



Key Features and Benefits

Robust and Flexible

- ▶ Up to 512 Channels / Talkgroups
- ▶ P25 Digital and Analog
- ▶ SMARTNET II®/SmartZone® P25 Digital and Analog
- ▶ All Supported Protocols Available Simultaneously
- ▶ DES & DES-OFB Encryption with 64 keys
- ▶ P25 Conventional & Trunked OTAR
- ▶ Conventional Vote Scan is Standard
- ▶ Supports Key Elements of MDC1200
- ▶ Compatible with Motorola Astro®
- ▶ Supports Motorola® System v7.4
- ▶ Simplified cabling with a single multi-function accessory connection in the rear

Data and Control Interfaces

- ▶ Supports P25 Conventional IP Packet Data
- ▶ Supports GPS AVL Data

Simplified Feature Updates and Option Selection

- ▶ Over the Air Programming (OTAP) option enables you to program radios without connecting them to a computer
- ▶ Easy radio programming and feature updating using EFJohnson's PC Configure™ software for portable and mobile radios

Multiple Configuration Options

- ▶ Dash Mount
- ▶ Trunk Mount
- ▶ 2 Control Heads
- ▶ Hand-Held Controller
- ▶ Internal or External Speaker
- ▶ Fixed Control Stations
- ▶ Siren Option
- ▶ Motorcycle Configuration

Extensive Accessory Suite

Complete line of accessories including microphones, speakers, and encryption keyloading devices. Visit our website for the *EFJohnson Subscriber Accessories Catalog!*

Rugged...Solid....Reliable.

EFJohnson designed the 53SL ES Series Mobile Radio to be all of these, along with flexible, versatile, and capable of operating in analog and digital applications. The 53SL ES Series is a high-tier mobile radio with a mid-tier price that meets the needs of first responders. Specifically designed for public safety, the 53SL ES Series offers crisp and powerful digital audio, Project 25 trunked and conventional operation, and interoperability with digital and analog as well as wideband and narrowband. Make the 53SL ES Series Mobile Radio your right choice.

EFJohnson is a leading provider of Project 25 compliant two-way radios and communication systems for law enforcement, fire fighters, EMS, and military.



▶ Project 25 Compliance

Supports Project 25 CAI (Common Air Interface), Project 25 Trunked and Conventional system protocols, and Project 25 Over-The-Air Rekeying (OTAR) functionality.

▶ Enhanced (AMBE+2) P25 Vocoder

Outstanding voice quality and noise reduction. EFJohnson is the only high tier radio vendor with a full implementation of this second generation Enhanced (AMBE+2) P25 preferred vocoder.

▶ Industry's Only SMARTNET® II / SmartZone® Licensee

Industry's only supplier licensed to support both analog and digital SMARTNET II and SmartZone trunking protocols.

▶ Numerous Encryption Protocols

Supports DES and industry standard P25 digital DES-OFB. Ask about our free Single Key DES-OFB encryption for P25.



53SL ES Series Mobile Radio

700/800 MHz

Typical Performance Specifications

GENERAL		7/800, 30/35W
Frequency Range (band splits)	762-870 MHz	
Channel Spacing		
Analog	25kHz, 12.5kHz	
P25 Digital	12.5kHz	
Maximum Frequency Separation	Full Band Split	
Display	Backlit LCD. 10 alpha-numeric characters plus Zone, Channel and Status. Electronically adjustable viewing angle	
Power Supply		
Nominal Voltage (negative ground)	13.6 VDC	
Operating Supply Voltage Range	10.9 ~ 16.3 VDC	
Standby Current (back-light off)	700 mA	
Receive Current at Rated Audio Power	2.65A	
Current at Max Rated Transmit Power	12.5A	
Temperature Range		
Operating	-30°C to +60°C	
Storage	-40°C to +85°C	
Nominal Dimensions (H x W x D)	2.1" x 7.2" x 8.3"	
exclusive of mounting, cables, knobs	(5.3 cm x 18.2 cm x 21.1 cm)	
Nominal Weight	6.5 lbs (2.3 kg)	
FCC ID	ATH2425372	
Industry Canada	IC: 933B-2425372	

TRANSMITTER	
RF Output Power (variable)	15 ~ 30 W (762-806MHz) 15 ~ 35 W (806-870MHz)
Transmitter Frequency Range(s)	762~776, 792~806, 806~825, 851~870 MHz
Maximum Frequency Separation	Full Band Split
Frequency Accuracy (-30°C ~ +80°C, +25°C ref.)	±1.5 ppm
Modulation Limiting	
25kHz channels	±5 kHz
12.5kHz channels	±2.5 kHz
Modulation Fidelity (C4FM, 12.5kHz Digital)	< 5%
Spurious Emissions	-70 dBc
Audio	
Analog Frequency Response (TIA 6dB/octave pre-emphasis)	+1dB, -3dB
FM Hum and Noise Ratio (25kHz Analog)	40 dB
FM Hum and Noise Ratio (12.5kHz Analog)	34 dB
Distortion	2%
FCC Emission Designators	8K10F1D, 8K10F1E, 11K0F3E, 16K0F3E

RECEIVER	
Receiver Frequency Ranges	762~776, 851~870 MHz
Maximum Frequency Separation	Full Band Split
Sensitivity	
Analog Mode: 12dB SINAD (25 & 12.5kHz)	.25µV (-119 dBm)
Digital Mode: (5% BER)	.25µV (-119 dBm)
Selectivity (Adjacent Channel Rejection)	
25kHz channels, Analog	> 80 dB
12.5kHz channels	> 63 dB
Offset, Digital	< 9 dB / kHz
Intermodulation	-80 dB
Spurious Response Rejection	-83dB
Audio	
Analog Frequency Response (TIA 6dB/octave pre-emphasis)	+1dB, -3dB
Output Power (3Ω load)	12W rms
Distortion (1kHz, 60% Deviation)	< 3%

ENVIRONMENTAL SPECIFICATIONS

Environment	Mil Spec	810F
	M	P
Low Pressure	500.4	II
High Temp.	501.4	I, II
Low Temp.	502.4	I, II
Temp. Shock	503.4	I
Solar Radiation	505.4	I
Rain/Blown Rain	506.4	I, III
Humidity	507.4	--
Salt Fog	509.4	--
Dust	510.4	I
Vibration	514.5	I(24), II(5)
Shock	516.5	I, IV

M = Method P = Procedure

Also meets equivalent superseded C, D, and E standards

ENCRYPTION OPTIONS

Supported Encryption Algorithms	DES, DES-OFB
Encryption Keys/Radio	64 Common Key Reference (CKR) 64 Physical Identifier (PID) Compatible with Motorola Key Variable Loader
Encryption Frame Re-sync Interval	P25 CAI 360 msec
Encryption Keying	External Key Loader, OTAR
Synchronization	CFB – Cipher Feedback OFB – Output Feedback
Vector Generator	National Institute of Standards and Technology (NIST) approved random number generator
Encryption Type	Digital
Key Erasure	Keyboard Command
Code Key Initialization	Internal pseudorandom generator

ACCESSORIES

- Antennas
- Keypad Microphones
- Desk Microphones
- Hand-Held Controller
- Remote Control Heads
- External Speakers
- Power Supplies
- Control Station Components
- Tone Remotes
- Encryption Key Management Tools
- Radio Programming Tools
- Mounting Hardware
- Siren Control Kit