

## Traffic Response Vehicle Graphical Message Sign (TRVGMS)



The response vehicle graphical message / hazard warning sign, was designed to offer ROADSIDE, PORTABLE Trailer or VEHICLE MOUNTED advanced warning to motorists of road incidents or hazards and the possible route deviations that are necessary. Research has shown that informed motorists will not slowdown at traffic accident or traffic incident response sites, thus improving vehicle throughput and capacity during these situations.

The sign uses a graphical matrix of 30 x 24 pixels with appropriate spacing for 80-100 km per hour roads. The message may incorporate a multifunction display, which includes traditional merge LEFT or RIGHT arrow, graphical ICONS or scrolling information line concerning the incident. The message may be segmented or sequenced with a suitable delay between frames to maximise the viewing potential to the motorist.



The Response Vehicle Graphic Display may be mounted on a vehicle or appropriate trailer. The self raising display mechanism activates under user control and monitors current consumption and sensors indicating position of the moving display section. The display and raising mechanism utilise the vehicles 12 volt electrical system and with all display pixels illuminated, consumes typically less than 3 amps.

Messages are created using ETG's proprietary message creator program which is supplied with the sign. Combinations of graphical ICONS and rolling text messages may be assembled into a sequence of frames to maximise driver viewing. The display sets are created on a PC and transferred to the display controller on a compact flash disk. The easy to use controller allows for simple quick operation by the user and facilitates full control of all sign functions and display selection.

### Traffic Response Vehicle Graphical Message Sign features



- Graphic and text message display capability
- Multiple sequenced frames with graphic icons and rolling text messages are created using ETG's proprietary VMS graphic creator program
- Messages are transferred to the display controller on a compact flash card
- Rugged vehicle mounted configuration utilising existing roof structure
- Optional speed radar & user selected VMS operation
- Failsafe operation with stall current monitoring, position monitoring and auto down operation
- Easy on site setup from within vehicle with full external monitoring



## Functional Attributes

- Full graphic configuration or alpha numeric display presentation
- The sign provides a maximum of 30 pixels (wide) by 24 pixels (high)
- Windows based user interface with local on-sight adjustment via Laptop or hand held controller or remote adjustment via optional mobile GSM phone network or GPRS
- Safety net sign display configuration operation, that identifies and corrects configuration errors and provides easy configuration of displays and display set sequences
- Minimum current consumption
- Low cost reliable electrical 'raise & lower' mechanism with safety fallback operation, current monitoring and position monitoring
- Simple easy to use hand controller for field use personnel operation from within the vehicle

## Specification

### Physical

- Pixels: 4 LEDs per pixel with a 6 column by 8 row tile matrix
- Sign face dimensions: typical width 1.3 mt x height 1.1 mt

### Power supply

- Operational voltage: 12 volt DC battery with solar charging power source
- Operating at maximum brightness typically less than 1.5 amps for 60% capacity of 2400 pixels
- Dimming range for night time operation current 15% maximum

### Optical and photometric specification

- Yellow in colour as per CIE 1931 Chromacity (590 nms)
- Type of LED: Yellow AlinGap, output luminous intensity 3.2 CD/LED (daylight operation)
- Viewing angle typically +/-10% horizontal and 2.5° vertical
- Luminance intensity uniformity: variation does not exceed 5:1
- Daylight mode: LEDs can be brightened to increase visibility
- Night time mode: LEDs can be dimmed to eliminate "flaring" (overly bright) and reduce current consumption
- Dimming facility – 8 levels, maximum output at 1100lx
- Daytime visibility over 400 metres

### Motor actuator mechanism for raising and lowering

- 12 volt duel direction electrical system: typical current consumption 5 amps
- Thrust maximum 3.500N
- Stroke length typical 200 mm
- Speed 3 to 46 mm/sec
- Typical operational temperature range 5°C to 40°C
- Noise level LA28:dB(A) 45; measuring method ISO 3746