

GuidelineTM is a self-contained, robotic leader-follower kit which can be easily integrated with any existing robotic vehicle or appliqué kit. Through the use of a simple tether connection, the GuidelineTM-equipped follower mimics the path of any leader with sufficient accuracy for lane-keeping at highway speeds.

The system can be used for:

- Robotic convoy operations
- Transport of robotic vehicles on public roads without a trailer
- · Robotic following in GPS-denied, RF-denied, low-visibility, or bad weather environments
- A failsafe 'follow-me' capability for advanced robotic vehicles

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Guideline™ Features and Highlights

Capabilities

- Connects to any lead vehicle or dismounted operator
- · Maneuvering in cluttered or urban terrain
- · High speed maneuvering
- Cornering
- · System disconnect and shutdown
- · Day/night operations
- · Operates in GPS or RF-denied environments

- Operates at highway convoy speeds (50 mph)
- Operates on-road, off-road and in wet/icy conditions
- · Capable of safe emergency braking
- Following distances are up to 60 meters (adjusts with speed)
- In reverse gear, follower behaves like a standard trailer



Applications

- Unmanned convoy operations
- Trailerless transport of robotic vehicles
- Failsafe "follow me" capability for robotic vehicles
- Easy logistical moves of robotic vehicles
- · Operate in all weather and visibility conditions
- Reduce manpower in active military zones or other dangerous environments



System Overview

The GuidelineTM sensor outputs angle and length data and generates a path for the follower vehicle mirros the path taken by the lead vehicle. No complicated sensors need tuning or mantainence. The system works in all light and weather conditions and does not depend on RF or GPS data for instructions. The system works equally well in reverse, responding the same way that a long trailer would respond. The simple elegance of this solution means less complex equipment to maintain, simplified operator training, and the potential for significant manpower reductions for safety or cost reasons.

System Components

- Self-contained unit straps to any location on the front of the follower vehicle
- · No modifications to the leader vehicle required
- Interfaces with follower vehicle OEM drive-by-wire system through open standard and is compatible with ASI or third-party vehicle automation kits





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