



Aardvark Model A-2700B

Wireless Signal Detector

FEATURES



- Scans and identifies RF energy activity in up to 24 frequency bands with “customizable” bands
- Frequency range: 30-3000 MHz (option to 5.7 GHz)
- -100 dBm noise floor, silent vibrator, headphone monitor output, volume control
- Automatic reporting, real time alerts & location (with external GPS), integrated real time clock
- Specialized filtering to reduce false alarm rates
- Handheld & unattended versions with/without integrated wireless link
- Integrated programmable attenuator to increase range of detection
- Serial port for connection to other devices such as GPS receiver

DESCRIPTION



The *Aardvark* is the first of a family of low cost signal detectors providing an innovative solution for characterization of all wireless activity over a wide frequency range and facilitates automatic geo location of target cell phones or emitters. The signal strength is measured in up to 24 frequency bands, and allows detection of any wireless devices regardless of modulation type while attributing the signal to a specific band. Simultaneously, the *Aardvark* provides a selectable threshold alert when a target signal is detected and logs the activity with time/date and signal strength to an internal micro SD card, to a companion smart phone or PC, or provides an automatic alert with frequency band, signal strength, and other information through a wireless data link. An external GPS receiver may be added to also log GPS location and integrate it into logging operations for display on standard geolocation software. The hand held version also shows search results on an LCD display, and optionally triggers a silent vibrator alarm and audio alert (use with headset) at a predetermined threshold for each band independently.

The cutting edge technology implemented in the *Aardvark* provides exceptional detection range up to 10 times further than competitive units, the ability to eliminate false alarms from nearby cell towers, push to talk phones, microwave ovens and even for “custom” selected frequency bands. A programmable attenuator is also included providing the ability to reduce sensitivity by 10, 20, and 30 dB reducing the range of detection for close in operations.

In scan mode, the *Aardvark* may be programmed to scan at up to 100 channels per second. Any combination of the 24 channels may be scanned, under user control or programmed from a PC. The LCD displays shows all channels simultaneously in bar graph signal strength format, including a programmable max hold line that shows the highest signal level received for each band since the last reset. A stretch-and-dump circuit assures that the detector will capture short signal bursts.

The *Aardvark* is available in a ruggedized metal case using an innovative design with silicon rubber bumpers for impact resistance. Two sizes of battery cases are available with rechargeable batteries for the ruggedized enclosure.



Specifications subject to change without notice as we improve our products.
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SPECIFICATIONS

RECEIVER PARAMETERS

Frequency range.....30 MHz to 5700 MHz (Depends on options)
Selectivity.....Set by filters (Typically >60 dB out of band rejection)
Sensitivity.....-96 dBm noise floor (typical)
Dynamic range.....60 dB
Attenuation.....Programmable values of 0, 10, 20, and 30 dB
Scan speed.....Selectable 1/2/5/10/20/50/100 channels/second max
Antenna.....Attached log periodic (700-2700 MHz), SMA connector for external antenna (commercial version)
Input Impedance.....50 ohms

CONTROL CHARACTERISTICS

Front panel.....Transflective 128x64 LCD w/backlight, R/G/B color is by selectable keypad
Remote control/programming.....USB, serial interface or optional wireless data link

PHYSICAL/ENVIRONMENTAL CHARACTERISTICS

Power input.....(2) 1.5 V AA batteries, Lithium recommended for longer life
Power consumption.....Approximately 50 mw when active, <1 mw standby
External power.....Via Mini-B USB connector (standard +5V USB power) and 3.4mm DC jack
Weight.....Approximately 12-13.5 oz with batteries
Size.....3W x 5.9L x 0.9T inches (excluding antenna)
Interface Connectors.....Mini-B USB, RS232 with adapter cable
Audio output.....40 mw w/volume control, 3.5 mm stereo jack
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)

STANDARD VERSION (16 FREQUENCY BANDS)

<i>Frequency</i>	<i>Description</i>	<i>Frequency</i>	<i>Description</i>
704-716 MHz (Cell)	LTE/AT&T	902-928 MHz	ISM
776-788 MHz (Cell)	LTE/Verizon	880-915 MHz (Cell)	EGSM
805-815 MHz (Cell)	IDEN 800	1600-1660 MHz	Mobile SATCOM
824-849 MHz (Cell)	GSM 850	1710-1785 MHz (Cell)	GSM 1800
896-902 MHz (Cell)	IDEN 900	1850-1910 MHz (Cell)	PCS
1920-1980 MHz (Cell)	International UMTS	1880-1920 MHz	DECT 6.0
2400-2483 MHz	Wi-Fi/Bluetooth	1000-3000 MHz	High Pass Filter
2500-2570 MHz (Cell)	WiMAX	0-1000 MHz	Low Pass Filter

Please note that in a custom configuration, highpass and lowpass filters may be cascaded for use as a very broad bandpass or bandstop filter. This allows for increased frequency rejection of unwanted signals that may cause false alarms. Filters are available at customized frequencies upon request.

