



# Technical Data Sheet

## SD-100

### Handheld

### Signal Detector

## FEATURES



- Exceptionally low cost
- Wide frequency range 30 MHz to 3GHz or 30 Mhz to 6 GHz, depending upon options
- Option for eight switchable frequency bands and 20 dB attenuator
- Exceptional sensitivity – far reaching detection range
- Wide range of plug in filters that may be quickly inserted, providing full customization of frequency range
- Optional external antenna

## DESCRIPTION

The **SD-100** offers an exceptionally low cost solution to detect cell phones and wireless devices in a miniature unit that can fit on a keychain. The energy is measured over the installed frequency bands for detection of any wireless devices, and provides a vibrator and LED alert when a signal is detected exceeding a user variable threshold. The **SD-100** may be used covertly to determine the cellular format or signal type by listening to the audio signal representing a “musical song” applicable to a particular wireless transmission. This provides the user the ability to determine if the wireless device is GSM, CDMA, IDEN, Bluetooth, 802.11, Satellite mobile, etc.

The **SD-100** may also be configured with a miniature plug-in filter customizing the frequency range to detect a signal in a specific frequency range. These are available in a wide variety of frequency ranges. An additional option provides eight selectable integrated frequency bands with up to 20 dB of attenuation for each band. The **SD-100** may be also be used with an external log periodic antenna for direction finding.

An option including an integrated microcomputer provides the ability to perform automatic calibration of the sensor to the background environment providing for exceptionally low false alarm rates and a high probability of detection of target signals. The calibration routine may be utilized over a long period of time, ensuring that intermittent RF does not trigger a false alarm condition. The **SD-100** may also be configured with a external wireless data link for automatic reporting.



*Specifications subject to change without notice as we improve our products*

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## SPECIFICATIONS

### RECEIVER PARAMETERS

*Frequency range* .....30 MHz to 3000 MHz (30 MHz – 6 GHz optional)  
*Frequency bandwidth*..... up to 2 GHz  
*Selectivity*.....Typically 60 dB out of band rejection  
*Sensitivity*.....-80 dBm noise floor (typical)  
*Dynamic range*.....60 dB  
*Audio output*.....40 mw, 8 ohms, 3.5mm stereo headphone jack  
*Controls*.....Audio volume, alarm threshold

### PHYSICAL/ENVIRONMENTAL CHARACTERISTICS

*Power input*.....powered by internal AA battery  
*Power consumption*.....Approximately 50 mw when active, <1 mw standby  
*Weight*.....Approximately 1 oz.  
*Size*.....Approximately 2 3/4" X 1 3/4 " X 1/2 "  
*Alarms*.....LED; vibrator (may be disabled)  
*Operating temperature range*.....-20 to +55°C  
*Non-operating temperature range*.....-40 to +70°C  
*Operating altitude*.....0 to 12,000 ft (0 to 3657 m)  
*Operating humidity*.....10 to 90% non-condensing (waterproof seal)

### FILTER SETS (Customized filters available)

Frequency	Description	Frequency	Description
704-716 MHz	LTE/AT&T	880-915 MHz	EGSM
777-787 MHz	LTE Mid	1600-1660 MHz	Mobile SATCOM
776-788 MHz	LTE/Verizon	902-928 MHz	ISM
805-815 MHz	IDEN 800	1920-1980 MHz	International UMTS
824-849 MHz	GSM 850	2400-2483 MHz	Wi-Fi/Bluetooth
896-902 MHz	IDEN 900	1880-1920 MHz	US DECT 6.0
1710-1785 MHz	GSM 1800	314-316 MHz	Key Fob (US)
1850-1910 MHz	PCS	410-430 MHz	UHF Land Mobile
2500-2570 MHz	WiMAX	428-438 MHz	Key Fob (International)
0-700 MHz	Low pass filter	450-470 MHz	UHF Land Mobile
700-2700 MHz	High pass filter	136-174 MHz	US Land Mobile

### OPTIONS

- Opt 1 Extended frequency range 30 MHz – 6 GHz
- Opt 2 Single band filter (select frequency band from list)
- Opt 3 Dual filter for improved rejection (select frequency band)
- Opt 4 Six pack of “drop in” filters
- Opt 5 Customized Fly Away Tool Kit
- Opt 6 Eight switch-selected frequency bands
- Opt 7 Integrated micro computer with serial interface

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