



# Traffic Detection Options



## DOPPLER RADAR DETECTION

The Doppler Radar Detection System detects approaching vehicles moving at speeds as slow as 2.5 mph (4 km/h). The Doppler Radar Detector mounts directly to the Signal System and is easily adjusted to maximize the detection zone. It is equipped with an LED indicator to provide visual confirmation of detection. The Doppler Radar Detector has a rugged housing with an operating temperature range of -40° to 158° F (-40° to 70° C).



## PRE-EMPTION DETECTION

The Pre-emption Detection System provides a green phase in the direction of an approaching emergency vehicle. Indication lights will confirm the system is functioning. Actuation is accomplished through optical communication.



## VIDEO DETECTION

The Video Detection System provides true presence detection and can be configured with multiple directional detection zones. The Video Detection Camera mounts directly to Horizon Signal Systems, and does not require a laptop computer for setup. The non-intrusive installation and configuration is accomplished quickly and efficiently.



## LOOP DETECTION

Horizon Signal Systems can be equipped with a Loop Detection Module to facilitate the use of existing, new or temporary loops. The Loop Detection Module provides true presence detection and features adjustable sensitivity, self-tuning and detection indicator. The Loop Detection Module can accommodate multiple loops.

### Traffic Actuation Comparison Chart

	<i>Doppler Radar</i>	<i>Pre-Emption</i>	<i>Loops</i>	<i>Video</i>
Installation	Easy / Fast	Easy / Fast	Difficult / Slow	Easy / Fast
Configuration	Easy / Indiscriminate	Easy / Indiscriminate	Easy / Precise	Easy / Precise
Verification of Detection	Onboard LED	Onboard LED	Onboard LED	Visual w/ Laptop
Number of Detection Zones	1	1	1	Up to 8
Number of Traffic Lanes	1	1	1	4
Detection Sensitivity	Moving Only	Optical	Moving / Stopped	Moving / Stopped
Operating Temperature Range	-40° to +158° F -40° to +70° C	-35° to +165° F -37° to +75° C	n/a	n/a

Traffic detection modules are used to recognize vehicles entering a pre-designated zone(s). This information is transmitted to the signal controller which coordinates signal operation. Signals which have been actuated via the detection module will be provided a green indication in the order of detection occurrence or in the order of pre-programmed priority. The signal controller can be programmed to provide minimum and varying green times based on vehicle presence up to a pre-programmed maximum green time. Horizon Portable Signal Systems can also be programmed to rest in red until vehicles enter the detection zone. This type of programming combined with the varying green time based on vehicle presence ensures the most efficient traffic flow.

### DISTRIBUTED BY



General specifications for traffic detection options are subject to change without notice to reflect improvements and upgrades. Additional information is available. Contact Horizon Signal Technologies for details.

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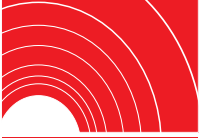
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horizon



**SIGNAL**  
TECHNOLOGIES

## Work Zone Luminaire

PORTABLE TRAFFIC SIGNAL SYSTEMS



### **MAKES NIGHT / LOW VISIBILITY OPERATIONS SAFER**

The Work Zone Luminaire increases safety within the work zone by illuminating the portable traffic signal trailer and associated work area during periods of low visibility. A photocell sensor automatically activates the light at dusk, and deactivates it at dawn for convenient, automatic operation.

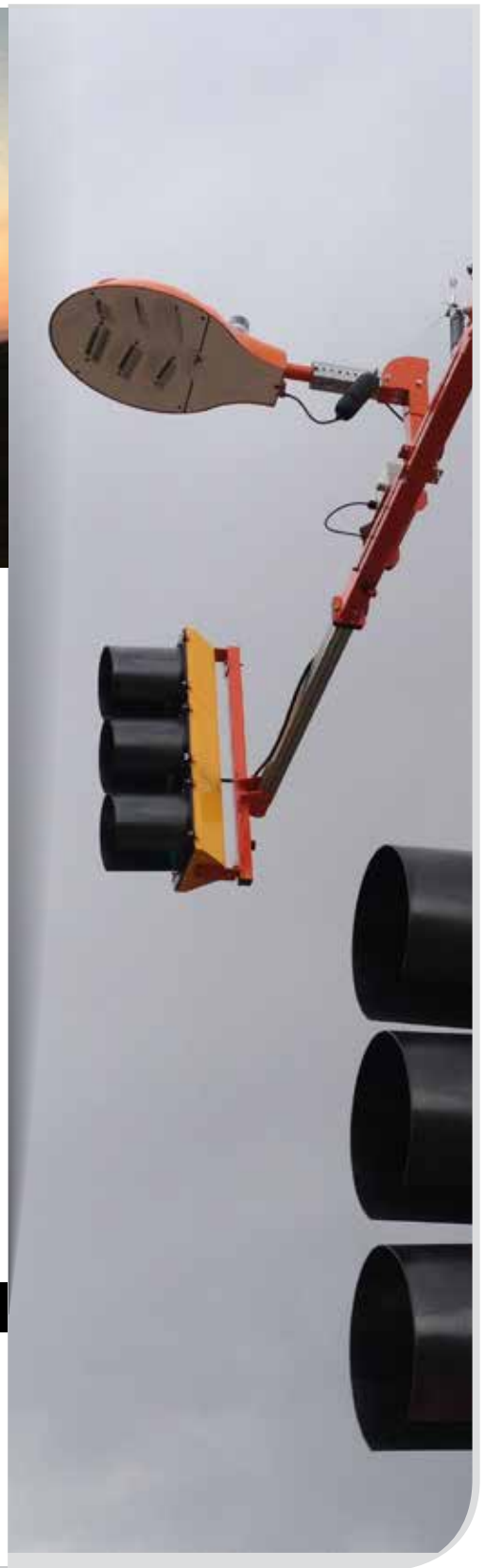
## How it Works



The 8000+ Lumen Work Zone Luminaire is designed for the most demanding environments. The die-cast aluminum housing provides a durable housing for the LEDs, while the rotating mounting bracket allows the light to be positioned as needed. This compact flood light is the perfect solution to increase visibility for motorists and improve safety in your work zone.

- 8,000+ Lumen rating
- 75,000+ hours operating life
- 4,000k color temperature rating
- Dimensions: 19.6" diameter x 28.49" depth x 7.7" height
- 108 LEDs
- Rugged die-cast aluminum housing allows for corrosion resistance and long life
- Works in conjunction with photocell to turn on and off automatically
- Operating temperature: -40°F - 122°F

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# SQ3TS<sup>®</sup> Component Options



## MESSAGE BOARD INTERFACE SYSTEM

Horizon Signal Systems can wirelessly interface with most major brands of message board to provide motorists with an advanced warning of upcoming traffic signals. Customized messages such as "Red Signal Ahead" are activated by signal status and indication changes.



## ADVANCED REMOTE MONITORING SYSTEM

The Advanced Remote Monitoring (ARM) System allows an authorized user to monitor an entire fleet of Horizon Portable Traffic Signals for location, battery voltage, operating hours and system status. The ARM system will send alerts if a signal is moved, battery voltage is low, or a system fault is detected.



## WIRELESS KNOCKDOWN SYSTEM

The Wireless Knockdown System allows the SQ3TS System to be wirelessly operated from a street corner controller. The System allows for easy signal substitution of a permanent signal in the event of a knockdown or traffic pattern reconfiguration.



## CLEARANCE TIME EXTENSION

The Clearance Time Extension System ensures all vehicles have cleared the zone before allowing the next programmed green interval. If traffic has not cleared the zone, the Clearance Time Extension System will increase the programmed red time until all vehicles are clear.



## GENERATOR ENCLOSURE

The Generator Enclosure provides backup power for Portable Signal Systems operating in areas with limited solar collection capabilities. The unit features a lockable coupler to allow for storage on the rear of the SQ3TS Trailer to keep the unit out of sight. The enclosure is designed to be used with the Honda EU2000i generator.



## RAILROAD PRE-EMPTION

The Railroad Pre-emption System preempts the active signal program in the event of a train intersecting the work zone. The system is activated by the railroad crossing gate controls via a hard-wired or wireless connection. All signals within the system revert to a solid red indication at the same time the railroad gates are activated.



## WAIT TIME / FAULT DISPLAY

This dual-purpose component displays current wait time until the next green indication, and also displays an alert message in the event of a signal fault. A small changeable message sign is installed on the SQ3TS trailer and interfaces directly with the Horizon multi-phase controller to display data in real-time.



## TURN ARROW SIGNAL HEAD

MUTCD compliant turn arrows can be added to the SQ3TS Portable Traffic Signal System. This addition makes for easy, safe traffic flow through intersections during construction, annual events and seasonal traffic.



# SQ2<sup>®</sup> Component Options

PTS UPGRADE KITS



### SOLAR CHARGING AND OUTRIGGER PACKAGE

The SQ2 Portable Traffic Signal System is available with a solar charging option to increase battery run time. The solar charge option includes a cart outrigger package which adds additional stabilization and expedites cart leveling. The outrigger package is available as a stand-alone option.



### ADVANCED REMOTE MONITORING SYSTEM

The Advanced Remote Monitoring (ARM) System allows an authorized user to monitor an entire fleet of Horizon Portable Traffic Signals for location, battery voltage, operating hours and system status. The ARM system will send alerts if a signal is moved, battery voltage is low, or a system fault is detected.



### SQ2 TRANSPORT TRAILER

The SQ2 Transport Trailer is customized to provide secure storage for the SQ2 mobile traffic signals and add-on components. It includes lockdown pegs, custom flooring with painted guide lines, diamond plate stone guard and structural supports to ensure the SQ2 Transport meets the heavy-duty demands of the work zone.



### WIRELESS OR WIRED REMOTE

Two remote control options are available for the SQ2 Portable Traffic Signal System. The first option is a wireless handheld remote with a clear line of sight range of one half mile. The second option is a hardwired remote with a 25ft or 50ft cable. Both remotes are designed for safe efficient manual control.



### DRIVEWAY ASSISTANCE DEVICE

The Driveway Assistance Device addresses the need to control driveways that fall within one lane temporary work zones. The system increases safety for both the motorist and the worker while maximizing traffic flow through the work zone.



### PEDESTRIAN SIGNAL

The Pedestrian Signal Upgrade Kit includes MUTCD compliant indications exclusively intended for controlling pedestrian traffic.

The pedestrian indications can be easily be integrated to existing SQ3TS Systems or be furnished on a stand-alone cart.



### PILOT CAR / FLAGGER MODULE

The Pilot Car / Flagger Module allows a pilot car driver or flagger to operate the SQ2 Portable Traffic Signal System remotely using a hand held transmitter with selectable green times. The use of the Horizon Pilot Car / Flagger Module enhances safety for both motorists and workers.



### RAMP METER SIGNAL

The Temporary Ramp Metering System provides a quick, reliable solution to highway congestion. The system can be easily deployed at any highway on-ramp to regulate the flow of traffic onto the highway, and ease overall congestion. The signal features standard 12-inch red and green indications for high visibility.