



## VHF AND UHF TRANSCEIVERS

### IC-F5023

(25W VHF TRANSCEIVER)

### IC-F6023

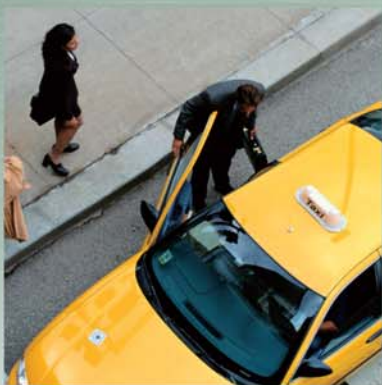
(25W UHF TRANSCEIVER)

### IC-F5023H

(50W VHF TRANSCEIVER)

### IC-F6023H

(45W UHF TRANSCEIVER)



# One Step Up



Limited Functions only.



128 ch (Max.) /  
8 zones

2-Tone, 5-Tone  
CTCSS, DTCSS

MDC PTT ID &  
MDC emergency call

VHF 50W\*,  
UHF 45W\* Output  
\*25W depending on version.

8-character  
LCD display

Optional voice  
scrambler

# Features, Performance, Value For the Everyday LMR User

The IC-F5023/H series is ideal for small-to-mid sized systems for public safety, large industry to light commercial users.

The IC-F5023/H 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 TRANSCEIVERS

<b>IC-F5023</b>	25 W
<b>IC-F5023H</b>	50 W

## UHF TRANSCEIVERS

<b>IC-F6023</b>	25 W
<b>IC-F6023H</b>	45 W





## 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-F5023/H 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-F5023/H 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 preset 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-F5023/H series covers a wide frequency range in one version (VHF 136–174 MHz, UHF 400–470, 450–520 MHz).

## Compatible with IC-F3033/F4033 series handheld

The IC-F5023/H series is designed to be a companion to our IC-F3033 series waterproof 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.



## Optional internal units

The IC-F5023/H series has a 40-pin option slot for adding an optional internal unit. Optional voice scrambler units, UT-109R or UT-110R provide secure private conversation.

## External memory channel control with optional ACC cable

With the optional OPC-1939 D-SUB 15-pin ACC cable, the IC-F5023/H 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 shows optional OPC-1939 installed on high power version.

## Other features

- Wide and narrow channel spacing (25/12.5 kHz) is programmable per channel
- Embedded ESN
- $\pm 2.5$  ppm 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



## SPECIFICATIONS

	IC-F5023, IC-F5023H	IC-F6023, IC-F6023H
GENERAL		
Frequency coverage	136–174 MHz	400–470 MHz 450–520 MHz
Number of channels	Max. 128 Ch/ 8 zones	
Type of emission	16K0F3E, 11K0F3E	
Channel spacing	25/12.5 kHz	
PLL channel step	2.5/3.125 kHz	
Power supply requirement	13.6 V DC	
Current drain (approx.)		
Tx	50 W/45 W	11 A
	25 W	5 A
Rx	Max. audio	0.7 A
	Standby	250 mA
Antenna impedance	50 Ω (SO-239)	
Operating temperature range	–30 °C to +60 °C	
Dimensions (W × H × D)	150 × 40 × 167.5 mm (50 W/45 W version)	
(Projections not included)	150 × 40 × 117.5 mm (25 W version)	
Weight (approx.)	1.1 kg (50 W/45 W version) 0.8 kg (25 W version)	
TRANSMITTER		
Output power (at 13.6 V DC)		
IC-F5023H/IC-F6023H	50 W, 25 W, 5 W (Hi, L2, L1)	45 W, 25 W, 4.5 W (Hi, L2, L1)
IC-F5023/IC-F6023	25 W, 10 W, 2.5 W (Hi, L2, L1)	25 W, 10 W, 2.5 W (Hi, L2, L1)
Max. frequency deviation	±5.0 kHz/±2.5 kHz (Wide/Narrow)	
Frequency stability	±2.5 ppm	
Spurious emissions	70 dB typ.	
FM Hum and noise	46 dB/40 dB typ. (Wide/Narrow)	
Audio harmonic distortion	3% typ. (AF 1 KHz, 40% deviation)	
Modulation limiting	70–100% of Max. deviation	
Ext. microphone impedance	600 Ω (8-pin modular)	

	IC-F5023, IC-F5023H	IC-F6023, IC-F6023H
<b>RECEIVER</b>		
Sensitivity (at 12 dB SINAD)	0.25 μV typ.	
Adjacent channel selectivity	75 dB/65 dB typ. (Wide/Narrow)	
Spurious response	80 dB typ.	
Intermodulation	75 dB typ.	
Hum and noise	45/40 dB typ. (Wide/Narrow)	
Audio output power	4 W typ. (at 5% distortion, 4 Ω load)	
Ext. speaker connector	2-conductor 3.5 (d) mm (1/8")/4 Ω	

All stated specifications are subject to change without notice or obligation.

## Applicable U.S. Military Specifications

Standard	MIL 810 F	
	Method	Procedure
Low Pressure	500.4	I, II
High Temperature	501.4	I, II
Low Temperature	502.4	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.

## Supplied Accessories

- Hand microphone (HM-152)
- DC power cable
- Mounting bracket kit
- Microphone hanger
- Key assign stickers

## OPTIONS

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

**HAND MICROPHONES**

HM-152      HM-152T DTMF microphone      HM-148G Heavy duty microphone      HM-148T Heavy duty microphone with DTMF keypad

**DESKTOP MICROPHONE**

SM-26

**VOICE SCRAMBLER UNITS**

UT-109R VOICE SCRAMBLER UNIT Non-rolling type      UT-110R VOICE SCRAMBLER UNIT Rolling type

**EXTERNAL SPEAKERS**

SP-35: 2 m cable  
SP-35L: 6 m cable

**ACC CABLES**

OPC-1939 15-pin type      OPC-2078 25-pin type

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