

SD-171EL 5/1W VHF (146-174 MHz)

SD-174EL 5/1W UHF (450-490 MHz)



- 5/1 Watt
- LED Status Indicator
- 16 Channels (Dip Switch Select)
- Modem Options\* (GMSK/FFSK)
- CTCSS/DCS Encode/Decode
- DE-15 Pin Female Connector
- TX Time Out Timer
- 12.5/25 kHz Channel Spacing
- Carrier Detect
- Busy Channel Lockout
- 2-Tone Decode

\*ACC-513E GMSK 9600 Baud  
ACC-514E FFSK 4800 Baud

### Applications

Water/Waste Treatment Plants  
Oil and Gas Field SCADA  
Security/Alarm Systems  
Gate Systems  
Remote Controls  
Commercial Sign Controls  
Automatic Vehicle Location  
Murphy/Kill Switches  
Weather Monitoring  
Irrigation Systems  
Emergency Call Boxes  
Low Power Repeaters



The Maxon SD-170EL Series of radios are durable, reliable and designed to meet the needs for a variety of wireless applications. Include the optional FFSK or GMSK modem boards to add even more diversity to this cost effective radio.

The modules incorporate the most requested mechanical footprint and BNC antenna connection. Adjustable transmit power settings from one to five watts provides the power needed on any job and the tri-color LED indicator gives instant on-sight status of the radios operation. Combine that with low current drain and fast transmitter/receiver attack times for operation in the harshest of system demands. The die cast aluminum cabinet/lid provides resistance to RF interference; and gives exceptional environmental durability in the most extreme conditions.

Whether implementing a new system or installing into an existing system, the Maxon family of data telemetry radios have been the choice of OEM and end-users worldwide for over 35 years.

## SPECIFICATIONS

### GENERAL

SD-171EL	146-174 MHz
SD-174EL	450-490 MHz
Channel Spacing	12.5/25 kHz
PLL Channel Step	5, 6.25 kHz
Power Requirement	9-18 V DC, 12V nominal
Current Drain	Tx Hi: 2.0, Tx Lo: 1A, Stdy 65mA
Operating Temperature	-22° to 140° F (-30° to 60° C)
Dimensions (L/W/H)	4.6 x 2.4 x 1.4" (117x62x35 mm)
Weight	9.4 oz. (267 g.)
Lock Time	<10ms
LED Status	Green - Receive/Decode Red - Transmit Yellow - Busy
TX Duty Cycle	35% @ Temp Range Listed

### TRANSMITTER

Output Power	5/1 Watt Programmable
FM Hum and Noise	40dB (12.5 kHz), 40dB (25 kHz)
Modulation Sensitivity	100mV RMS (60% peak dev)
Spurious Emissions	-36dBm
Frequency Deviation	±2.5, Min. ±1.9 kHz (12.5 kHz) ±5.0, Min. ±3.8 kHz (25 kHz)
Adj. Channel Power	70dB (25 kHz), 60dB (12.5 kHz)
Audio Response	+1, -3dB from 6dB per octave pre-emphasis and characteristic 300 ~ 3000 Hz

### RECEIVER

Sensitivity	.30μV (12.5 kHz), 0.28μV (25 kHz)
Selectivity	65dB (12.5 kHz), 70dB (25 kHz)
Intermodulation	-70dB
Spurious Emissions	-57dB (9kHz-1GHz), -47dB (1GHz-4GHz)
RX Hum/Noise	-40dB (12.5 kHz), 40dB (25 kHz)
Spurious/Harmonic	65dB
Response Time	<16ms
Squelch Attack Time	<20/40 ms (RSSI/Analog) <10/30ms (RSSI/Analog), ±20dB
Squelch Decay Time	5 ms Min., 20 ms Max
Audio Output Power	0.5 Watt

NOTE: Some features indicated by specifications listed are prohibited by FCC rule and are not available on models sold in the U.S. or its territories.

Specifications are subject to change without notice.

## ACCESSORIES



### ACCESSORY OPTIONS

BNC 6" Antenna VHF/UHF  
ACC-514E FFSK (4800 25 kHz, 2400 12.5 kHz) Baud Modem  
ACC-513E GMSK (9600 25 kHz, 4800 12.5 kHz) Baud Modem  
PC Programming Software and Cable (USB)  
Extender Board for Service and Alignment  
Magnetic Mount w/Wave Antennas  
Heat Sink

**PACKAGE INCLUDES:**  
Radio Only

### DB-15 PCONNECTOR

BUSY	6		11	SERIAL DATA OUT (OPT)
DATA MOD IN	1		12	SERIAL BUSY OUT (OPT)
MIC IN	7		13	GPS DTA IN (OPT)
DATA OUT	2		14	GROUND (OPT)
SERIAL IN (PROG)	8		15	GPS DATA OUT (OPT)
PTT IN	3			
SPEAKER OUT	9			
VIN (12V)	4			
SERIAL DATA IN (OPT)	10			
SERIAL OUT (PROG)	5			

Approvals	FCC	Industry Canada
SD-171EL	RXUSD-171E	153B-SD-171E
SD-174EL	RXUSD-174E	153B-SD-174E



Manufactured  
to ISO-9002:2000  
quality standard.

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