# ICOM

# IC-F9511HT

# High Power Mobile for the First Responder!

P25

AES/DES option

Rugged
MIL-STD 810

IP54

DIGITAL

- P25 Conventional & Trunking
- AES/DES Encryption *(Option)*
- Enhanced Vocoder Ready
- 110W Output Power
- 512 Channels 128 Zone
- Full Dot-matrix LCD

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IC-F9511HT

Photo includes optional SP-30.

*High-Power* 110W

# High POWER MOBILE FOR THE FIRST RESPONDER!

## Ready for : P25 conventional, P25 trunking and analog conventional. All in one radio!

**High-Power 110W**

VHF P25 CONVENTIONAL & TRUNKED TRANSCEIVER

# IC-F9511HT

## P25 Conventional & Trunking Features

### P25 VHF Conventional and Trunking
The IC-F9511HT comes with P25 VHF conventional and trunking capabilities. You can assign individual channels to analog conventional, P25 conventional or P25 trunking, all within one radio.

### Interoperability
The IC-F9511HT conforms to standard specifications for TIA/EIA -102, CAAB, Digital C4FM Transceiver Performance Recommendations. Provides interoperability with other brand P25 equipment for public safety applications.

### Digital/Analog mixed mode operation
The mixed mode operation allows you to detect and receive both analog FM and P25 digital modes and to transmit either mode depending on programming.

### Individual ID and talkgroup ID
The IC-F9511HT has a 100 individual ID and 250 talkgroup ID memories. Use the display to visually select the person or group you're going to call.

### Optional AES/DES encryption
The IC-F9511HT provides AES and/or DES encryption for secure conversation with the optional UT-125 AES/DES encryption unit or UT-128 DES encryption unit.

### OTAR (Over-the-Air-Rekeying)
The IC-F9511HT supports P25 OTAR for changing encryption keys over the air.

### Enhanced vocoder ready
Using the DVSI's AMBE+2™ vocoder, the IC-F9511HT is enhanced vocoder ready.

## 110W of powerful RF output

A full 110W of output power is available for reliable long distance communication. A large heat sink provides effective cooling mechanism allowing continuous duty cycle operation (20% duty cycle transmission).

## Compact "letter size" RF unit

While the IC-F9511HT provides 110W of RF output, the RF (main) unit dimensions are only 175 (W) $\times$ 60 (H) $\times$ 279 (D) mm ($6\frac{7}{8}$ $\times$ $2\frac{3}{8}$ $\times$ $10\frac{31}{32}$ in), so the RF unit can be fit into a "letter size" console box.

## IP54 dust and water resistance

The controller and RF unit have dust-protection and splash resistance, equivalent to IP54.

## Dot matrix, multi-function LCD

With a high contrast dot matrix display, upper and lower case characters can be easily distinguished. The display shows 12 characters by 2 lines. LCD backlight is standard.



Internal clock setting example

## Self-grounding mic, HM-148G

The supplied HM-148G self-grounding microphone has a mechanism for self grounding where a grounding wire is no longer required.



Optional external speaker, SP-30

## Tactical group function

The tactical group function allows you to copy memory channels to the tactical zone and temporarily regroup memory channels. Using the optional zone copy cable, memory channels in the tactical zone can be transferred from a master radio to other radios.

## Abundant scanning functions

The dual priority scan monitors two primary channels alternately, while scanning other channels. The mode dependent scan function automatically changes the scan list according to the operating channel setting. The talk back function with timer beep, TX channel and cancel channel settings allow you to preset the transmission channel when you push the PTT button during a scanning operation or cancel the scanning.

## Radio stun/kill and Power-on password function

The radio stun/kill function* disables a lost or stolen radio over the air, eliminating security threats from undesired listeners. The power-on password prevents unauthorized people from turning on the radio.
* P25 digital mode only.

## Optional external speaker SP-30

Newly designed external speaker, SP-30 offers 15W* (typ.) of high level audio with the IC-F9511HT for improved operation in noisy environments.
* Rated input of the SP-30 is 20W.

## Other features

- Wide frequency coverage (136–174MHz)
- FM wide/narrow channel spacing[1]
- Built-in audio compander[1]
- Built-in inversion type voice scrambler[1]
- NTIA VHF specification compliant
- Talk around function
- DTMF autodial[1]
- Microphone hanger action (On hook scan and off hook monitor)
- 2-Tone encoder and decoder[1] and MDC 1200 compatible[1] (Available in future)
[1] Analog mode only

## Separate controller

The controller and speaker are separated from the RF unit for flexible installation. A 5m (16.4ft) separation cable is attached to the controller and optional separation cable length is selectable from 1.9m (6.2ft), 3m (9.8ft) and 8m (26.2ft).

## 512 memory channels, 128 zones

Up to 512 memory channels can be divided into 128 memory zones, allowing you flexible channel and communication group management. The CTCSS and DTCS encoder and decoder* are also built-in to set up your own talk groups. * Analog mode only.

## 9-pin external speaker connector

The IC-F9511HT has a 9-pin speaker connector with a 15W (typ.) audio amplifier for connecting the SP-30 external speaker, horn honk and ignition sensing line, etc,. When an external loud speaker is connected, the RX speaker function allows you to relay the received audio over the loud speaker.

## Programmable accessory connector

The IC-F9511HT has a D-SUB 25-pin ACC connector for connecting external devices. It has reserved pins for programming to input operating channels, turn on/off functions and output received audio.

## SPECIFICATIONS

### GENERAL

- Frequency range : 136–174MHz
- Number of channels : Max. 512 channels/ 128 zones
- Channel spacing : 15/30kHz (analog) 12.5kHz (digital)
- PLL channel step : 2.5kHz, 3.125kHz
- Antenna impedance : 50Ω (SO-239)
- Operating Temp. range : –30˚C to +60˚C ; –22˚F to +140˚F
- Power supply requirement : 13.6V DC nominal
- Current drain (approx) :
  - Tx High (110W) 22.0A
  - Rx Max. audio 3.0A
  - Stand-by 400mA
- Dimensions (W×H×D) (projections not included) :
  - RF unit 175×60×279 mm ; $6^7/_8 \times 2^3/_8 \times 10^{31}/_{32}$ in
  - Controller 178×48×50 mm ; $7 \times 1^7/_8 \times 1^{31}/_{32}$ in
- Weight (approx.) : 4.1kg; 9.0lb
  - With controller & cable 4.7kg; 10.4lb

**Measurements made in accordance with TIA-102 (Digital), TIA-603B (Wide/narrow). All stated specifications are subject to change without notice or obligation.**

### TRANSMITTER

- Output power (approx) : 110W
- Max. frequency deviation : ±5.0/2.5kHz (Wide/Narrow)
  - Maximum pattern ±2.85kHz (Digital)
- Frequency error : ±1.0ppm
- Spurious emissions : 70dB min.
- Adjacent channel power : 70/60dB min. (Wide/Narrow) 67dB min. (Digital)
- FM hum and noise : 48/45dB typ. (Wide/Narrow)
- Audio harmonic distortion : 3% typ. (40% deviation)
- Ext. microphone impedance : 600Ω (8-pin modular)

#### Applicable U.S. Military Specifications & IP Rating

| 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 |
| Rain | 506.4 | I, III |
| Humidity | 507.4 | – |
| Salt Fog | 509.4 | – |
| Dust | 510.4 | I |
| Vibration | 514.5 | I |
| Shock | 516.5 | I, IV |

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

| Ingress Protection Standard | |
|---|---|
| Dust & Water | IP54 (Dust-protection and water resistant) |

### RECEIVER

- Sensitivity :
  - Analog 0.25µV typ. (at 12dB SINAD)
  - Digital 0.25µV typ. (at 5% BER)
- Squelch sensitivity : 0.25µV typ. (at threshold)
- Adjacent Ch. selectivity :
  - Analog (TIA/EIA603B) 81/53dB typ. (Wide/narrow)
  - (TIA/EIA603) 85/77dB typ. (Wide/narrow)
  - Digital 63dB typ.
- Spurious response : 85dB min.
- Intermodulation : 78dB typ.
- Hum and noise ratio : 55/51dB typ. (Wide/Narrow) 52dB typ. (Digital)
- Audio output power (with external speaker) : 15W typ. at 3% distortion with a 4Ω load

#### Supplied Accessories
- Hand microphone, HM-148G
- Controller unit
- Separation cable, 5m (16.4ft)
- DC power cable
- Microphone hanger
- Key assign stickers
- Mounting bracket kit for main unit and controller
- Fuse
- Crimp terminals
- Socket terminals
- Cable with fuse holder
- * Speaker is an option.

## 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.
**HM-152T** : DTMF microphone.
**HM-148G** : Heavy duty microphone. Self-grounding type. Same as supplied.
**HM-148T** : Heavy duty microphone with DTMFkeypad. Self-grounding type.

### SEPARATION CABLES



**OPC-609** (1.9m; 6.2ft)  **OPC-607** (3m; 9.8ft)  **OPC-726** (5m; 16.4ft)  **OPC-608** (8m; 26.2ft)

**OPC-609** : 1.9m; 6.2ft separation cable.
**OPC-607** : 3.0m; 9.8ft separation cable.
**OPC-726** : 5.0m; 16.4ft separation cable. Same as supplied.
**OPC-608** : 8.0m; 26.2ft separation cable.
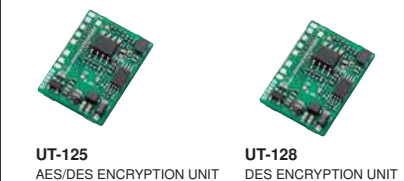
### DESKTOP MICROPHONE
**SM-25**



Convenient for dispatching, equipped with monitor switch.

### EXTERNAL SPEAKER
**SP-30**



20W rated input power (40W max. input).

### ENCRYPTION UNITS



**UT-125** AES/DES ENCRYPTION UNIT  **UT-128** DES ENCRYPTION UNIT

**UT-125** : Provides AES and DES encryption capabilities.
**UT-128** : Provides DES encryption capabilities.

### ZONE COPY CABLES



**OPC-1532**    **OPC-1871**

**OPC-1532** : Mobile to mobile zone copy cable.
**OPC-1871** : Mobile to handheld zone copy cable.