

# ***SPECTRA***

## **Motorcycle Radio**

*Featuring:*

*Clear and  
Secure Capable  
Models in Conventional,  
SMARTNET and  
SmartZone*

*136-146 MHz  
146-174 MHz  
403-433 MHz  
438-470 MHz  
800 MHz*



***Shown with Optional Black  
Weather Resistant Enclosure***



***A4 Rotary Control for Conventional Models***

## **STANDARD FEATURES**

- ▶ Up to 128 channel capability
- ▶ 8-character alphanumeric display
- ▶ Broad-band transmit and receive
- ▶ 7 ft. power cable
- ▶ Weather resistant speaker with 9 ft. cable
- ▶ Weather resistant control head and microphone
- ▶ White weather resistant enclosure for the transceiver
- ▶ Interface cable for connection to headsets
- ▶ 10 watt audio output
- ▶ Rotary control head models available for Conventional, SMARTNET and SmartZone models
- ▶ Survives MIL-STD 810C, D & E for shock, vibration, rain, dust, salt fog, solar radiation, and fungus
- ▶ Priority Monitor Scan
- ▶ Stat Alert Unit ID and Emergency

## **OPTIONAL FEATURES**

- ▶ Securenet Encryption
- ▶ Black weather resistant enclosure



**MOTOROLA**

# SPECTRA Motorcycle Radio

## SPECIFICATIONS

### GENERAL SPECIFICATIONS

<b>No. of Modes:</b>		128 (Conventional) 20 Trunked Channels, 10 Conventional Modes (Smartnet)					
<b>Squelch Option:</b>		Carrier squelch, Private-Line and Digital Private-Line codes are standard and available within the same radio unit.					
<b>Primary Power :</b>		13.6V Nominal, Negative Ground					
<b>Channel Resolution:</b>		Multiples of 5.0 kHz or 6.25 kHz					
<b>System Types</b>	<b>Standard Models</b>	<b>Securenet Capable</b>	<b>Frequency Range MHz</b>	<b>Minimum RF Power Output</b>	<b>Receive Current Standby</b>	<b>Receive Current @ Rated Audio</b>	<b>Transmit @ Rated Power</b>
Conventional	M33KMA7JA4_K M33KMA7JA7_K M33KMA7JA7_K	M33KXA7JA4_K M33KXA7JA7_K M33KXA7JA7_K	VHF-136-162	15 Watt	0.5A	2.5A	5.4A
	M34KMA7JA4_K M34KMA7JA5_K M34KMA7JA7_K	M34KXA7JA4_K M34KXA7JA5_K M34KXA7JA7_K	UHF-403-433 UHF-438-470	15 Watt	0.6A	3.6A	6.0A
SMARTNET	M35KGA5JC4_K M35KGA5JC5_K M35KGA5JC7_K	M35ZXA5JC4_K M35ZXA5JC5_K M35ZXA5JC7_K	800 TX* 806-824, 851-869 RX* 851-869	15 Watt	0.5A	2.5A	6.5A
SMARTNET		M33ZXA5JC4_K M33ZXA5JC5_K M33ZXA5JC7_K	VHF 136-162 146-174	10W-25W Variable	0.5A	2.5A	4.2A (10W) 6.4A (25W)
SmartZone	M35KGA5JE4AK M35KGA5JE5AK M35KGA5JE7AK	M35ZXA5JE4AK M35ZXA5JE5AK M35ZXA5JE7AK	TX* 806-824 851-869 RX* 851-869	15W	0.5A	2.5A	6.5A
SmartZone		M33ZXA5JE4AK M33ZXA5JE5AK M33ZXA5JE7AK	VHF 136-162 VHF 146-174	10W-25W Variable	0.5A	2.5A	4.2A (10W) 6.4A (25W)

\* reduced deviation from 821-824 (TX) and 866-869 (Talkaround) except test mode

### TRANSCIVER DIMENSIONS AND WEIGHT

	Transceiver 15W	Weatherproof
Enclosure		
Length In. (mm):	8.6 (218.4)	15.0 (381.0)
Width In. (mm):	7.1 (180)	13.5 (343.0)
Height In. (mm):	2.0 (51)	6.3 (160.0)
Weight Lb. (kg):	5.5 (2.5)	14.8 (6.7)

### TRANSMITTER

<b>Input Impedance:</b>	50 Ohms		
<b>Frequency Stability:</b>	-30°C to +60°C ±0.0005%; optional±0.00025% from center frequency		
<b>VHF:</b>	±0.00025% from center frequency		
<b>UHF:</b>	±0.00015% from center frequency		
<b>800:</b>			
<b>Spurious &amp; Harmonics:</b>	70 dB below carrier		
<b>Modulation:</b>	(16F3) ±5 kHz (16KOF3E, 16KOF1D, 15KOF2D)		
<b>Audio Sensitivity:</b>	80mV nominal for 60% system deviation ± 3dB		
<b>Audio Response:</b>	+1/-3 dB from 300 to 3000 Hz		
<b>Audio Distortion:</b>	3% @ 1000 Hz, 60% Max deviation VHF & 800; 2% @ 1000 Hz, 60% Max deviation UHF		
<b>FM Noise:</b>	VHF -50 dB	UHF -45 dB	800 MHz -40 dB
<b>Frequency Separation:</b>	26 or 28 MHz	32 or 30 MHz	18 MHz

### ENVIRONMENTAL PERFORMANCE

Standard	Method	Test	Radio Performance
MIL 810E	514.4 516.4	Vibration Shock	Meets or exceeds published specifications following vibration

Specifications subject to change without notice.



#### Support Services

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**MOTOROLA**

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### WEATHER RESISTANT METHODS

Standard	Method	Procedure	Test
MIL 810E	505.3	I	Solar Radiation
	506.3	I	Blowing Rain
	507.3	II Cycle 5	Humidity
	509.3	I	Salt Fog
	510.3	I	Blowing Dust
	508.3		Fungus

NOTE: Spectra radios also meet or exceed corresponding requirements for MIL STD 810C & D.

### SECURITY

<b>Encryption Type:</b>	Digital
<b>Coding Method:</b>	Multi-register non-linear combiner
<b>Number of Codes:</b>	Dependent on encryption options
<b>Code Key Initialization:</b>	Internally derived pseudo-random initializing vector
<b>Code Key Generator:</b>	External hand held microprocessor controlled key variable loader
<b>Code Storage:</b>	Volatile electronic memory
<b>Analog to Digital Conversion:</b>	Continuously variable Slope Delta Modulation (CSVD)
<b>Voice Sample Rate:</b>	12 K bit/Sec

### CONTROL HEAD DIMENSIONS AND WEIGHT

<b>(Depth) Length In. (mm):</b>	2.3 (58.4)
<b>Weight In. (mm):</b>	7.1 (180.0)
<b>Height In. (mm):</b>	2.0 (51)
<b>Control Head lb. (kg):</b>	0.8 (0.4)
<b>Microphone lb. (kg):</b>	2.9 (1.3)
<b>Speaker: lb. (kg):</b>	1.7 (0.77)

### RECEIVER

<b>Audio Output:</b>	10 watts @ 3% distortion				
<b>Input Impedance:</b>	50 ohms				
<b>Frequency Stability:</b>	-30°C to +60°C ±0.0005%; optional ±0.00025% from center frequency				
<b>VHF:</b>	±0.00025% from center frequency				
<b>UHF:</b>	±0.00015% from center frequency				
<b>800:</b>					
<b>Receiver Band</b>	VHF		UHF		800 MHz
<b>Channel Spacing:</b>	25 kHz or 30 kHz		25 kHz		25 kHz
<b>Sensitivity SINAD:</b>	STD.	OPT.	STD.	OPT.	STD.
	No Preamp .35 µV	Preamp .2 µV	No Preamp .35 µV	Preamp .2 µV	No Preamp .3 µV
<b>Spurious &amp; Image Rejection:</b>	-90 dB	-85 dB	-90 dB	-85 dB	-90 dB
<b>Intermodulation EIA SINAD:</b>	-85 dB @ 25 kHz	-80 dB @ 25 kHz	-83 dB @ 25 kHz	-80 dB @ 25 kHz	-80 dB @ 25 kHz
<b>Selectivity:</b>	-85 dB @ 25 kHz	25 kHz	-85 dB @ 25 kHz	25 kHz	-80 dB @ 25 kHz
<b>Max. Frequency Separation:</b>	26 MHz Range 1 28 MHz Range 2		32 MHz		18 MHz

\* Typical specifications