



ICOM

F3021/F4021 SERIES

STEP UP TO MORE THAN A BASIC RADIO

FEATURE	FUNCTION	BENEFIT
GENERAL		
Die-cast Aluminum Chassis	Mil-spec rated rugged design	Reliable performance, even in the most demanding industrial and public safety applications
Compact Case	Facilitates easy handling	Easily fits into the palm of your hand
IP54 Compliant	Rated for ingress protection	“Ingress Protection” rated as resistant to dust and low pressure water jet
Volume Knob	Adjusts audio level	Easily adjusts the radio’s volume
128 Memory Capacities	Program 128 separate channels for operation	Plenty of channel capacity. Perfect for applications requiring a multiple channel system design
Alphanumeric Display	8 character alphanumeric display	Allows entry of upper and lower case characters for easy channel zone tag identification. Shows channel, zone, tone code and scanning channels names on the display. A separate row of operational icons indicate battery, signal strength, RX/TX and other radio conditions
Dynamic Zone Configuration	Eight memory channel zones. Assign any quantity of memory channels to a zone	Helpful for “partitioning” multiple channels into clearly defined groups. Example: “Zone 1” is EMT, “Zone 2” is FD District 4, etc.
Alphanumeric Zone Tagging	Custom label each zone with up to 8 alpha and/or numeric characters for user display	Enables quick, easy identification of programmed zones, channels or groups
Programmable Keys	Eight programmable buttons for assignable user functions	Customizes function keys to user specific needs (see “Programmable Key Choices” section for detailed explanation)
500mW Speaker	Clear audio	Provides loud clear audio for easy copy
Alphanumeric Memory Tagging	Up to 8 alpha and/or numeric tags, or names, can be assigned to each of the 128 channels	Enables quick, easy identification of programmed channels
Wide Frequency Range	Provides operation for full VHF high band range (136-174 MHz) and UHF (400-470 MHz or 450-512MHz)	Enables the full utilization of the spectrum by using all available frequencies even if not co-located

FEATURE	FUNCTION	BENEFIT
Wide/Narrow Channel Spacing	12.5 kHz and 25 kHz channel bandwidth	This radio features wide and narrow channel bandwidth by channel for compatibility with the older (wide) and newer (narrow) channel assignments – very flexible to grow with the users changing needs
Li-ion Battery	Long life between charges	2000 mAh battery provides long periods of use between charges.
Multiple Tone Squelch Signaling	CTCSS and DTCS encode/decode	Compatibility with existing CTCSS & DTCS based systems
Advanced Signaling	2/5 tone encode/decode, and DTMF encode built in	Advanced functions available via this built-in feature include selective individual and group calling, radio check, auto TX, stun/kill radio, remote scan start/stop. Excellent for isolating a call to a specific user without needlessly altering others and for maintaining control of fleet. All tone encoders are built-in. The UT-108 is required for DTMF decode
MDC1200 Signaling	Provides a wide variety of signaling functions by transmitting a silent, digital signal at 1200bps simultaneously with voice transmission	Allows for PTT ID, Radio Check, advanced emergency functions, Stun, and Revive. 100% compatible with other MDC1200 fleets from other manufacturers so it is easy to merge your radio with systems that already use MDC 1200 radios
Multiple 2-Tone Receive	Receive up to 10 2-tone combinations	Allows user to monitor multiple 2-tones pages on 1 memory channel. User can assign any 1 of 10 channels to transmit per memory channel. Not limited to industry standard 2-tone tables
Over the Air Stun or Kill	Remote disabling of radio with 2/5 tone	In the event of unauthorized use or theft, the radio can be disabled over the air from an authorized source. Excellent for maintaining communication integrity with minimal disruption
Scrambling	Voice encryption for communications privacy	Add the UT-109R/UT-110R for increased over the air security
Lone Worker Function	When the radio is not operated for a preset period of time, it beeps. User must press the emergency button otherwise emergency signal is automatically generated calling for help	Protects the safety of individual required to work by themselves in potentially hazardous positions
RECEIVER SECTION		
Feature Based Scan	Scan features are fully programmable to allow setting TX channel, talkback, and cancel channel functions to be programmed as desired per channel	User has greater flexibility to program scan as needed

FEATURE	FUNCTION	BENEFIT
Priority Channel/Scan	Frequent checking of an assigned channel	A great feature, when a highly important frequency needs to be continually checked for activity. Users can assign one channel as priority channel
Priority (Home) Channel	Instant access to 2 priority (home) channel	Enables instant access to either of the 2 priority (home) channels regardless of memory/zone location
TRANSMITTER SECTION		
Multiple Format ANI	Automatic unit number identification	This is an excellent feature for public safety, plant security, and any application where it is essential to identify the user during transmission. Supports DTMF, 5-tone and MDC formats. User can also customize their own ANI
Emergency Call	Alerts dispatch to emergency situations	The radio can transmit an emergency ID message, showing the unit number, and may repeat that emergency status message until cancelled, and the emergency is under control. Essential for public safety and plant security, as well as in any hazardous, high-risk area
Time Out Timer	Disables transmitter after excessive PTT's	The radio's time out timer (TOT) is helpful if the radio is accidentally keyed, or if a user gets too "long-winded", tying up the frequency beyond normal use. The transmitter can also be locked out for a programmable period of time following time out
Transmit Inhibit	Disables transmitter from use	Configure the radio to prohibit transmission if the channel is selected as a "receive only" channel. Perfect for monitoring NOAA "weather" broadcasts or other channels when no permission to transmit, but permission to receive exists
Busy Channel Lockout	Disables transmitter from use	Configure the radio to prohibit transmission if the channel is busy, when a CTCSS tone is received unmatched
PROGRAMMABLE KEY CHOICES		
Channel Up/Down	Changes programmed frequency channel	Easily selects any of the channel's assignments. Also used to select programmed scan lists, zones and transmit TX codes
Priority Channel	Selects A or B priority channel	Easy selection of priority (home) channel for instant access
Priority Re-write	Re-assigns priority A channel	Allows user to re-assign priority A channel as needed

FEATURE	FUNCTION	BENEFIT
Surveillance	Allows user to turn surveillance mode on / off	When surveillance mode is turned on, radio goes “dark and quiet” for users safety. All backlight and button beep functions are disabled
Zone	Selects channel zone number	Allows access to channel groups
Scan Start/Stop	Enables/ disables scanning function	Provides scanning control and access to multiple scan lists
Scan Tag	Provides scan select of any channel	This function adds or deletes any channel from a scan list. User may “inhibit” or disable on a per channel basis
Lock	Disables most functions from programmable keys	Electronically locks all programmable keys, except call, monitor and emergency ID functions
Monitor	Un-mutes audio channel	Muted channels can be “monitored” to check for traffic
High/Low	Selects transmitter power output levels	Selects low 1, low 2, or high-powered settings. Allows only the level of transmitter power needed, for reduced power supply consumption
Talk Around	Allows transmit on receive frequency in duplex channels	Provides direct, mobile-to-mobile communications, avoiding needless repeater use and congestion. Also provides direct communications when out of range of repeater system
Call	Transmits 2/5 tone calling code	Alerts the other user’s receiver, opening the audio to monitor the transmission. Perfect for “toning out” additional fire companies for the fire service
TX Code	Selects individual calling code 2-tone or 5-tone	Determines what TX coded channel is to be used. Allows user to select and send any of the pre-programmed 2/5 tone codes
Emergency	Activates emergency call	Provides single or repeated emergency ID transmissions
DTMF	Selects DTMF auto dial number or PTT ID	Selects the desired DTMF channel and transmits the code when user presses the assigned key.
User Mode Set	Enables access to adjust radio wide parameters	Allows user to adjust backlighting, function beep on/off, squelch level, mic gain, and power on battery voltage indicator. Gives the user front panel squelch and adjust key
Scrambler	Enables/disables voice scrambler function	Gives access to activate voice encryption and communications privacy

FEATURE**FUNCTION****BENEFIT****SOFTWARE IMPROVEMENTS**

Grid or List Style of Data Entry	Allows direct channel data entry	Streamlines channel entry, scan, list, and calling code data for large systems
Text Preview Screen	Provides preview of alpha tag while entering text	Streamlines text entry process – eliminates the need to program and check display
Improved Help Screens	Helps you program your radios	Provides detailed instructions for each programming option, help screens are structured identical to programming “tree” to provide ease in locating specific information
Improved “Cut and Paste” Capability	Allows selection of multiple rows of programming for cut and paste operations	Improve programming efficiency and minimize errors while programming by copying and pasting entire lists at one time
Programming List “Reorder” Feature	Move order of items in memory channel and other programming lists	Another tool to make programming easier and more efficient. “Grab” one or more items in a list, and use “CTRL+Up/Down” command to move items into a different order
Embedded ESN	Electronic Serial Number embedded in radio at factory	Prevent loss of radio, makes recovery easier. Also prevents serial number sticker falsification

< See back for specifications >

SPECIFICATIONS

GENERAL

- Frequency range :

IC-F3021T/S	136–174MHz
IC-F4021T/S	400–470MHz
	450–512MHz
	450–520MHz
- Number of channels : 128 channels/8 zones
- Channel spacing : 12.5kHz/25kHz, 15kHz/30kHz
- PLL channel step : 2.5kHz, 3.125kHz
- Antenna impedance : 50Ω
- Usable temperature range : –30°C to +60°C; –22°F to +140°F
- Power supply requirement : 7.2V DC
- Current drain (at 7.2V DC; approx.):

Transmit	VHF/UHF	1.5A/1.5A (at 5W/4W)
	Receive	Stand-by 75mA
		Rated output 250mA
- Dimensions (with BP-231) : 53 (W) × 120 (H) × 32.5 (D) mm;
(projections are not included) 2³/₃₂ (W) × 4²³/₃₂ (H) × 1⁹/₃₂ (D) in
- Weight (approx.) : 260g; 9.2oz (with BP-231)

TRANSMITTER

- Output power : 5W (VHF), 4W (UHF)
- Max. frequency deviation : ±5.0/±2.5kHz (Wide/narrow)
- Frequency error : ±2.5ppm
- Spurious emissions : 80dB typ.
- Adjacent channel power

VHF	: 80/70dB typ. (Wide/narrow)
UHF	: 75/68dB typ. (Wide/narrow)
- FM Hum and Noise : 48/45dB typ. (Wide/narrow)
- Audio harmonic distortion : 3% typ. (AF 1kHz, 40% deviation)
- Modulation limiting : 60–100% of max. deviation
- External microphone connector :

3-conductor 2.5 (d) mm (1/10")/2.2kΩ

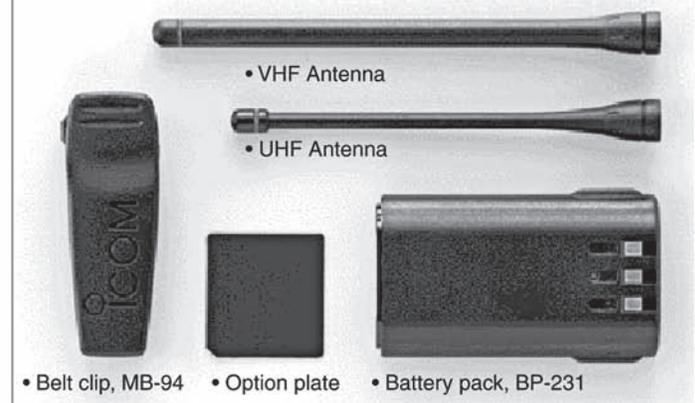
RECEIVER

- Intermediate frequency : 1st 46.35MHz
2nd 450kHz
- Sensitivity : 0.25μV typ. (at 12dB SINAD)
- Squelch sensitivity : 0.25μV typ. (at threshold)
- Adjacent channel selectivity : 75/65dB typ. (Wide/narrow)
- Spurious response : 70dB min.
- Intermodulation : 75/74dB typ. (VHF/UHF)
- Hum and noise ratio

VHF	: 55/50dB typ. (Wide/narrow)
UHF	: 53/48dB typ. (Wide/narrow)
- Audio output power : 500mW typ.
(at 5% distortion with an 8Ω load)
- External speaker connector: 2-conductor 3.5 (d) mm (1/8")/8Ω

SUPPLIED ACCESSORIES

(May differ according to version)



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

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Icom America Inc.
 2380 116th Ave NE, Bellevue, WA 98004
 Main Phone: 425-454-8155
 Tech Support: 800-253-1498
 Web: www.icomamerica.com
 Literature request line: 425-450-6088
 Online brochure: www.icomamerica.com/downloads

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