



Side Object Detection System for Trailers

Collision warning for maneuvering in tight spaces, making turns and back-up assistance

Altra Technologies delivers the latest in collision warning technology. Our systems are designed to increase safety, decrease operating costs, and generate additional profit, utilizing the industry's first modular, low cost, expandable design.

The Side Object Detection System for Trailers was developed to give drivers assistance when backing into, or pulling away from loading docks; maneuvering in tight spaces (narrow alleys, small parking lots, etc.); changing lanes; or making right hand turns in traffic.

Altra has developed a unique sensor technology that combines maximum range information with superb accuracy. This combination provides for precision assistance and early warning of potential hazards. The system actually registers the distance to an object beside the vehicle so that drivers can safely maneuver and avoid costly trailer damage. This cuts costly accidents and improves driver productivity.

Altra's Applications Engineering team will work with you to customize a specific solution to your collision warning needs. Call us today to discuss your individual needs.

***Collision
Warning
Systems***



Features

- Trailer independent: allows hookup to any tractor
- System minimizes false alarms and operator distractions
- Ultrasonic technology delivers precise, consistent, and reliable detection in all weather conditions
- Intelligent "smart sensors" keeps cost down
- Detect objects from 20 feet down to 6 inches
- Field upgradable: allows you to expand coverage to include side trailer coverage

Components

Altra's systems are built using an array of modular, functional components. This approach offers the flexibility to tailor a system that meets each customer's specific needs. The following are the components needed to build a standard side object detection system for trailers.

Trailer LED Display

Trailer LED Displays (TLD) are mounted on both sides of the trailer in a position from which at least one of the displays can be seen at all times by the driver. When an object is detected beside the trailer the driver is notified of the presence of the object and the range to the object by the illumination of lights on the Trailer LED display.

Driver/Trailer Interface

The Driver/Trailer Interface (DTI) mounts under the trailer and electrically connects to the standard seven-wire interface cable running between the tractor and trailer. Power for the system is taken from pin 7 of the interface or from power equipment in the case of a Refrigerator Unit. The DTI's job is to process detection and range information received from the Sensor Signal Processor and to communicate this information to the driver via the TLD.

Sensor Signal Processor

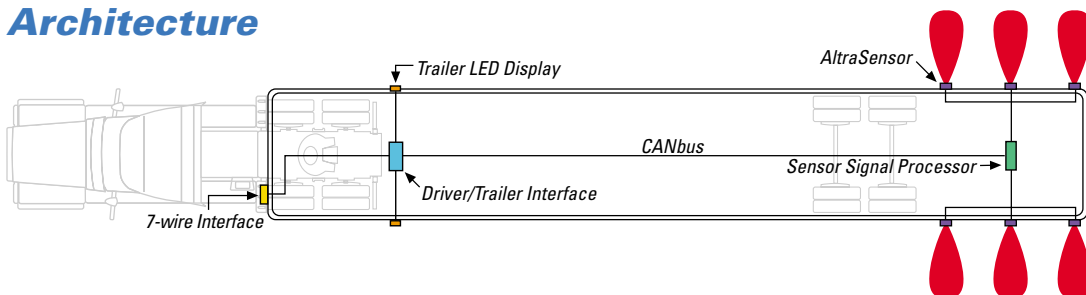
The Signal Sensor Processor (SSP) mounts in the vicinity of the AltraSensors located at the rear of the trailer. The SSP receives electronic signals from the AltraSensors, processes the electronic signals (patent pending) to determine the range to objects in vicinity of the AltraSensor, and transfers pertinent data to the DTI.

AltraSensor

AltraSensors are mounted on the side of the trailer. Working in conjunction with the SSP, these sensors employ a proprietary technology to achieve superior detection capability. Achieving detection of many objects up to 20 feet in range, Altra's system provides effective detection and early warning of potential hazards. The sensors are built to withstand shock, vibration and a wide range of temperatures and each sensor is designed to perform over a broad range of environmental conditions.

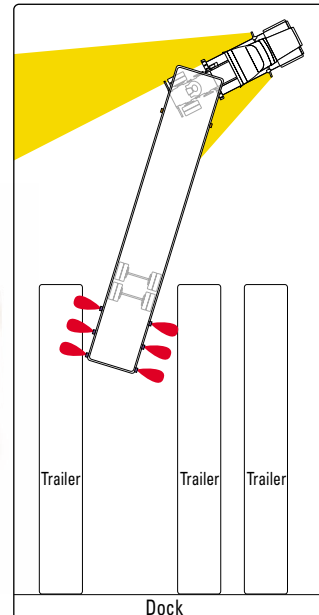
All Altra Technologies Collision Warning System Components are rigorously tested and comply with SAE J1455.

Architecture

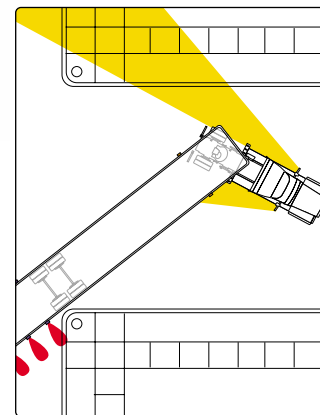


Typical Scenarios

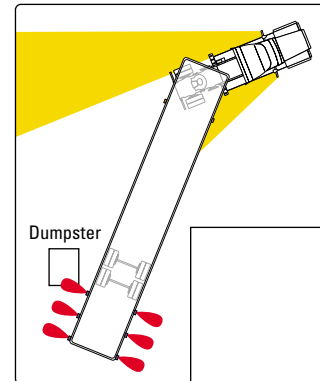
- Driver's viewing area
- Sensor detection area



Loading and unloading freight



Right hand turns



Miscellaneous objects



Altra Technologies, Inc.

605 Lewis Avenue North

Watertown, Minnesota 55388 USA

phone (952) 955-2614 • fax (952) 955-2620

www.altratech.com

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and other patents pending.