Supplemental Active Collision Avoidance System

Model NTT-ISS

Rural Intersection Supplemental Safety System

Safety at unsignalized intersections is a major concern. Intersection collisions are one of the most common types of crash, and in the United States, they account for nearly ***2 million accidents and 6,700 fatalities every year****…*

- **Enhanced Safety –** provides warning of traffic that might otherwise not be visible
- **Low Cost Installation** –Adapts to existing hardware
- **Modular and Scalable –** Supports different intersection geometrics, variable number of devices and sensors
- **Radio Communications Based** –No wires or expensive infrastructure
- **Solar Power –** Eliminates the need for AC power
- **Easy Service –** the system is configured using the laptop, and monitored wirelessly
- **Customizable –** active warning signs per customer specification

The NTT Rural Intersection Supplemental Safety System, NTT-ISS represents the first in a family of low-cost, intelligent, scalable rural transportation safety products. These products are based on technology used for the last 5 years during operational tests of a Low Cost Grade Crossing Warning System.

The NTT-ISS system uses a fused sensor technology to detect approaching vehicles that might otherwise not be visible from the intersection. This information is then relayed through the secure wireless network, and is communicated to the motorist via the active message sign. The system can also be configured to detect slow or turning traffic at the intersection, and provide a warning to the vehicles approaching the intersection. The modular design of the system ensures that various crossing layouts can be accommodated.

The NTT-ISS system can be tailored to meet a wide variety of intersection configurations.

STOP LOOK LIVE

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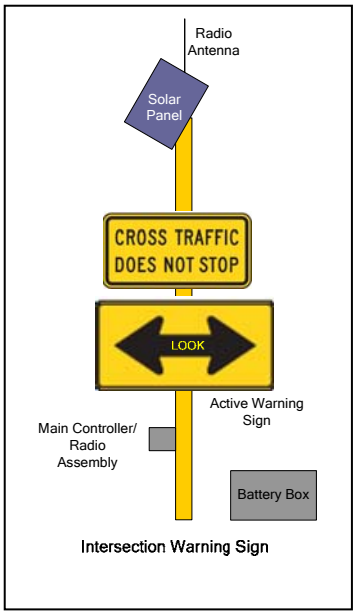
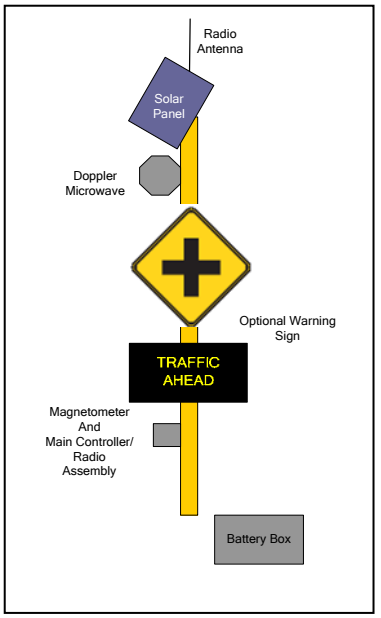
The NTT-ISS Rural Intersection Supplemental Safety System is composed of two major sub-systems, the detector node and the sign node. Each node is custom-configured using common NTT building blocks. Devices communicate on a continuous basis, and sensor nodes detect the approaching vehicles and notify the sign node. The several detector and sign nodes can be configured to work together. Each node tests itself periodically, and will failsafe the whole system to Flashing if any faults are detected.





Detector Node Specifications

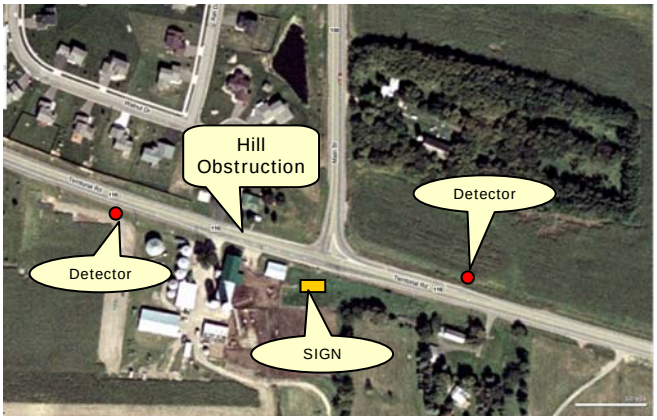
Radio Transceiver – *900MHz ISM band licence-free spread-spectrum radios.*

Vehicle Detection Module – *Fused sensor array consisting of a Doppler Microwave Vehicle Detector and a 3 axis Magnetometer Vehicle Detector. Magnetometer can be installed either on the post at the roadside or under the pavement. Multiple Magnetometers can be connected to a single sensor node to accommodate different road geometries.*

Power System – *12 volts DC gel electrolyte lead acid long life battery with solar charging system. Battery/Solar installation custom engineered for road traffic and location, to insure maximum battery life and performance.*

Main Controller – *Highly integrated microcontroller monitors and controls the operation of the system.*

Optional Intersection Congestion Warning Sign – *Either a custom fixed-message LED sign or a warning sign with LED Flashers indicating slow traffic at the intersection.*



Sign Node Specifications

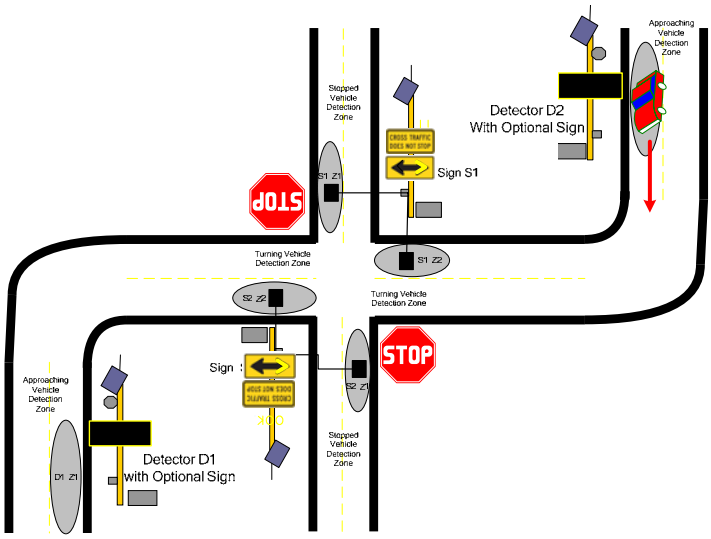
Radio Transceiver – *900MHz ISM band licence-free spread-spectrum radio .*

Main Controller – *Highly integrated microcontroller that monitors and controls the operation of the system.*

Power System – *12 volts DC gel electrolyte lead acid long life battery with solar charging system. Battery/Solar installation custom engineered for road traffic and location, to insure maximum battery life and performance.*

Warning Sign – *A fixed-message LED sign with a Failsafe built-in.*

Optional Slow Vehicle Detection Module – *A Magnetometer Vehicle Detector. Multiple Magnetometers can be connected to a sign node to accommodate different road geometries.*



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