LADS - Large Animal Detection System

LADS is a first-of-its-kind, award-winning detection system designed to monitor the presence of large animals on highways and provide warning to motorists **for as long as the animals remain in the monitored region**. Its innovative design ensures **robust detection and continuous monitoring** capabilities. LADS runs entirely on **solar power**, requires **minimal disturbance** to the pre-existing environment, and operates efficiently under **harsh weather conditions**.

LADS received a 2013 Intelligent Transportation Systems Society of Canada (ITS Canada) Award in recognition of its significant and notable advancement of ITS services.
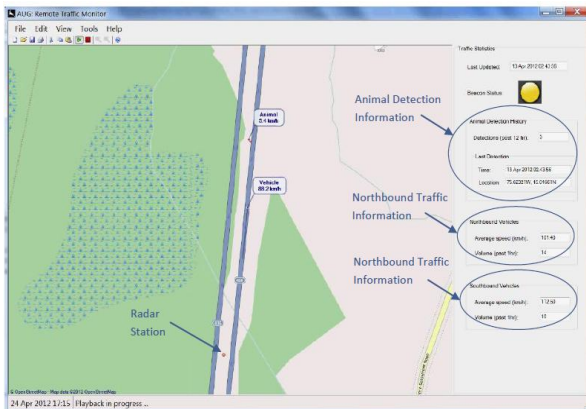
Features

LADS employs state-of-the-art detection technology, resulting in an innovative design that provides end-users with several key benefits.

ITS Canada 2013 Award for LADS

- **Accurate:** Extremely low false detection rates and superior functionality in extreme weather conditions

- **Cost savings:** Reducing animal-vehicle collisions results in fewer collision insurance claims, animal and human injuries, fatalities, and lower cleanup costs, translating into millions of dollars of savings to society

- **Traffic monitoring:** Monitors and analyses traffic passing through the monitored region for volume, speed, and more

- **Remote access (optional):** Operators can remotely access and monitor LADS

Sylvan LADS User Interface

- **Low environmental impact:** Innovative pole-mounted design eliminates the need for clearance, resulting in minimal invasiveness to the environment

- **Low maintenance:** Enables extended periods between maintenance, further reducing costs. Its unique radar-based system design means **no sensor alignment is required**

- **Low training requirements:** Easily operated by existing personnel with minimal training

For more about LADS, visit
http://lads.augsignals.com

Airborne Underwater Geophysical Signals

How Does LADS Work?

LADS provides an environmentally-friendly, all-weather surveillance system for accurate and reliable large animal intrusion detection and tracking. The system includes multiple solar-powered sensor stations, consisting of **360-degree coverage radars** for detection and tracking of animals within the monitored area and **processing units** that are used to collect and process data from the sensors. These units also report events and transmit alarms to local or remote sites/devices (e.g. flashing beacons) through wireless communication.

When large animals (e.g. deer, bears, caribou and moose) enter the configurable monitored area, LADS instantaneously triggers the warning devices to alert drivers and/or report to operators at remote sites, for as long as the animals linger in the area. Warnings are switched off automatically soon after the animals leave the area. LADS filters out detections of vehicles and smaller animals (e.g. skunks, raccoons and birds) as well as detections beyond the monitored area to ensure that only large animal detections within the monitored area will activate the warnings.

Specifications

General

Maximum coverage (per unit)	1400m; 1.54 km^2
Target Types	Vehicles, animals
Target Velocity	0.1 to 50 m/s
False Alarms	< 1 per 24 hrs
Misdetection Rate	1 per 10000
Input Power	24 VDC
Radiated Power	Safe for human exposure
Dimensions:	
Radar	33cm (h) x 43cm (dia)
Control box	39cm (h) x 34cm (w) x 20cm (d)
Weight (combined)	15kg

Environmental

Temperature	(cold start) -40˚C to +60˚C (operating)-45˚C to +60˚C (storage) -45˚C to +70˚C
Humidity	50% ± 5 to 95% ± 4, non-condensing
Altitude	Up to 4500m
Vibration	MIL-STD-810F
Wind	Up to 120 km/hr
Weather Sealing	Weather resistant (rain, snow, dust, sand, salt spray)
Power Consumption	75 W
Environmental Ratings	NEMA 4
Ratings (Radar)	FCC Class B, EN 301480, Parts 1 & 3; CE: EN 60215 EN 300019-1-4 (Class 4.1E with -40˚C) EN 300019-1-5 (Class 5.2, including mechanical class 5M3)

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