ICOM

IC-F5021 VHF TRANSCEIVER
IC-F6021 UHF TRANSCEIVER

One Step Up

Rugged MIL-STD 810

MDC 1200 Compatible
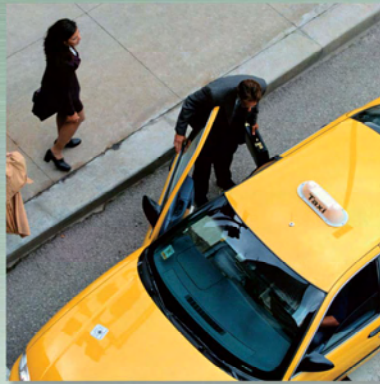
- 128 ch (Max.) / 8 zones
- 2-Tone, 5-Tone CTCSS, DTCS
- MDC PTT ID & MDC emergency call
- VHF 50W, UHF 45W Output
- 8-character LCD display
- Optional voice scrambler

Icom Inc

P0 P1 P2 P3

Features,
Performance,
Value
For the Everyday
LMR User

The IC-F5021 series is ideal for small-to-mid sized systems for public safety, large industry to light commercial users. The IC-F5021 series offers multiple signaling, advanced scanning, improved external channel control capability and wide frequency coverage packed in a compact body. This rugged mobile easily exceeds your expectations with its reliable performance and communication quality.

VHF TRANSCEIVER 50W
IC-F5021

UHF TRANSCEIVER 45W
IC-F6021

128 memory channels

128 channels (Max.) separated into 8 memory zones. Memory channels can be identified with the 8-character channel name and selected easily with the up/down buttons.

Front mounted speaker

4 watts (typ.) front mounted speaker delivers clear and loud audio. With the speaker facing the operator, audio can be clearly heard without impediment during operation.

6 programmable buttons

A pair of up/down and P0–P3 function assignable buttons allow you to customize functions to meet specific needs. An independent volume knob offers simple, convenient operation.

MIL grade rugged construction

The tough aluminum die-cast chassis and polycarbonate front panel have been tested to the MIL standard 810F. With this heavy-duty construction, the IC-F5021 series provides reliable operation over the long term in all manners of rugged environments.

Most popular signalings built-in

Use the built-in 2-Tone, 5-Tone, CTCSS and DTCS capabilities as standard to set up your own talk groups, PTT ID and quiet stand-by when others are talking. The IC-F5021 series has added CTCSS/DTCS high speed decode and 2-Tone decode accuracy.

MDC 1200 compatible

The following MDC features are available with the built-in MDC signaling.
- PTT ID (TX/RX) • Radio check (RX)
- Radio stun (RX) • Radio revive (RX)
- Emergency TX/RX (No ACK)
- 5 alias table (Max.)

Multiple 2-Tone, Multiple 5-Tone

Up to ten 2-Tone and eight 5-Tone codes can be decoded on a channel. When a matched tone is received, the following items are programmable for each code.
- Beep sound • Answer back • Scan
- Bell icon • Radio stun/kill/revive

Radio kill, stun and revive

The radio kill/stun functions disable a lost or stolen radio over the air, eliminating security threats from undesired listeners. When the stun command is received, all functions will be temporary locked out until the revive command is received or the unlock password is entered.

Lone worker function

When the radio is not operated for a pre-set period, the radio sounds a beep and requires you to push any button. If the radio is still not operated for a specified wait period, an emergency signal automatically transmits and informs co-workers that something may have happened to the individual worker.

Mode dependent scan

In the mode dependent setting, the scanning setting is dependent on the operating channel. When you change the operating channel, the scanning list automatically changes to the list set for that channel. It is convenient when you move to a different operating area and change operating channel, you don't have to change the scanning setting.

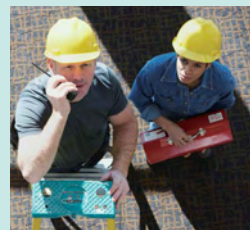## Tx channel setting and Talk back function

The Tx channel setting allows you to program a transmission channel while scanning. Start channel, last detected channel, priority and preprogrammed channel are selectable. Prior to the Tx channel setting, the talk back function allows you to talk on the last detected channel, while scanning resumes after a preset time. The user can easily make a quick response with this function.

Wide frequency coverage

The IC-F5021 series covers a wide frequency range in one version (VHF 136–174MHz, UHF 400–470 or 450–512MHz).

Optional unit

The IC-F5021 series has a 40-pin option slot for adding an optional unit. Optional voice scrambler units, UT-109R or UT-110R provide secure private conversation. Optional DTMF decoder unit, UT-108R offers DTMF decode capability.

External memory channel control with optional ACC cable

With the optional OPC-1939 D-SUB 15-pin ACC cable, the IC-F5021 series can be programmed to control an operating channel from an external device (up to 16 preprogrammed channels). The ACC connector also provides an ignition sensing function, external PTT, PC command, horn honk, audio output and modulated signal input depending on programming.

Photo includes optional OPC-1939

Other features

- Wide/narrow (25/12.5kHz) channel spacing
- Embedded ESN
- ±2.5ppm frequency stability
- Microphone hanger action programmable
- Optional DTMF microphone (HM-152T)
- 8 DTMF autodial memories
- BIIS 1200 PTT ID transmission
- Power-on password function
- Nuisance delete function
- Time-out-timer, Lock-out penalty timer and more

Compatible with IC-F3021/F4021 series handheld

The IC-F5021/F6021 series is designed to be a companion to our IC-F3021/F4021 series handheld transceiver. The number of channels and banks, signaling formats, programming software and voice scrambler are compatible. Take advantage of the shared functionality to complete your communications requirements.

IC‒F5021·IC‒F6021

SPECIFICATIONS

GENERAL

- Frequency range :
  IC-F5021   136–174MHz
  IC-F6021   400–470MHz,
       450–512MHz
- Number of Channels : Max. 128 Ch/ 8 zones
- Channel spacing : 12.5/25kHz, 15/30kHz
- PLL channel step : 2.5kHz, 3.125 kHz
- Antenna impedance : 50Ω (SO-239)
- Operating temp. range : –30˚C to +60˚C
  ; –22˚F to +140˚F
- Power supply requirement : 13.6V DC
- Current drain (approx.) :
  Tx   50W/45W   14.0A
  Rx   Max. audio   1.2A
       Stand-by   300mA
- Dimensions (W×H×D) : 150×40×167.5 mm;
  (Projections not included) $5^{29}/_{32}×1^9/_{16}×6^{19}/_{32}$ in
- Weight : 1.1kg; 2.4lb (approx.)

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

TRANSMITTER

- Output power   VHF : 50W
  (at 13.6V DC)   UHF   45W
- Max. frequency deviation: ± 5kHz/± 2.5kHz (W/N)
- Frequency error : ±2.5ppm
- Spurious emissions : 70dB typ.
- FM Hum and Noise : 46dB/40dB typ. (W/N)
- Adjacent channel power : 70dB/60dB min. (W/N)
- Audio harmonic distortion : 3% typ. (40% deviation)
- Modulation limiting : 70–100% of Max. deviation
- External Mic. impedance : 600Ω (8-pin modular)

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 810F	
	Method	Procedure
Low Pressure	500.4	I, II
High Temperature	501.4	I, II
Low Temperature	502.4-3	I, II
Temperature Shock	503.4	I
Solar Radiation	505.4	I
Humidity	507.4	–
Settling Dust	510.4	III
Vibration	514.5	I
Shock	516.5	I, IV

Also meets equivalent MIL-STD-810-C, -D and -E.

RECEIVER

- Sensitivity : 0.25µV typ. (at 12 dB SINAD)
- Squelch sensitivity : 0.25µV typ. (at threshold)
- Adjacent Ch. selectivity : 75dB/65dB typ. (W/N)
- Spurious response : 70dB min.
- Intermodulation : 75dB typ.
- Hum and noise ratio : 50dB/45dB typ. (W/N)
- Audio output power : 4W typ. at 5% distortion with a 4Ω load
- External SP connector : 2-conductor 3.5 (d) mm (⅛″)/4Ω

Supplied Accessories
- Hand mic. (HM-152)
- Mounting bracket kit
- Key assign stickers
- DC power cable
- Microphone hanger

OPTIONS

Some options may not be available in some countries. Please ask your dealer for details.

HAND MICROPHONES

HM-152   HM-152T   HM-148G   HM-148T

HM-152 : Regular hand microphone. Same as supplied.
HM-152T : DTMF microphone.
HM-148G : Heavy duty microphone. Self-grounding type.
HM-148T : Heavy duty microphone with DTMF keypad. Self-grounding type.

DESKTOP MICROPHONE
SM-25

Convenient for dispatching, equipped with monitor switch.

EXTERNAL SPEAKERS

SP-5   SP-10   SP-22

SP-5 : Large external speaker.
SP-10 : Mid sized external speaker.
SP-22 : Compact and easy-to-install external speaker.

INTERNAL UNITS

UT-108R DTMF DECODER   **UT-109R** VOICE SCRAMBLER UNIT   **UT-110R** VOICE SCRAMBLER UNIT

UT-108R : Provides DTMF decode capability.
UT-109R : Up to 32 scrambling codes are available.
UT-110R : Provides higher operating security. Up to 1020 (255 codes × 4 groups) scrambling codes are available.

ACC CABLE
OPC-1939

15-pin ACC cable. For connecting with a PC, external speaker, external channel control, ignition sense line or vehicle's horn.

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