



Backup Assistance System for Trailers

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.

Altra has developed a unique sensor technology that combines maximum range information with superb accuracy. This combination provides for precision backup assistance and early warning of potential hazards. The precision backup system actually registers the distance to an object behind the vehicle so that drivers can safely backup and avoid costly rear end 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.

The TLDs are highly visible via the tractor's side view mirrors

Trailer LED Display (TLD) ▶



Collision Warning Systems

Features

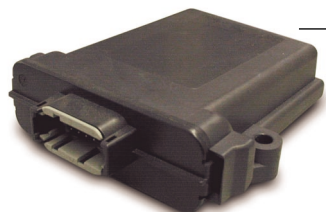
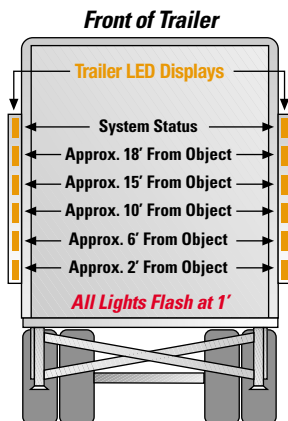
- Trailer independent: allows hookup to any tractor
- System minimizes false alarms and operator distractions
- Ultrasonic technology delivers precise, consistent, and reliable detection in all weather conditions
- Intelligent "smart sensors" keeps cost down
- Able to detect objects within 20 feet
- 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 gives each customer the flexibility to tailor a system that meets their specific needs. The following are the pieces needed to build a standard backup assistance solution for trailers.

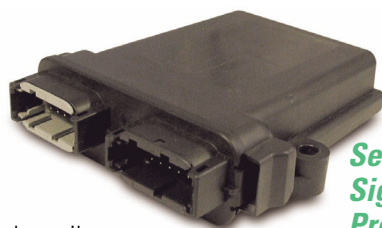
Trailer LED Display

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 behind the trailer, while backing up, 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.

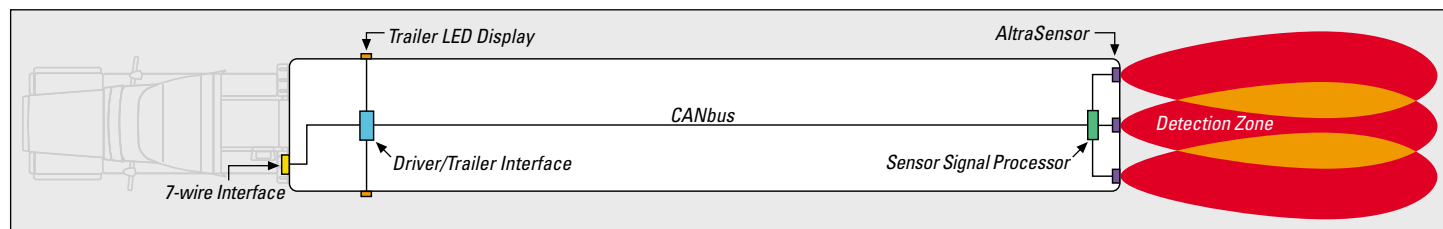


AltraSensor

Three AltraSensors are mounted on the rear 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



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and other patents pending.