

**maxon****VHF / UHF SD-160 Series****RF data radio**

Control and Monitor Remote Applications

The Maxon SD-160 Series RF data radios deliver reliable 2-way communication and remote control for a variety of application needs.

Available as VHF (SD-161) or UHF (SD-164) with 2 Watts and 16 channels. The SD-160 Series provides reliable data or voice communication at all times. Crystal clear audio quality makes the SD-160 Series an ideal radio for golf course and emergency call boxes.

When paired with the optional GMSK or FFSK modem board, the SD-160 Series transmits and receives data for wireless security systems, or it can be used in conjunction with police mobile data terminals for license tag checks.

The optional GPS receiver works with an Automatic Vehicle Location System for tracking fleet movement and communicating data directly to a computer.

Other applications

- Weather Stations
- Pump Flow Control
- Emergency Call Boxes
- SCADA Applications

Features

- CTCSS/DCS Tone signaling
- Scan
- Time-out-timer
- Busy Channel lockout
- Marked Idle

- TX Delay
- LED Status indicator
- Courtesy Beep
- Power Save



SD-160 Series

maxon®

specifications

general	VHF model SD-161	UHF model SD-164
Frequency Range	148-174 MHz	450-490 MHz
Channels	16 (Dip switch selectable or external serial command)	
Channel Spacing	25 / 30 / 15 / 12.5 kHz	25 / 12.5 kHz
PLL Step	5.0 / 6.25 / 7.5 kHz	5.0 / 6.25 kHz
Channel Spread	26 MHz	40 MHz
Antenna Impedance	50 Ω	50 Ω
Operating Voltage	7.2V DC to 18V DC +/-20%	
Operating Temperature	-22° F to +140° F (-30° C to +60° C)	
Frequency Stability (-30° C to +60° C)	± 2.5 ppm	± 2.5 ppm
Current Draw RX	<65 mA	<65 mA
Current Draw TX	<1.0 A	<1.0 A
Attack Time RX to TX	20 ms	20 ms
Attack Time TX to RX	20 ms (no power saving)	20 ms (no power saving)
PLL Lock Time	10 ms	10 ms
Squelch Attack Time		
RF Level at Threshold	40 ms	40 ms
RF Level at Threshold +20dB	30 ms	30 ms
Squelch Decay	5 ms min., 20 ms max.	
Baud Rate GMSK	Up to 9600	Up to 9600
Baud Rate FFSK	Up to 4800	Up to 4800
Dimensions (H x W x D)	4-15/16" x 2-5/16" x 1-1/4" (125 x 58 x 32 mm)	
Weight	8.9 oz. (253 gm)	8.9 oz. (253 gm)
FCC Identifier	O7KSD161	O7KSD164
FCC Compliance	Parts 22, 74, 90.210	Parts 22, 74, 90.210
IC Certification Number	3690A-SD161	3690A-SD164

receiver (measurement procedures made per ANSI/TIA / EIA - 603)	VHF model	UHF model
Sensitivity		
12 dB SINAD	.25μV @ 12.5 kHz	.25μV @ 25 kHz
Selectivity	65 dB @ 12.5 kHz	70 dB @ 25 kHz
Intermodulation	70 dB @ 12.5 kHz	70 dB @ 25 kHz
Spurious Response	65 dB @ 12.5 kHz	65 dB @ 25 kHz
Audio Output	250mV @ 8 Ω (filtered) 250mV rms @ 10KΩ (unfiltered)	

transmitter (measurement procedures made per ANSI/TIA / EIA - 603)

transmitter (measurement procedures made per ANSI/TIA / EIA - 603)	VHF model	UHF model
RF Output	2 Watts	2 Watts
Spurious and Harmonic Emissions	60 dB	60 dB
Modulation	16K0F3E, 11K0F3E, 19K6F3D	
FM Hum and Noise	40 dB @ 12.5 kHz; 40 dB @ 25 kHz	
Audio Distortion	2%	2%
Unfiltered Modulation	100m V rms (input) 7m V rms (filtered modulation input)	

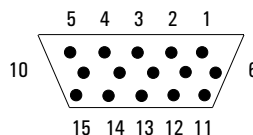
Specifications are subject to change without notice.

features / functions

- 2 Watts and up to 16 channels
- CTCSS / DCS Tone signaling
- Scan
- LED Status indicator
- Time-out-timer function
- Busy channel lockout
- Marked idle
- TX Delay
- Courtesy beep
- Power save
- Die-cast aluminum housing with mounting holes

data connector pin-out

- 1- Data modulation input - Analog input (Nominal modulated level input - 100 Vrms)
- 2- Data unfiltered output - Analog output (Nominal demodulation output level - 250m Vrms @ 10KΩ)
- 3- PTT- TTL level (or RS-232 level with modem option)
- 4- Ground
- 5- Serial data output for radio control or program - TTL level
- 6- Busy detect - TTL level (or RS-232 level with modem option)
- 7- Microphone filtered audio input - Analog input (Nominal modulated level input - 7mVrms)
- 8- Serial data input for radio control or program - TTL level
- 9- Speaker filtered output - Analog output (Nominal demodulation output level - 1Vrms @ 8μ)
- 10- Serial data input for option modem - RS-232 level
- 11- Serial data busy for option modem - RS-232 level
- 12- Serial data input for option modem - RS-232 level
- 13- GPS data input- TTL level (NMEA 0183 format)
- 14- DGPS data input - TTL level (NMEA 0183 format)
- 15- GPS data output - TTL level (NMEA 0183 format)



accessories / options

Antennas: VHF Antenna, 148-174 MHz, 6" uncut, BNC connector (CA-1506U); UHF Antenna, 450-470 MHz, 6", BNC connector (CA-4506B); UHF Antenna, 488-512 MHz, 6", BNC connector (CA-4506Y); GPS Antenna (ACC-160)

Signaling: GMSK 9600 baud modem (ACC-513); FFSK 4800 baud modem (ACC-514); GPS Receiver (ACC-515)

ISO 9002
Certification



Manufactured under ISO 9002 quality standards and backed by our Quality Assurance Program

For more information, contact:



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