



VHF P25 CONVENTIONAL & TRUNKED TRANSCEIVER

# IC-F9511HT

# High Power Mobile for the First Responder!

P25 Conventional  
& Trunking

AES/DES  
Encryption (Option)

Enhanced  
Vocoder Ready

110W Output  
Power

512 Channels  
128 Zone

Dual-head  
Configuration (Option)



AES/DES  
option



IP54

DIGITAL



High-Power **110W**

Photo includes optional RMK-4, OPC-609 and SP-30

# High Power Mobile for the First Responder!

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

VHF P25 CONVENTIONAL & TRUNKED TRANSCEIVER

**IC-F9511HT**

**110W**  
High-Power



## 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 and trunked 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).

## IP54 dust and water resistance

The controller and RF unit have IP54 dust-protection and splash resistance allowing it to be used in wet and dusty conditions.

## Compact "letter size" RF unit

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



Photo includes optional RMK-4, OPC-607, SP-22, SP-30 and HM-148G.

## Optional dual-head controller\*

By installing the optional RMK-4 with a separation cable, the IC-F9511HT can be made a two controller "Dual-head" configuration. While a dual-head operator is communicating using one of the controllers, the other operator can monitor incoming and outgoing audio. Also, the radio can be used as an intercom between controllers.

\* Optional dual-head separation kit, separation cable, microphone and speaker are required.

## 512 memory channels, 128 zones

Up to 512 memory channels can be divided into 128 memory zones, allowing you flexi-

ble 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.

## 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



## 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.

## 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. \*\* The power-on password function is not compatible with the RMK-4.

## 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)
- HM-148G self-grounding microphone supplied with the IC-F9511HT
- FM wide/narrow channel spacing\*<sup>1</sup>
- Built-in audio compander\*<sup>1</sup>
- Built-in inversion type voice scrambler\*<sup>1</sup>
- NTIA VHF specification compliant
- Talk around function
- DTMF autodial\*<sup>1</sup>
- Microphone hanger action (On hook scan and off hook monitor)
- 2-Tone encoder and decoder\*<sup>1</sup> and MDC 1200 compatible\*<sup>1</sup> (Available in future)

\*<sup>1</sup> Analog mode only



**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
- Emission designators : Analog (wide/narrow) 16K0F3E/11K0F3E Digital 8K10F1E, 8K10F1D
- 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 (WxHxD) (projections not included) : RF unit 175x60x279 mm; 6 7/8 x 2 3/8 x 10 31/32 in Controller 175x45x50.3 mm; 6 7/8 x 1 29/32 x 1 37/32 in
- Weight (approx.) : 4.1kg; 9.0lb With controller & cable 4.7kg; 10.4lb Controller 260g; 9.2oz

**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)

When an external speaker is connected to the controller, the controller does not have IP54 protection.

**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 : 15W typ. at 3% distortion (with external speaker) with a 4Ω load

**Supplied Accessories**

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

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

**OPTIONS**

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



- 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 DTMF keypad. Self-grounding type.



For dual-head configuration. Separation cable, microphone and speaker are required separately.



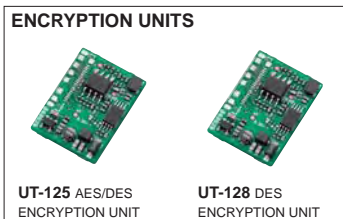
- OPC-609** : 1.9m; 6.2ft separation cable.
- OPC-607** : 3.0m; 9.8ft separation cable.
- OPC-726** : 5.0m; 16.4ft separation cable. Same as supplied with the IC-F9511HT.
- OPC-608** : 8.0m; 26.2ft separation cable.



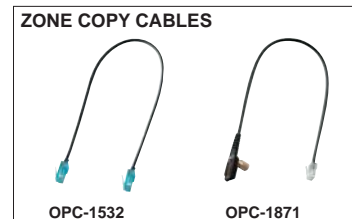
Convenient for dispatching, equipped with monitor switch.



- SP-30**: External speaker for connection with the RF unit. 20W rated input power (40W max. input) Speaker plug adapter is supplied for connection with the controller.
- SP-22**: External speaker for connection with the controller.



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



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

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