



2012 ATSSA
INNOVATION AWARD
WINNER

Wrong Way LED Warning System

Wrong way driving often leads to the most feared of traffic incidents, the head-on collision. These collisions are more likely to produce serious injuries and fatalities. Most of the time the offenders are confused, distracted or intoxicated drivers, so one might think there's little that can be done to prevent wrong way driving.

Installing DO NOT ENTER and WRONG WAY BlinkerSign[®] LED signs can deter drivers from making wrong-way movements onto freeways and other restricted roads by providing extra visible warning cues standard traffic signs lack. Optional activations include vehicle direction sensors (radar speed detection and induction ground loops). Additional signs facing the opposite direction can be added to warn drivers of the wrong way traveling vehicle.

TAPCO's Optional Activations Include

Option 1: 24/7 or dusk till dawn Blinkersign[®] or BlinkerBeacon[®]

- Low cost option with continuous flashing

Option 2: Time Clock

- Preset schedule to when accidents are primarily occurring

Option 3: Single Radar

- Will flash as vehicle approaches

Option 4: Dual Radar w/ BlinkLink[™] Alert Network

- Front end radar to trigger sign while back end radar send alerts to dispatch

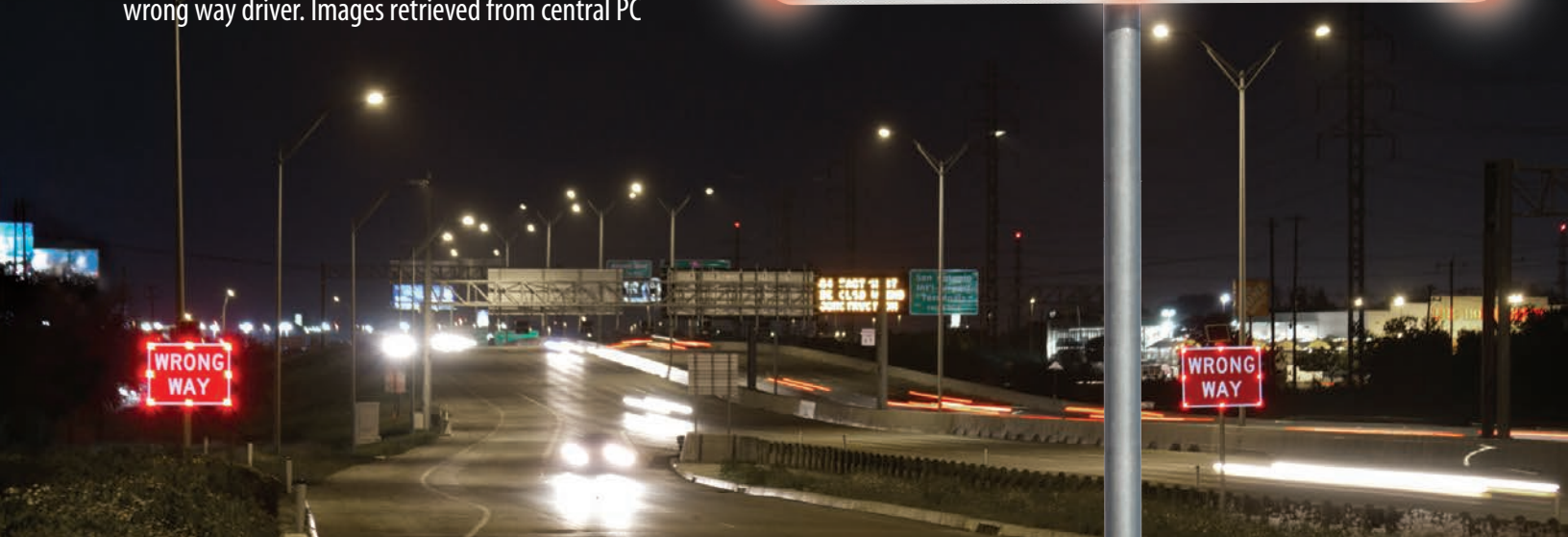
Option 5: Dual Radar w/ Camera & BlinkLink[™] Alert Network

- Same as option 4 with confirmation camera to validate wrong way driver. Images retrieved from central PC



**Reduce accidents,
incidents and fatalities
(30% in latest San
Antonio study)**

A high-visibility real-time
warning to drivers traveling in
the wrong direction



Wrong Way BlinkerSign®/ BlinkerBeacon® (Used in all Options)

Features and Benefits

- Installs easily onto most new or existing sign post or poles
- Can be integrated into an ITS (Intelligent Transportation System)
- Day-Viz® daylight visible high intensity LEDs are highly visible in bright daylight, fog, rain, and snow

Sign Specifications

Sign Substrate	.080 Highway Grade Aluminum
Reflective Sheeting	3M™ DG3 - with anti-graffiti overlay
MUTCD Compliance	MUTCD Section 2A.07 Compliant

Warranty

3 Years

Size Options (MUTCD standard)



Time Clock Controller and Scheduling Software (Option 2)

Hardware Time Clock Controller

This hardware controller is integrated into TAPCO BlinkerSign® LED signs and stores the schedule uploaded from the included Scheduling Software. In turn, the controller activates the BlinkerSign® according to the stored schedule.

To configure or alter scheduling for a BlinkerSign®, simply connect a laptop (not included) running the Scheduling Software to the ITS Time Clock Controller via a USB cable (included). The schedule is uploaded to the time clock controller/BlinkerSign® and can also be saved to the laptop for updating or use in other ITS devices.

Benefits

- Can be scheduled for late night hours, bar time, when accidents occur
- Dusk till dawn option also available



BlinkerBeam® Wireless Communication (Options 3, 4, & 5)

Wrong Way BlinkerSign® Warning Systems typically consist of two Wrong Way signs (1 & 2) one on each side of the roadway. When activated, the signs communicate wirelessly with each other through the BlinkerBeam® transmitter (3). Instantly both signs are flashing in unison.

- Operates license-free on 902-928 MHz Spread Spectrum
- Stand-alone operation
- Solar Powered or 110 VAC operation
- Fully programmable outputs
- Range up to 900 feet with internal antenna, optional antenna for extended distance



BlinkerBeam® permits wireless synchronous communication between two or more Wrong Way BlinkerSign® LED signs.

Radar Detection & Dispatch Alert (Single Radar Option 2, Dual Radar Options 4 & 5)

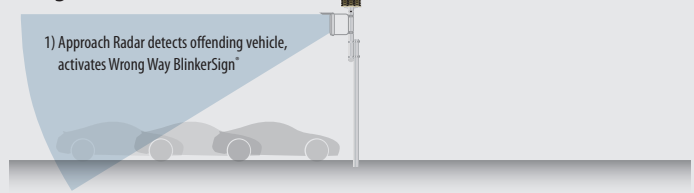
Approach Radar Features and Benefits (Single & Dual Radar)

- Fully configurable via RS232 serial port for all settings
- Wide input operating range & low power allows solar operation
- Weatherproof enclosure option
- Will make sure sign flashes when vehicles are present

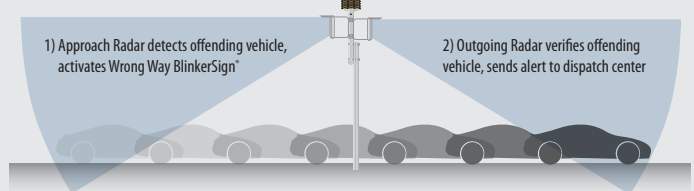
Outgoing Radar Features and Benefits (Dual Radar Only)

- Will trigger alert to dispatch
- Wide input operating range & low power allows solar operation
- Confirms wrong way driver

Single Radar



Dual Radar



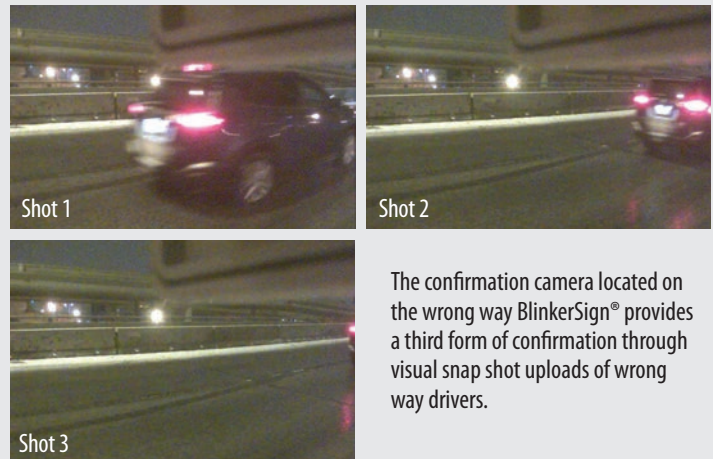
Confirmation Camera (Option 5)

- HDTV 720p
- Images sent to server
- Power over Ethernet
- Video motion detection

Camera Specifications

Image sensor	1/4" progressive scan RGB CMOS
Lens	2.8mm 81" view, f2.0, fixed iris, fixed focus
Light sensitivity E	1.0 – 10000 lux
Shutter time	1/6 s to 1/24500 s
Resolutions	1280x720 to 320 x 180
Frame rate	25 fps @ 50Hz and 30 fps @ 60Hz
Casing	IP66 Nema 4x-rated metal casing (aluminum)
Memory	256 MB RAM, 128 MB Flash
Power	8-28V DC max 4.7 W

Wrong Way Driver Caught on Camera



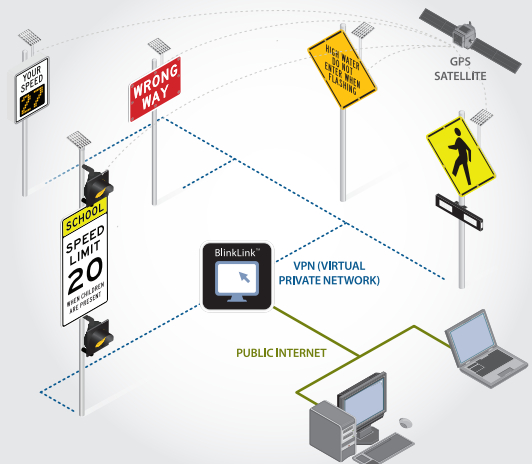
The confirmation camera located on the wrong way BlinkerSign® provides a third form of confirmation through visual snap shot uploads of wrong way drivers.

BlinkLink™ Web-based Traffic Device Monitor & Control (Options 4 & 5)

Real-time map based location monitoring shows the status of all web enabled Wrong Way devices. The activation of a device triggers a visual and audible notification on the BlinkLink™ portal.

Additional notifications are sent via email and SMS text messaging so that the right people get notified no matter where they are. Within seconds after a notification is received, a series of images are sent to the BlinkLink™ system and can be viewed to show the event as it happened for visual verification and identification of the Wrong Way incident.

- Logs of the events are kept and can be exported.
- User accountability and access controls enable the customer to track who can do what, and when they did it.
- Notification logs also verify that notifications are being sent out and to whom they have been sent out to.



		Option 1	Option 2	Option 3	Option 4	Option 5
Components	BlinkerSign®/BlinkerBeacon®	✓	✓	✓	✓	✓
	BlinkerBeam®			✓	✓	✓
	24/7 Dusk till Dawn	✓				
	Time Clock		✓			
	Single Radar			✓		
	Dual Radar				✓	✓
	Confirmation Camera					✓
	BlinkLink™				✓	✓

