Messagemaker Displays

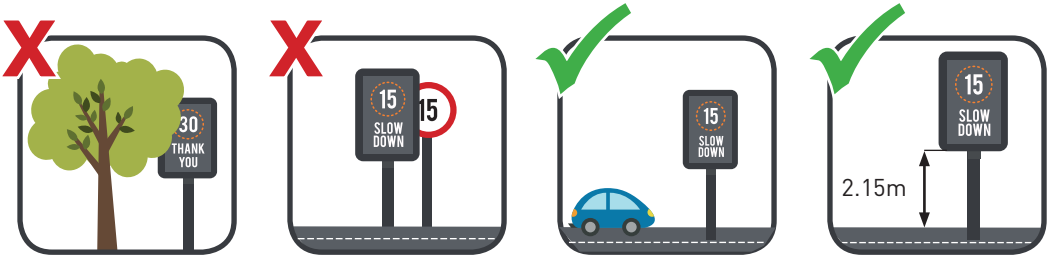
MANUAL

VEHICLE ACTIVATED SPEED SIGNS

BEFORE INSTALLATION

Below is a brief guidelines for the positions of your speed signs.

- A minimum height of 2.15m must be allowed between the base of the sign and the ground.
- The sign must be clearly visible to approaching traffic. Preferably on a clear straight road to allow sufficient time to be seen by drivers.
- The edge of the sign nearest the roadside should be not be less than 0.75m away.
- Please ensure the unit does not obstruct any pre-existing road traffic signs.
- Avoid placing our sign underneath overhanging trees/hedges, especially if using solar panels. This will have a detrimental effect on the charging of the batteries plus tree sap will cause the sign to become dirty and could cause the sign to be obscured.
- The sign should not overhang an existing highway boundary without the adjoining owners' consent.
- Ensure the sign is mounted to a suitable post, or permission is granted to use an existing pole or lamp post.



1.0 BOX CONTENTS

- SID / SLR / SAM Speed Sign
- Radar *(Optional; pre-fitted if applicable)*
- Sheet pole mounting bracket *(Pre-fitted)*
- Solar Charge Controller *(Optional; pre-fitted if applicable) (Fig 1.)*
- 80w Solar Panel *(Optional)*
- Solar Panel Mounting Bracket *(Only solar powered models)*
- 4 x U-bolts for solar panel mounting bracket for 76mm posts *(Only solar powered models) (Fig 2.)*
- 2 x 76mm clips to fit the sheet pole mounting bracket to your post *(Fig 3.)*
- USB Data Cable *(Data radars only) (Fig 4.)*
- 1 x Battery *(excluding mains powered models) (Fig 5.)*
- 2 x Batteries *(Solar powered models only) (Fig 5.)*
- 1 x Battery charging Cable *(Battery powered model only) (Fig 6.)*
- 1 x Battery Charger *(Battery powered model only) (Fig 6.)*
- Keys *(Fig 7.)*

Fig 1.

Fig 2.

Fig 3.

Fig 4.

Fig 5.

Fig 6.

Fig 7.

1.1 BATTERIES

- Batteries are not pre-installed, so will need to be fitted into the unit once installed.
- The batteries are pre-wired for correct polarity, **do not alter this.**
- Each Yuassa 12v 22,000 AH battery weighs 7 kg each.
- Each unit can hold up to 2 batteries, held in place by the battery clamps pictured below.

Battery Powered

1 battery as standard

Main Powered

Optional batteries for intermittent power supply.

Solar Powered

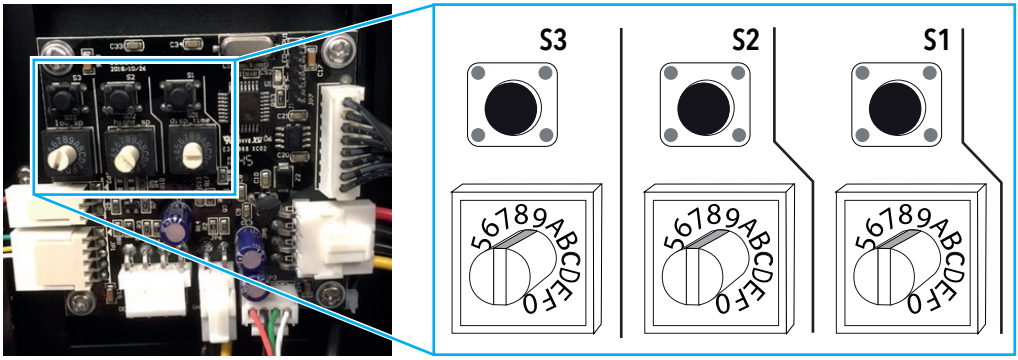
2 batteries and Solar Charger Controller

2.0 PROGRAMMING YOUR SIGN

Your unit has already been pre-programmed to the speed settings specified at the time of order. If you wish to change the settings, follow the guide below. You are able to change;

1. The minium trigger speed
2. The maximum trigger speed
3. Length of time for LED illumination

Control Board inside your speed sign:



2.1 Minimum Trigger Speed Setting : Dial S3

Dial S3	0	1	2	3	4	5	6	7	8	9	A	B	C	D
Speed	0	5	10	15	20	25	30	35	40	45	50	55	60	65

Using the above table, twist the S3 white dial to the value you require. Then, press and hold the black button above to confirm and set the desired speed. *(The new selected speed will display on the front of the sign momentarily.)*

2.2 Maximum Trigger Speed Settings : Dial S2

Dial S2	0	1	2	3	4	5	6	7	8	9	A	B	C	D
Speed	30	35	40	45	50	55	60	65	70	75	80	85	90	95

Using the above table, twist the S2 white dial to the value you require. Then, press and hold the black button above to confirm and set the desired speed. *(The new selected speed will display on the front of the sign momentarily.)*

2.3 Length of time for Illumination Duration: Dial S1

Dial S2	0	1	2	3	4	5	6	7	8	9	A	B	C	D
Seconds	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5

Using the above table, twist the S1 white dial to the value you require. Then, press and hold the black button above to confirm and set the desired speed. *(The new selected illumination duration time will display on the front of the sign momentarily.)*

3.0 SOLAR PANEL INSTALLATION *(optional extra)*

In your packaging, you will be supplied with an installation guide, but some important information is outlined below.

Also supplied are 4 U-Shaped clamps, suitable for 76mm Diameter posts. (*Other sizes are available upon request.)*

3.1 IMPORTANT INFORMATION

- Always observe the correct polarity when making electrical connections. Reverse polarity connection to a battery is a fire hazard and may damage your solar regulator/charge controller.
- Do not walk or drop objects on the panel front or rear.
- Do not use mirrors or any other objects to concentrate sunlight on the solar panels.
- Always handle with care.

3.2 MOUNTING

- Choose a location that is free from shade and as close as possible to South facing *(in the Northern hemisphere).*
- Always fix to a solid and supportive surface capable of withstanding all expected loads including the weight of the panel as well as those imposed by wind and snow.
- For optimum performance tilt the panel at an angle of 70° facing south.

3.3 MAINTENENCE

- Occasionally wipe the solar panel with a damp cloth (use only water and mild detergent) to remove the build-up of dirt, salt, etc.
- Batteries should be maintained in accordance with manufacturer's instructions. *(printed on the side of the battery)*
- All wiring and connections should be regularly checked for integrity and corrosion.

3.4 TROUBLESHOOTING

If your solar panel does not seem to be performing properly start by addressing the following;

- Inspect all electrical connections for any sign of corrosion or loose wiring.
- Test the panel's open circuit voltage (Voc). To reduce risk of sparking cover the panel before disconnecting. Using a multi-meter set to DC Volts, measure the voltage across the +ve and –ve terminals of the panel. In bright sunny conditions a reading of approx. 18to 22V should be seen.
- Verify the condition of the battery. Over time a battery will lose its ability to recharge, especially after repeated heavy cycles of charge and deep discharge. Contact the battery's manufacturer for more detailed guidelines on battery testing.
- Make sure your system is properly sized for your power requirements.

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MANUAL

DATA CAPTURE SYSTEMS

VEHICLE ACTIVATED SPEED SIGNS

VAS Speed Signs with Data Capture abilities, have 4GB of on-board storage. This should be enough to store a lifetime's worth of detection data.

Data is recorded continuously without the need for any settings to be altered.

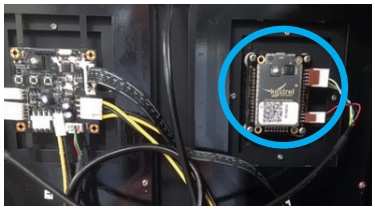
SOFTWARE DOWNLOAD

To view recorded data, the 'Kestrel Workbench' software is required.

This is available on our website www.messagemaker.co.uk under 'Downloads'.

USB LOCATION

SID and SAM Signs



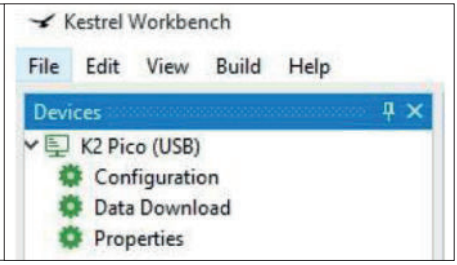
SLR Sign

IMPORTING DATA

1. Simply connect the radar via USB or remote access (Bluetooth/Modem).

The Micro USB port is located on top of the radar module as pictured below.

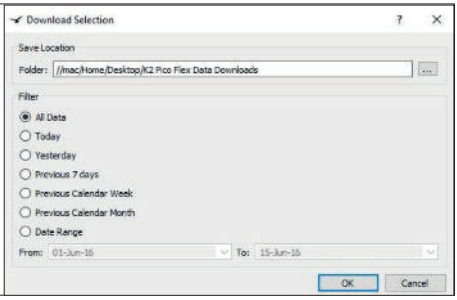
2. Open the 'Kestrel Workbench' software and Double click 'Data Download'



3. Here you can select the file location of where the data is to be stored.

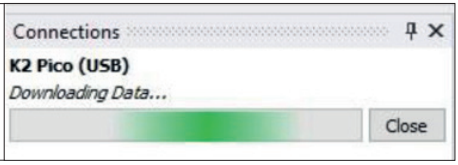
You are also able to select a date range in the 'Filter' section to define what data is included in the statistical analysis.

Click 'OK'



4. The download process will begin.

When the process is complete, the window will report itself as idle.



Need some help?

If you have a query regarding anything in this manual, or something else about your sign(s) please do not hesitate to contact your account manager, or contact us using the details below;

Call us: 01737 774747

Email: sales@messagemaker.co.uk

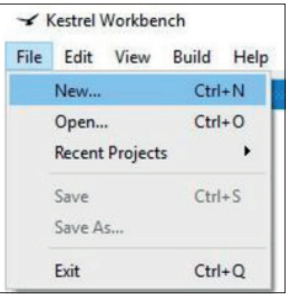
REPORT GENERATION

Kestrel Workbench has a built report generation feature, meaning that you can simply select an amount of data for Workbench to perform a statistical analysis on.

The reports include vehicle count data and presents this across a series of charts. It is important to note here that Continuous Wave (CW) Doppler radar technology does not have the scope for accurate vehicle counting because it only collects speed and direction information. Accurate counts require spatial information about passing vehicles in order to determine vehicle lengths. As such, with the Kestrel K2 Pico Flex Radar, a statistical average vehicle length value is used, which in practise amounts to 80-95% accuracy.

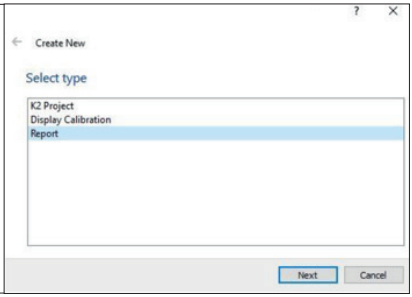
CREATING A REPORT

1. In Kestrel Workbench, go to **File > New...**

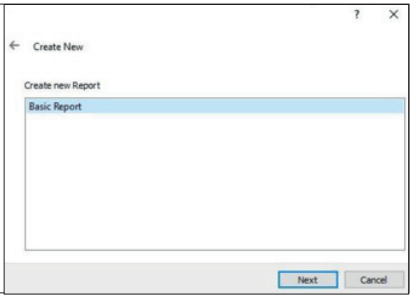


2. Select '**Report**'.

This menu can also used to create K2 Projects and LED Display Calibrations. Please contact our team for more information.

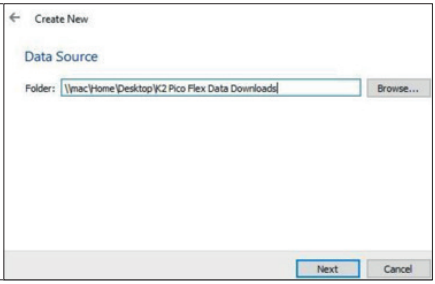


3. Select '**Basic Report**'.



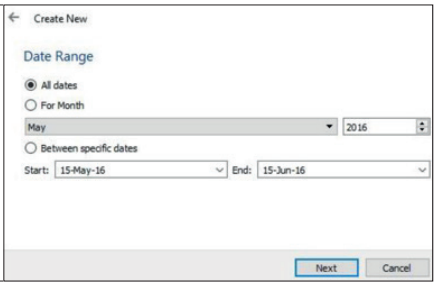
4. In the data source window, select the location which the original data was imported to.

Then press **'Next'.**



5. In the date range window, select which data from all previous imports, will be included in the report.

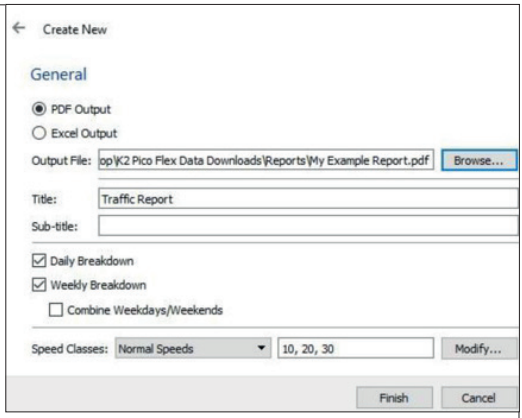
Then press **'Next'**



6. Select the type of output that you want; either PDF or Excel.

You can change the location of the output file, assign titles and select how the data is to be displayed here.

The field for 'Speed Classes' defines which speed ranges are to be included in the report. To define the speed range, enter the minimum and maximum spppeds.



For example, entering **10, 20, 30** will create 3 data columns of vehicles travelling;

- **under 10mph**
- **between 10mph and 20mph**
- **between 20mph and 30mph**

7. With the desired settings, select **'Finish'.**

To open the report, go to the file via your PC.