMK-3	Yes with RMK-2	Yes with RMK-2	No (Reversible)
Voice Inversion type	Built-in	Built-in	Built-in	No
Scrambler Non-rolling/Rolling	UT-109R/UT-110R	UT-109/UT-110	UT-109/UT-110	UT-109/UT-110
CTCSS, DTCS Enc/Dec	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
2-Tone, 5-Tone Enc/Dec	Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
DTMF Enc/Dec	Yes/Yes	Yes/Yes	Yes/Yes	Yes/UT-108
MDC 1200	Yes	Yes*3	Yes*3	No
BIIS 1200	Yes	Yes	Yes	Yes
LTR® Trunking	Built-in	UT-111	UT-111	UT-111
SmarTrunkII™	No	No	No	UT-117
6.25kHz digital	UT-119H	No	No	No
APCO P25 digital	No	Yes*2	Yes*2	No

*1 VHF only, UHF is 45W

*2 UT-120 and/or activation key are required depending on version. *3 Depending on version. Firmware update required.

SPECIFICATIONS

Specifications described below are target values. They may be subject to change.

■ GENERAL

- Frequency coverage :
 - IC-F5061/F5062/F5063 136–174MHz
 - IC-F6061/F6062/F6063 400–470MHz
 - IC-F6061 450–512MHz
 - IC-F6063 450–520MHz
- Channel spacing : 12.5/25kHz (EXP),
15/30kHz (USA)
12.5/20/25kHz (Europe)
6.25kHz (With UT-119H)
- PLL channel step : 2.5, 3.125kHz
- Number of channels : Max. 512 Ch./128 zones
- Antenna connector : SO-239 (50Ω)
- Operating Temp. range :
 - USA, Exp -30°C to +60°C; -22°F to +140°F
 - Europe -25°C to +55°C
- Power supply requirements :
 - Europe 13.2V DC
 - USA, Exp 13.6V DC
- Current drain (approx.) :
 - Receive Standby 300mA
 - Max. audio 1.2A
 - Transmit 25W 7.0A
 - 50W 14.0A
- Dimensions (W×H×D) : 160×45×150 mm
6⁵/₁₆×1²⁵/₃₂×5²⁹/₃₂in
- Weight (approx.) : 1310g; 2.9lb

■ TRANSMITTER

- Output power :
 - Europe, EXP 25W
 - USA 50W (VHF), 45W (VHF)
- Modulation system : Variable reactance
frequency modulation
- Maximum deviation : ±5.0/4.0/2.5kHz (W/M/N)
- Frequency error :
 - USA ±1.0ppm
 - EUR, EXP ±1.5kHz
- Spurious emissions :
 - USA, EXP 75dB typ.
 - Europe 0.25μW (≤ 1GHz)
 - 1.0μW (> 1GHz)
- Adjacent channel power : 60dB min. (Narrow)
70dB min. (Wide, mid)
- Audio harmonic distortion : +2dB to -5dB of 6dB/Octave
from 300Hz to 2550Hz (N)
from 300Hz to 3000Hz (W/N)
- FM Hum and Noise : 45/40dB typ. (Wide/Narrow)
(USA, EXP versions only, without CCITT filter)
- Audio harmonic distortion: 3% typ. (40% deviation)
- Limiting character of modulation :
70–100% of max. deviation

■ RECEIVER

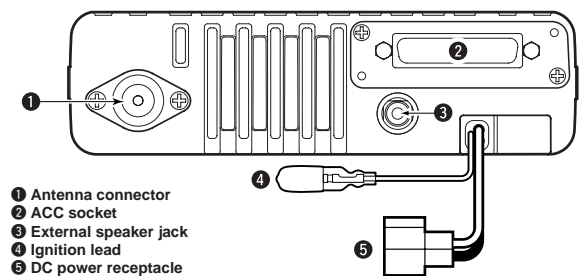
- Intermediate frequencies : 1st 46.35MHz
2nd 450kHz
- Sensitivity :
 - USA, EXP 0.25μV typ. at 12dB SINAD
 - Europe -4dBμV (emf) typ at 20dB
SINAD
- Squelch sensitivity : 0.25μV typ. (threshold)
- Adjacent channel selectivity : 85/83/75dB typ. (W/M/N)
- Spurious response : 90dB typ.
- Intermodulation :
 - Europe 70dB typ.
 - USA, EXP version 77dB typ.
- Hum and noise : 50/45dB typ. (Wide/Narrow)
(USA, EXP version only)
- Audio output power : 4.0W typ. at 10% distortion
with a 4Ω load

Measurements made in accordance with EIA-152C/204D, TIA603 for USA versions, or EN 300 086 for EUR versions.

■ SUPPLIED ACCESSORIES

- Hand microphone, HM-148 (USA version),
HM-152 (Europe, EXP versions)
- DC power cable, OPC-1132 (USA version),
OPC-1194A (Euro, EXP versions)
- Key assign sticker
- Microphone hanger

REAR PANEL VIEW



OPTIONS

■ INTERNAL UNITS (One of these units is selectable)

UT-109R : Non-rolling type voice scrambler unit. 40-pin type*.

UT-110R : Rolling type voice scrambler unit. 40-pin type*.

UT-96R : 2-tone/5-tone unit. 40-pin type*.

* The IC-F5060 series employs new 40-pin type slot interface, optional 30-pin type units are not compatible with the F5060 series.

■ DIGITAL UNITS

UT-119H : Digital unit. Provides 6.25kHz digital capability.

■ CLONING SOFTWARE AND CABLES (For dealers)

CS-F5060 : Cloning software. Allows quick and simple setting from a PC. (New item)
(Microsoft® Windows® 98SE, Windows® Me, Windows® 2000, Windows® XP).

+ OPC-1122/U: Cloning cable. OPC-1122U is USB type cable.

■ HAND MICROPHONES

HM-152 : Hand microphone.

HM-152T : DTMF hand microphone

HM-148 : Heavy duty, dynamic hand microphone

■ STAND MICROPHONE

SM-25 : Desktop microphone

■ SEPARATION KIT

RMK-3 : Controller separation kit (New item)

+ OPC-609 : 1.9m separation cable. EMC compliant.*

or OPC-607 : 3m separation cable. Non-EMC compliant.*

or OPC-608 : 8m separation cable. Non-EMC compliant.*

* One of these cables is required for use with the RMK-3.

■ EXTERNAL SPEAKERS

SP-5 : Large external speaker

SP-10 : Mid sized external speaker

SP-22 : Compact and easy-to-install external speaker



RMK-3



OPC-1122U

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