



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 1.9 m (6.2 ft), 3 m (9.8 ft), 5 m (16.4 ft) and 8 m (26.2 ft).

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.

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

The IC-F9511 series has a built-in 22 W 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 de-

vices. 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*¹
- Built-in audio compander*¹
- Built-in inversion type voice scrambler*¹
- Self-ground microphone, HM-148G
- Talk around function
- CTCSS and DTCS encoder and decoder*¹
- DTMF autodial*¹
- Microphone hanger action (On hook scan and off hook monitor)
- 2-Tone encoder and decoder*¹ and MDC 1200 compatible*¹

*¹ Analog mode only

SPECIFICATIONS

	IC-F9511T/S	IC-F9521T/S
GENERAL		
Frequency coverage	136–174 MHz	400–470 MHz 450–512 MHz
Number of channels	Max. 512 Ch/ 128 zones	
Type of emission	16K0F3E*, 11K0F3E, 8K10F1E, 8K10F1D	
Channel spacing	12.5/25, 15/30 kHz*	
PLL channel step	2.5/3.125 kHz	
Power supply requirement	13.6 V DC	
Current drain (approx.)		
Tx 50 W	11.0 A	14.0 A
Rx Max. audio/Standby	1000 mA/350 mA	1000 mA/350 mA
Antenna impedance	50Ω (SO-239)	
Operating temperature range	–30 °C to +60 °C; –22 °F to +140 °F	
Dimensions (W × H × D) (Projections not included)	175 × 45 × 170 mm; 6.89 × 1.77 × 6.69 in	
Weight (approx.) SP-35	1.5 kg; 3.3 lb	320 g; 11.3 oz
TRANSMITTER		
Output power (at 13.6 V DC)	50 W, 25 W, 5 W (Hi, L2, L1)	
Max. frequency deviation	±5.0 kHz/±2.5 kHz (Wide/Narrow)	
Digital	Max. pattern ±2.85 kHz, Minimum pattern ±0.95 kHz	
Frequency stability	±1.0 ppm	
Spurious emissions	70 dB min.	
FM Hum and noise	48/45 dB typ. (Wide/Narrow)	48/43 dB typ. (Wide/Narrow)
Audio harmonic distortion	1% typ. (40% deviation)	
Ext. microphone impedance	600 Ω (8-pin modular)	

	IC-F9511T/S	IC-F9521T/S
RECEIVER		
Sensitivity	0.25µV typ. (at 12dB SINAD) 0.25µV typ. (at 5% BER)	
Adjacent channel selectivity	Analog*1 81/53dB typ. (Wide/Narrow)	79*/53dB typ. (Wide/Narrow)
Digital	63dB typ.	
Spurious response	85dB min.	
Intermodulation	78dB typ.	
Hum and noise	Analog 55/51dB typ. (Wide/Narrow)	50/45dB typ. (Wide/Narrow)
Digital	52dB typ.	
Audio output power	4W typ. (at 10% distortion, 4Ω load)	
External audio (D-sub)	22W typ. (at 10% distortion, 4Ω load)	
Ext. speaker connector	2-conductor 3.5 (d) mm (1/8")/4Ω	

*1 TIA/EIA603B *2 81dB typ. (406.1–420MHz), *3 85dB typ. (406.1–420MHz)
Measurements made in accordance with TIA-102 (Digital), TIA-603B (Wide/narrow). All stated specifications are subject to change without notice or obligation.

* 25 kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions. Ask your dealer if you need 25kHz bandwidth.

Applicable U.S. Military Specifications

Standard	MIL 810 G	
	Method	Procedure
Low Pressure	500.5	I, II
High Temperature	501.5	I, II
Low Temperature	502.5	I, II
Temperature Shock	503.5	I-C
Solar Radiation	505.5	I
Humidity	507.5	II
Salt Fog*	509.5	–
Blowing Dust*	510.5	I
Vibration	514.6	I
Shock	516.6	I, IV

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

Ingress Protection Standard

Dust & Water IP54* (Dust-protection and water resistant)

* Salt fog, Blowing dust and IP54 tests were performed on the controller and RMK-2 only.

Supplied Accessories		
• Hand microphone, HM-148G	* For IC-F9511T/F9521T only.	• Mounting bracket kit
• Microphone hanger	• DC power cable	• Key assign stickers
	• External speaker, SP-35*	

OPTIONS

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

SEPARATION KIT



RMK-2
Use with one of the following separation cables.

SEPARATION CABLES



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

DESKTOP MICROPHONE



SM-26

HAND MICROPHONES



HM-211 Active noise cancelling microphone
HM-152
HM-152T DTMF microphone
HM-148G Heavy duty microphone
HM-148T Heavy duty microphone with DTMF keypad

EXTERNAL SPEAKERS



SP-30
20 W rated input
SP-35: 2 m cable
SP-35L: 6 m cable

INTERNAL UNITS



UT-125 AES/DES ENCRYPTION UNIT
UT-125 FIPS AES/DES ENCRYPTION UNIT (FIPS version)
UT-128 DES ENCRYPTION UNIT

ZONE COPY CABLES



OPC-1532 Mobile to mobile cable
OPC-1871 Mobile to handheld

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