



## SAS-1 Acoustic Sensor



### *Small, Low power, Side Mount, Multi-lane Sensor*

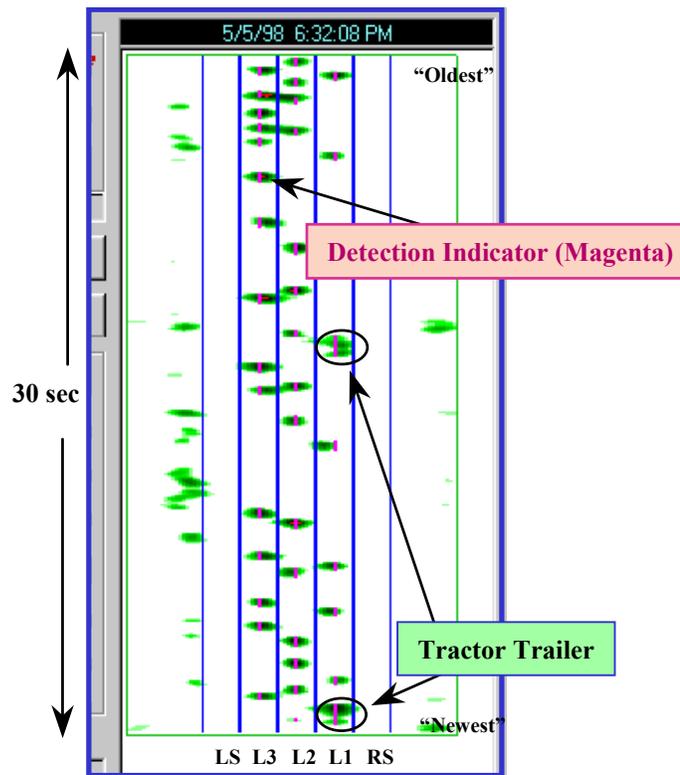
The SAS-1 operates in the adverse environments found on roadside structures. SAS-1 is an easy to use, programmable sensor ready to detect multiple lanes of traffic for real-time operations, or to collect traffic counts with 3 levels of classification.

- Low Power, Multi-Lane Sensor
- Wireless Option Eliminates Home Run Cables
- Easy Installation Eliminates Lane Closures
- Ideal Back-fit for Failed Loops
- Built in Upgrade Path for Vehicle Type Identification
- Wrong Way Detection for Off-Ramp Warning
- Addressable to Support Networking

Advanced signal and spatial processing provides the capability for high resolution multi-lane traffic flow monitoring with no loss of "lane switchers" at the detection zone.

The SAS-1 is quickly and easily installed, with no lane closures needed for the "side-fire" configuration. Low power consumption supports operating entirely from solar power.

A SAS-1 Acoustic Highway "Image" as shown on SAS Monitor companion software, included with the sensor.

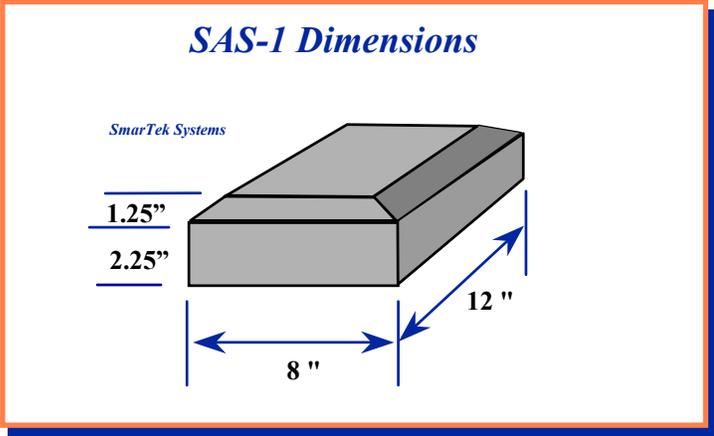


Each "Blob" Shows Position and Strength of Each Vehicle's Acoustic Intensity:

- Light Green is Weakest
- Dark Green/Red is Strongest



# Model SAS-1 Acoustic Sensor



## Specifications

### Number of Lanes and Message Formats

The SAS-1 can monitor 5 lanes and provides for several different interfaces depending on the communication link and the cabinet controller interface desired. The standard SAS-1 output message provides per lane traffic flow measurements of vehicle volume, lane occupancy, and average speed for a selectable update period (1 to 220 seconds). A bit serial vehicle presence relay message or opto-isolated dry contact vehicle presence relay signals (using the SAS Relay Interface) can be provided.

### Measurement Archiving

Up to 60 days depending on size of installed Flash Memory (1, 2, or 4 Mbits).

### Signal Interfaces

- 1) RS-422 (Standard) ..... Hard Wired Home Run (up to 2000 feet)
- 2) RS-232 (Optional) ..... Hard Wired Home Run (up to 100 feet)
- 3) Wireless (Optional) ..... Wireless Link (2.4 GHz Spread Spectrum)

### Power

- 1) Supply Voltage at the Sensor ..... 8 to 24 VDC
- 2) Required Power ..... Less than 2 Watts

### Physical

- 1) Dimensions .....12 in long x 8 in wide x 3.5 in deep
- 2) Weight (with Bracket) ..Less than 7 lb.
- 3) Material/Finish .....Aluminum/Enamel/Stainless Steel Fasteners
- 4) Mounting Bracket .....2 inch Diameter Aluminum Tube/Stainless Steel Bands
- 5) Operating Temp.....-20 Deg C to 75 Deg C
- 6) Humidity.....5% to 100%
- 7) Shock.....NEMA TS2-2.1.10
- 8)Vibration.....NEMA TS2-2.1.9

### Installation

Mount on roadside structure for coarse mechanical positioning so that the sensor face is pointing toward the center of the lanes to be monitored. After the SAS-1 is mechanically oriented and locked down, the position and size of each detection zone (up to 5) are electronically set using the SAS Monitor and Setup program. All SAS-1 setup parameters are stored in non-volatile memory.

- 1) Height Above Pavement ..... 25 to 40 feet
- 2) Horizontal Distance to First Detection Zone ..... 5 to 30 feet
- 3) Coarse SAS-1 Orientation .....Mechanical
- 4) Precise Detection Zone Position and Size .....Electronic