



Radar-driven Driver Feedback Signs are proven to slow traffic down - permanently. This is due to the signs ability to alert drivers with responsive messages, which react to their actual speed. The GR33 series signs are dot-matrix LED speed displays that show approaching vehicles speeds, as well as simple text messages and customised bitmaps .

The GR33 series can be set up to display drivers speeds and time-activated bitmaps (such as text, smileys, or other logos) - so different messages can be displayed at different times of the day.

The GR33CL model also offers the ability to display in different colour LED's (green/yellow/flashing red) as well as providing vehicle data collection (time & date, speed, average speed, 85th Percentile). All of this in a compact enclosure that can be integrated into a wide range of different sign faces, designed to suit the specific location.

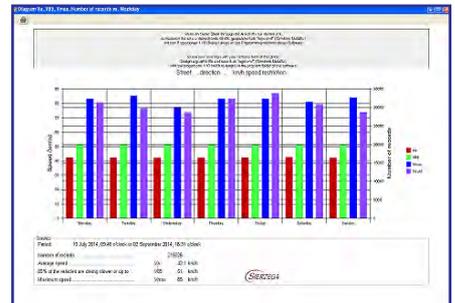
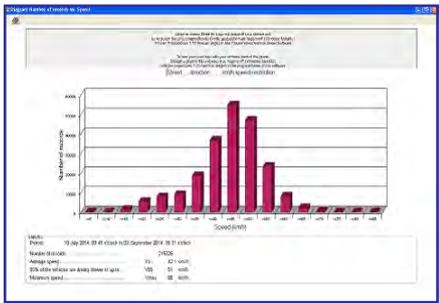
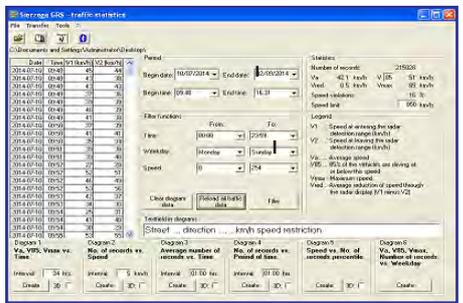
## Features

- Displays speed and text messages
- Flashes if speed threshold is exceeded
- Adjustable minimum and maximum speed thresholds
- Individual bitmaps can be used - such as text messages, smiling/frowning faces, speed limits, logos - or any other symbols
- Time controlled activation
- Automatic brightness adjustment
- Bluetooth operation/configuration
- Solar or mains power operation
- GR33L model - Amber LED's
- GR33CL model - Colour LED's (Green/Yellow/Red) with full data collection capability
- Remote operation/data transfer option available
- Long life reliability - virtually maintenance free
- Full installation service available - countrywide



## Data Collection (GR33CL model)

The signs in-built radar captures and stores data on all detected vehicles - date, time, V1 speed (speed at initial detection) and V2 speed (speed passing the sign). This data can be analysed using the GRS5.2 software supplied with the sign to provide useful statistics on driver behaviour as well as monitoring the effect the Driver Feedback Sign is having on reducing vehicle speeds.



## Technical Specifications

### Electrical Data

- Input Voltage 12V
- Power Consumption - Radar On, LED's Off <0.1W
- Display Active (speed value) <1W
- Peak (all LED's active) 4W

### Radar Sensor

- Operating Frequency K-band (24 Ghz)
- Transmitting Power 5 mW
- Certification FCC, IC, CE Approved
- Operating Speed 2 -199 km/h or 2 - 150 mph
- Detection Range min 100m, typ 150m Truck/HGV typ. 300m
- Accuracy +/- 3%

### LED's

- Brand High-Performance Osram "Black Series"
- Colour Yellow, Green, Red
- Viewing Angle >120 degrees

### Display

- Resolution 16 x 18 Pixels
- Pixel Grid 20mm
- Digit Size 305mm
- Reading Distance approx. 150m
- Update Rate 1 sec, adjustable
- Display Brightness Automatic
- Bitmap Memory 250 images

### Mechanical Data

- LED Matrix Display 440mm x 340mm
- Weight 4 kgs
- Enclosure ASA Plastic
- Protection Rating IP67
- Front Plate Sheeting Reflective EN12899 CR2
- Front Window Lexan, anti-glare coating
- Operating Temp Range -25 to 60 degrees C.
- Sign Mounting 76mm - 114mm dia pole
- Sign surround Bespoke, to suit location
- Data Download Bluetooth or via RC1
- Data Storage 1.5 Million records

