



SAS-1 Acoustic Sensor



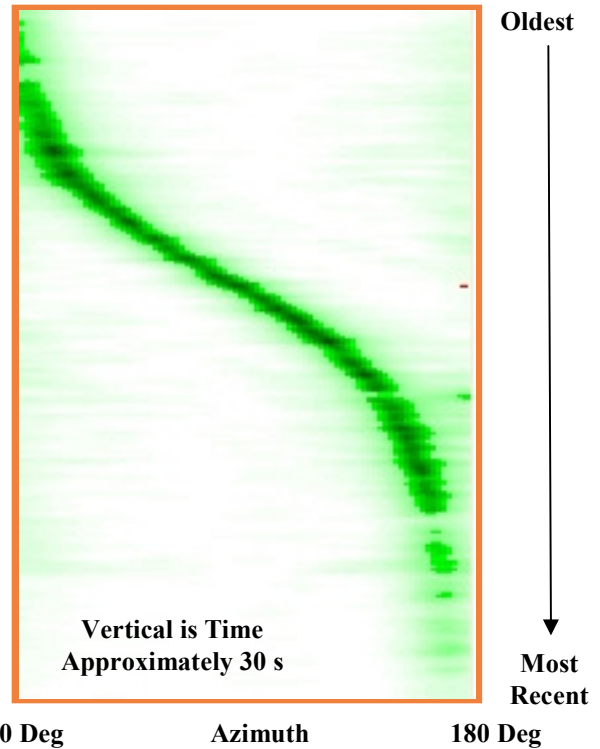
SAS-1 with battery pack base in Ames, Iowa demonstration

The SAS-1 operates in the adverse environments found on airstrips and runways. SAS-1 is an easy to use, programmable sensor ready to detect any vehicle or aircraft for real-time operations, or to collect continuous air traffic counts:

- Low Power, Multi-Lane Sensor
- Wireless Option Eliminates Home Run Cables
- Easy Installation
- Ideal alternative to expensive ground radars or embedded sensors in runway surfaces
- Addressable to Support Networking

The SAS-1 is quickly and easily installed for “side-fire” configuration. Low power consumption supports operating entirely from solar power.

SAS-1 Aircraft Detection Display Showing Left to Right Travel



Airport Surface Surveillance (CLASS) System Evaluation Test Bed at Phoenix Sky Harbor International Airport February 20, 1998 Through April 7, 1998



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)
- 4) Relay via SAS-RLY card Type 170 Card, TS1, TS2, Terminal Block

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.....-40 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

