



IC-F51 ATEX IC-F61 ATEX

(VHF Transceiver)

(UHF Transceiver)



INTRINSICALLY SAFE VERSION





Superior Wat **Supports Der**

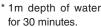
Firefighters, Police, Security challenges, but all have one Icom's IC-F51/F61 offers a co Rain or shine, this radio keep

Dust and Waterproof Protection Equivalent to IP67

The gasket sealed waterproof housing provides superior dust and waterproof*

protection, equivalent to IP67.

Reliable and dependable use in harsh conditions under water or dust, make the IC-F51 / IC-F61 the radio for all situations.





Built-in Tone Signaling

Use the built-in CTCSS, DTCS, 2-Tone and 5-Tone capability to set up your own talk groups and quiet stand-by when other groups are talking. You can also set up selective calls to individuals or control a repeater.

Multiple 5-Tone

Up to 8 5-Tone codes can be decoded on a single memory channel. This is perfect for professionals who require multiple district paging on one channel. When a matched tone is received, the following items are programmable for each code.

- Bell icon
- Stun Answer back
- Beep sound
 Auto transmit
- Scan
- ID decode Emergency cancel

VHF AND UHF TRANSCEIVERS

IC-F51 ATEX

VHF Transceiver

C-F61 ATEX

UHF Transceiver

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and Public utilities. Each profession has its own unique thing in common: the need for reliable communications. Impact waterproof, MIL STD package, that's easy to use. The solutions is solution to be used to be use.

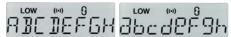


Up to 7 Programmable Buttons

The [P0]–[P3], [Red] and [Up], [Down] buttons are programmable to meet specific needs. The [Red] button on the top panel can be assigned as an emergency trigger.

Alphanumeric Display

The 8-character alphanumeric display shows channel, bank, tone code and scanning channel names on the display. 7 operational icons on the sub-line show various status at a glance.



Upper and lower case characters available.

Built-in Voice Scrambler

The IC-F51/F61 has a built-in rolling type voice scrambler equivalent to the UT-110.

Wide Range Coverage and Large Channel Capacity

The IC-F51 covers 136–174MHz and the IC-F61 covers 400–470MHz in one version. The 128 memory channels with 8 memory banks allows you to divide and store a variety of channels from local to wide area network channels. Wide, middle and narrow* channel bandwidth is programmable to each channel.

(* Programmable 25/12.5kHz or 20/12.5kHz Ch.)

Li-Ion Battery Pack

The large capacity 1950mAh (typ.) Lithium-lon (Li-Ion) battery pack, BP-227AXD provides a practical 10 hours* of operating time. Li-Ion batteries allow flexible charging and have almost no memory effect.

* Typical operation Tx:Rx:Stand-by=5:5:90

Compact Body

56(W)×97(H)×36.4(D) mm compact body with durable, dependable construction, has been tested to MIL standard specifications. The compact design fits comfortably in your palm, and is easy to carry around.

BIIS 1200 Compatible

The following selective calling and data features are available with the BIIS system.

- 32 abbreviated call memories
- 7 group IDs 24-status Messages
- 8-character SDM (Short Data Message)

Other Features

 Built-in audio compander • 8 DTMF autodial memories • Normal and priority scans • 2 step power saver • Busy, repeater lockout functions • Power ON password, and more...



ATEX Intrinsically Safe

The IC-F51/F61 and designated options are certified to the ATEX Protection Class II 2 GD Ex ib IIA T3 Ex tD A21 T160°C IP67 as interpreted in the following table. It is suitable for use in hazardous areas where flammable gasses, liquids or combustible dusts are used.

ATEX Gas Protection

Ш	2	G	D	Ex	ib	IIA	ТЗ	T3 = Device surface temperature will not exceed 200°C
								IIA = Protection in GAS group
								ib = Intrinsically safety according to EN60079-0
				E			Ex = Explosion proof equipment	
				С			D = Dusts	
								G = Gas, vapour and mist
								2 = High level protection for use in zone 1 (gas) and zone 21 (dust)
	II = Group II, other (non-mining) environments							

ATEX Dust Protection

7.1. <u></u>						
E	Ξx	tD	A21	T160°C IP67 IF		IP67 = IP67 dust and water proof protection
						T160°C = Maximum temperature of device surface
						A21 = For use in dust zone 21 environments
						tD = Enclosure protection
						Ex = Explosion proof equipment

ATEX Gas Group Classification

	T1: 450°C	T2: 300°C	T3: 200°C
- 1	Methane		
	Acetone	Ethyl alcohol	Benzine
	Ethane	I-amyl acetate	Diesel fuel
	Ethyl acetate	n-butane	Aircraft fuel
	Ammonia	n-butyl alcohol	Heating oil
IIA	Benzene (pure)		n-hexane
IIA	Acetic acid		
	Carbon Monoxide		
	Methanol		
	Propane		
	Toluene		

IC-F51 ATEX • IC-F61 ATEX

SPECIFICATIONS

	IC-F51 ATEX	IC-F61 ATEX IC-F61-L ATEX					
GENERAL							
Frequency coverage	136-174MHz	400–470MHz 350–400MHz (Non-RTTE)					
Number of channels	Max. 128 channels/ 8 zones						
Type of emission	16K0F3E, 14K0F3E, 8K50F3E						
Channel spacing	12.5/20/25kHz	12.5/20/25kHz 12.5/25kHz (IC-F61-L)					
PLL channel step	2.5/3.125kHz	5/6.25kHz					
Power supply requirement	7.2V D	7.2V DC nominal					
Current drain (approx.) Tx High (at 1W) Rx Max. audio Standby	0.7A 300mA 85mA	0.8A 300mA 85mA					
Antenna impedance	50Ω (SMA type)						
Operating temperature range	-20°C to +55°C						
Dimensions (W×H×D) (Projections not included)	56×97×36.4mm (With BP-227AXD)						
Weight (approx.)	290g (With BP-227AXD)						
TRANSMITTER							
Output power (at 7.2V DC)	1	W					
Max. frequency deviation	±5.0kHz/±4.0kHz/±2.5kHz (W/M/N)						
Frequency stability	±2.5ppm						
Spurious emissions	0.25μV (≤1GHz) 1.0μV (>1GHz)						
Modulation limiting	60-100% of Max. deviation						
Audio harmonic distortion	3% typ. (AF 1kHz 40% deviation)						
Ext. microphone connector	9-pin multi connector/2.2kΩ						
RECEIVER							
Sensitivity (at 20dB SINAD)	-4dBµV typ. (emf)						
Adjacent channel selectivity	75/73/65dB min. (W/M/N)						
Spurious response	70dB						
Intermodulation rejection	67dB typ.						
Hum and noise	55/53/50dB typ. (W/M/N)						
Audio output power	500mW typ. (at 5% distortion with 8Ω load)						
Ext. speaker connector	9-pin multi connector/8Ω						

Measurements made in accordance with EN 300-086.

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

Applicable U.S. Military Specifications & IP Rating

Standard	MIL 810 F		
Standard	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	
Rain Blowing/Drip	506.4	I, III	
Humidity	507.4	_	
Salt Fog	509.4	-	
Dust Blowing	510.4	I	
Vibration	514.5	I	
Shock	516.5	I, IV	

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

Dust & Water IP67 (Dust-protection and waterproof protection)

ATEX INTRINSICALLY SAFE TYPE APPROVAL

The approved rating is Gas: II2GD Ex ib IIA T3



Dust: II2GD Ex tD A21 T160°C IP67

Special conditions for use: Must be used with BP-227AXD When the transceiver is used in hazardous areas, either the jack cover or HM-138 must be attached to the connector.

* Note for IC-F51/F61 ATEX Non-Dust (II2G) version users, please use only the BP-227AX battery pack with the IC-F51/F61 ATEX Non-Dust version.

OPTIONS

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



BP-227AXD Li-lon 7.4V 1850mAh (min)



Charges the BP-227AXD in 9-10 hours. (approx.)







- BC-145SA/BC-147SA for 120V AC. SE for 230V AC. SV for 240V AC. BC-145SUK for 230V AC.
 These chargers are not approved as intrinsically safe. Do not charge the BP-227AXD in an explosive atmosphere

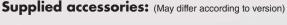


Rapid charges up to 6 battery packs in 2-2.5 hours



ANTENNAS FA-S24V: 136-150MHz (Blue) FA-S59V: 150-174MHz (Red) FA-S27U: 400-470MHz (Green)

STUBBY ANTENNAS FA-S62VS: 150–162MHz (Red) FA-S63VS: 160–174MHz (Green) FA-S57US: 450–490MHz (Red)



• Antenna (Length may differ according to version)



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