



VHF & UHF P25 CONVENTIONAL & TRUNKED TRANSCEIVERS

**IC-F9511T**

VHF transceiver with full keypad

**IC-F9511S**

VHF transceiver with simple keypad

**IC-F9521T**

UHF transceiver with full keypad

**IC-F9521S**

UHF transceiver with simple keypad

# Featured for the First Responder!



512 Channels/  
128 Zones

P25 Conventional  
& Trunking

AES/DES  
Encryption (Option)

Enhanced  
Vocoder Ready

50W Output  
Power

IP54  
(Controller only)

Full Dot-matrix  
LCD

Detachable  
Controller\*

\*Optional RMK-2 required



Photo includes optional RMK-2 and OPC-609.

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



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# P25 Conventional & Trunking Features



## P25 Conventional and Trunking

The IC-F9511 series has P25 conventional and trunking capabilities as standard. You can assign individual channels to analog conventional, P25 conventional or P25 trunking, all within one radio.

## Interoperability

The IC-F9511 series conforms to the standard specifications for TIA/EIA TSB-102, CAAB, Digital C4FM Transceiver Performance Recommendations and 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-F9511 series 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-F9511 series provides AES and/or DES encryption for secure conversation with the optional UT-125 or UT-128. UT-125 FIPS 140-2 level 1 certified version is also available.

## OTAR (Over-the-Air-Rekeying)

The IC-F9511 series 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-F9511 series is enhanced vocoder ready.

## Detachable controller (front panel)

With the optional remote control kit, RMK-2 and separation cable, the front panel controller of the radio can be detached from the main unit. It allows flexible installation in limited vehicle space. Separation cable length is selectable from 1.9m (6.2ft), 3m (9.8ft), 5m (16.4ft) and 8m (26.2ft).

## 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

## IP54 dust-protection and splash resistance (Controller only)

The rugged front controller panel is resistant to shock and vibration. When used with the optional separation kit, RMK-2, the controller head has dust-protection and splash resistance, equivalent to IP54.

## Built-in CTCSS and DTCS signaling

Use the built-in CTCSS and DTCS encoder and decoder capabilities\* to set up your own talk groups, and have your radio stand-by quietly when other groups are talking. You can also set up selective calls to individuals or control a repeater.

\* Analog mode only.

## 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.

## 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.

## 22W amp for Public address (PA) and RX speaker functions

The IC-F9511 series has a built-in 22W BTL audio amplifier. When an external loud speaker is connected to the radio, you can speak through the radio's microphone. The RX speaker function allows you to relay the received audio over the loud speaker.

## Programmable accessory connector

The IC-F9511 series 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 or honk a horn, etc. In addition, an ignition sensing line allows you to control the radio power from the engine ignition switch.



## 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.

## Other features

- Wide frequency coverage
- FM wide/narrow channel spacing\*<sup>1</sup>
- Built-in audio compander\*<sup>1</sup>
- Built-in inversion type voice scrambler\*<sup>1</sup>
- Self-ground microphone, HM-148G
- Talk around function
- CTCSS and DTCS encoder and decoder\*<sup>1</sup>
- 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>

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

**SPECIFICATIONS**

GENERAL	
• Frequency range	: IC-F9511T/S 136–174MHz IC-F9521T/S 400–470, 450–512MHz
• Number of channels	: Max. 512 channels/ 128 zones
• Channel spacing	Analog : 15/30kHz (VHF), 12.5/25kHz (UHF) Digital 12.5kHz
• Type of emission	N/W : 11K0F3E, 16K0F3E 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 (50W) 11.0A/14.0A (VHF/UHF) Rx Max. audio 1000mA Stand-by 350mA
• Dimensions (W×H×D)	: 175×45×170 mm (projections not included); 6 7/8 × 1 29/32 × 6 11/16 in
• Weight (approx.)	: 1.5kg; 3.3lb SP-22 290g; 10.2oz

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)	: 50W, 25W, 5.0W
• Max. frequency deviation	: ±5.0/2.5kHz (Wide/Narrow) Maximum pattern ±2.85kHz (Digital) Minimum pattern ±0.95kHz (Digital)
• Frequency stability	: ±1.0ppm
• Spurious emissions	: 70dB min.
• FM hum and noise	: 48/45dB typ. (VHF, W/N) 48/43dB typ. (UHF, W/N)
• Audio harmonic distortion	: 1% 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
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)  
\* IP54 tests were performed on the controller and RMK-2 only.

RECEIVER	
• Sensitivity	: Analog 0.25μV typ. (at 12dB SINAD) Digital 0.25μV typ. (at 5% BER)
• Adjacent Ch. selectivity	: Analog (TIA/EIA603B) 81/53dB typ. (VHF, W/N) 79*/53dB typ. (UHF, W/N) * 81dB typ. (406.1–420MHz) 63dB typ.
• Digital	: 63dB typ.
• Spurious response	: 85dB min. (VHF) 70dB* min. (UHF) * 85dB min. (406.1–420MHz)
• Intermodulation	: 78dB typ.
• Hum and noise	: 55/51dB typ. (VHF, W/N) 50/45dB typ. (UHF, W/N) 52dB typ. (Digital)
• Audio output power	: 4W typ. External audio (D-sub) 22W typ. at 10% distortion with a 4Ω load
• External speaker connector	: 2-conductor 3.5 (d) mm (1/8")/4Ω

**Supplied Accessories**  
• Hand microphone, HM-148G • DC power cable  
• Microphone hanger • Mounting bracket kit  
• External speaker, SP-22\* • Key assign stickers  
\* For IC-F9511T/F9521T only.

**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.



**RMK-2** : For front panel detachment installation. Use with one of the following separation cables.



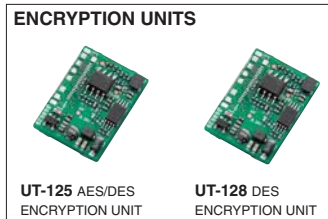
**OPC-609** : 1.9m; 6.2ft separation cable.  
**OPC-607** : 3.0m; 9.8ft separation cable.  
**OPC-726** : 5.0m; 16.4ft separation cable.  
**OPC-608** : 8.0m; 26.2ft separation cable.



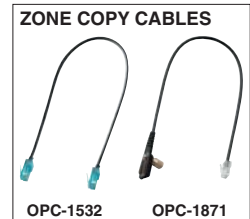
**SM-26** : Convenient for dispatching, equipped with monitor switch.  
**SM-25** is also available.



**SP-30** : 20W rated input power (30W max. input).  
**SP-22** : Compact and easy-to-install. Same as supplied with IC-F9511T/F9521T.  
**SP-10** : Compact mobile speaker.  
**SP-5** : Large speaker for good audio quality.



**UT-125** : Provides AES and DES encryption capabilities. FIPS version available.  
**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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