



## VHF AND UHF TRANSCEIVERS

### IC-F3022T

(VHF transceiver with 10-keypad)

### IC-F4022T

(UHF transceiver with 10-keypad)

### IC-F3022S

(VHF transceiver without 10-keypad)

### IC-F4022S

(UHF transceiver without 10-keypad)



IP54



# One Rank Up



128 ch / 8 zones

2-Tone, 5-Tone CTCSS, DTCS

MDC PTT ID & MDC emergency call

15.5 hrs. operating time with BP-232N

8-character LCD display

Optional voice scrambler

# SIMPLE, RUGGED, VERSATILE FOR T



▲ IC-F3022T

▲ IC-F4022S

*Only Icom quality can offer this featured radio. In this compact, rugged design, you'll find a wide range of features such as multiple memory channels, a long-life Lithium-Ion battery and wide frequency range. This rugged handheld easily offers reliable performance and communication.*

## Compact lightweight body

The rounded compact\* design fits comfortably in your palm and is light-weight\*\* for carrying around all day. The large size programmable buttons have ample button-pitch to allow blind touch operation.

\* 53(W)×120(H)×36.9(D) mm

\*\* 296g including BP-232N

## IP54 dust-protection and splash resistance

The IC-F3022 series meets IP54 requirements for dust-protection and splash resistance. The aluminum die-cast chassis is the basis for this rugged construction, allowing long-life usage in various environments.

## 128 memory channels and button control memory channel

The IC-F3022 series has 128 memory channels with 8 zones. Memory channel selection can be made easily with the up/down buttons laid out below the PTT button.

## 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 and quiet standby when others are talking.

## 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

## Lithium-Ion battery standard

Supplied 2000mAh Li-Ion battery pack, BP-232N, provides 15.5 hours\* of operating time. Li-Ion batteries have virtually no memory issues and allows you flexible charging. \* Typical operation; Tx:Rx:Stand-by=5:5:90, power save on

## VHF TRANSCEIVERS

# IC-F3022T

With 10-keypad

# IC-F3022S

Without 10-keypad

## UHF TRANSCEIVERS

# IC-F4022T

With 10-keypad

# IC-F4022S

Without 10-keypad

# THE EVERYDAY USER

*simple to use but versatile rich light weight body, many attractive signalings, large capacity frequency coverage are standard. Exceeds your expectations with communication quality.*

## 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 not operated for a preset time, an emergency signal automatically transmits and informs your co-worker 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 an operating channel, you don't have to change the scanning setting.

## Wide frequency coverage

The IC-F3022 series covers a wide frequency range with one version (136–174, 400–470 MHz). Wide, middle and narrow channel spacing (25, 20, 12.5kHz) is programmable per channel.

## Optional board

The IC-F3022 series has a 40-pin expansion socket for adding an optional board. A voice scrambler provides secure conversation and the DTMF decoder features has ANI (Automatic Number Identification) capability, depending on the installed board.

## Other features

- 2 step power saver
- 8 DTMF autodial memories
- Surveillance function temporarily turns off the LED backlight and beep sound
- Optional man down unit, UT-124R
- Normal and priority scan
- Nuisance delete function temporarily deletes a channel from the scanning list
- TOT (Time-Out-Timer) function and lock out penalty timer
- Low battery beep function

## OPTIONS

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



Battery packs	Type and capacity	Operating time* (VHF/UHF)	Output power (VHF/UHF)
BP-230N	Li-Ion 7.4V/ 980mAh	7.35 hours	5W/4W
BP-232N	Li-Ion 7.4V/2000mAh	15.5 hours	5W/4W
BP-240	AAA (LR03) batteries × 6	—	1W

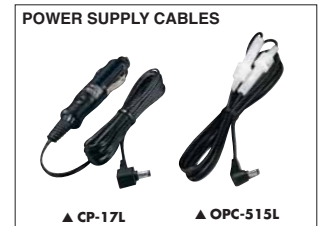
\* Operating time is approximate time (at 20°C). Tx: standby=5:5:90. Power save on.



**BC-171 DESKTOP CHARGER + BC-147 AC ADAPTER**  
Charges the BP-232N in 10 hours (approx.).



**BC-160 DESKTOP CHARGER + BC-145 AC ADAPTER**  
Charges the BP-232N in 3 hours (approx.).  
**BC-119N + AD-106 + BC-145** is also available. : Charges the BP-232N in 3 hours (approx.).



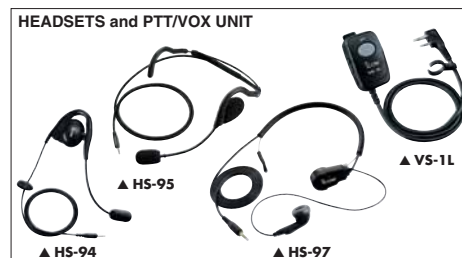
**CP-17L CIGARETTE LIGHTER CABLE, OPC-515L DC POWER CABLE**  
For use with the BC-160 or BC-119N. (12–16V DC required).



**BC-121N MULTI-CHARGER + AD-106 CHARGER ADAPTER + BC-157 AC ADAPTER**  
Rapidly charges up to 6 battery packs (Six AD-106s are required).  
Charges the BP-232N in 3 hours (approx.).  
**OPC-656 DC POWER CABLE** :For use with the BC-121N. (12–20V DC required).



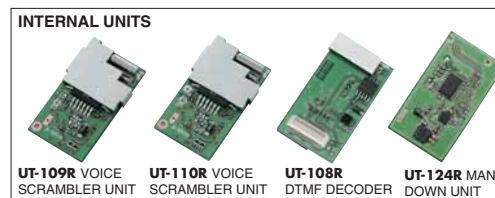
**MB-93** : Swivel type belt clip.  
**MB-94** : Alligator type. Same as supplied.  
**MB-96N** : Swivel type belt hanger.  
**MB-96F** : Fixed type belt hanger.



**HS-94**: Earhook headset with flexible boom microphone.  
**HS-95**: Behind-the-head headset with flexible boom microphone.  
**HS-97**: Throat microphone fits around your neck and picks up speech vibration.  
**VS-1L**: PTT/VOX unit. Required when using these headsets with the transceiver.



**HM-153L**: Durable earphone-microphone with revolving clip.  
**HM-158L**: Compact and durable body with screw-type connector.  
**HM-159L**: Full size durable speaker microphone.



**UT-109R**: Up to 32 scrambling codes are available. 40-pin type.  
**UT-110R**: Up to 1020 scrambling codes are available. 40-pin type.  
**UT-108R**: Provides DTMF selective call and ANI capabilities. 40-pin type.  
**UT-124R**: Automatically sends an emergency signal when the transceiver is left in a horizontal position for a preset time. 40-pin type.



Provides clear audio in noisy environments.

## STUBBY ANTENNAS

- **FA-SC56VS**: 150–162MHz, 80mm
- **FA-SC57VS**: 160–174MHz, 80mm
- **FA-SC73US**: 450–490MHz, 60mm

## CUT ANTENNAS

- **FA-SC61VC**: 136–174MHz
  - **FA-SC61UC**: 380–520MHz
- Cut the antenna element to tune to a specific center frequency.

## ANTENNAS

- **FA-SC25V**: 136–150MHz
- **FA-SC55V**: 150–174MHz
- **FA-SC25U**: 400–430MHz
- **FA-SC57U**: 430–470MHz



## SPECIFICATIONS

## GENERAL

- Frequency range :  
IC-F3022T/S 136–174MHz  
IC-F4022T/S 400–470MHz
- Number of channels : 128 channels/8 zones
- Channel spacing : 12.5/20/25kHz
- PLL channel step : 2.5kHz, 3.125kHz
- Antenna impedance : 50Ω
- Usable temperature range : –25°C to +55°C
- 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 72mA  
Rated output 250mA
- Dimensions (with BP-232N) : 53 (W) × 120 (H) × 36.9 (D) mm  
(projections are not included)
- Weight (approx.) : 296g (with BP-232N)

## TRANSMITTER

- Output power : 5W (VHF), 4W (UHF)
- Max. frequency deviation : ±5.0/±4.0/±2.5kHz (Wide/mid/narrow)
- Frequency error : ±2.5ppm
- Spurious emissions : 0.25μW (≤ 1GHz)  
1.0μW (> 1GHz)
- Adjacent channel power VHF : 80/80/70dB typ. (Wide/mid/narrow)  
UHF 76/74/68dB typ. (Wide/mid/narrow)
- Audio harmonic distortion : 1.5% typ. (AF 1kHz, 40% deviation)
- Modulation limiting : 60–100% of max. deviation
- Ext. microphone connector : 3-conductor 2.5 (d) mm/2.2kΩ

Measurements made in accordance with EN 300-086.

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

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## RECEIVER

- Intermediate frequency : 1st 46.35MHz  
2nd 450kHz
- Sensitivity : –4dBμV typ. (emf; at 20dB SINAD)
- Squelch sensitivity : –4dBμV typ. (emf; at threshold)
- Adjacent channel selectivity VHF : 76/75/66dB typ. (Wide/mid/narrow)  
UHF 74/73/64dB typ. (Wide/mid/narrow)
- Spurious response : 70dB min.
- Intermodulation : 67dB typ.
- Hum and noise ratio VHF : 60/58/55dB typ. (Wide/mid/narrow)  
UHF 57/55/51dB typ. (Wide/mid/narrow)
- Audio output power : 500mW typ.  
(at 5% distortion with an 8Ω load)
- External speaker connector: 2-conductor 3.5 (d) mm/8Ω

## 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
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.

## SUPPLIED ACCESSORIES

(May differ according to version)



• Belt clip, MB-94 • Option plate • Battery pack, BP-232N

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