SmartSensor V

USER QUICK-REFERENCE GUIDE

1   Install the SmartSensor Manager (SSM) software

1   Find the setup program from the Wavetronix website by going to www.wavetronix.com, clicking on the **Support** tab, choosing the **SmartSensor** product line, and choosing **SmartSensor V** from the drop-down menu.

2   To install, simply download the file to your local machine.

3   Double-click on the SSM icon to open SmartSensor Manager.

2   Make a connection

1   Attach a serial cable to the RS-232 or RS-485 port of a surge protection module.

2   Once SmartSensor Manager is open, select the type of connection you want to make (**Serial**, **Modem** or **Internet**).

**3**   Click **OK**.

3   Enter the sensor settings

Go to **Edit > Sensor Settings** to access the Sensor Settings. The Sensor Settings window contains three tabs that allow you to edit the following settings (if necessary):

- ■ **Serial Number –** Text fields for identification
- ■ **Multi-drop ID –** Text fields for identification
- ■ **Description/Location –** Text fields for identification
- ■ **RF Channel –** Prevents radars from interfering
- ■ **Measurement Units –** English or Metric
- ■ **Baud Rate –** Normally set at 9600 bps
- ■ **Other data collection settings**

WAVETRONIX
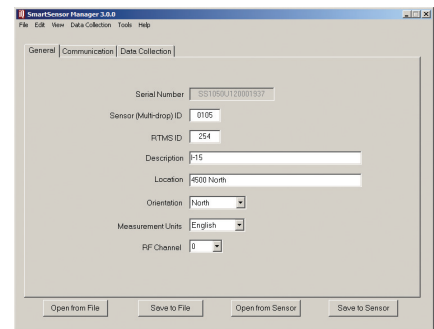
4   Auto-configure the sensor

1   Select **Edit > Lane Configuration**.

2   Once the Lane Configuration page opens, click on the **Automatic** button.

3   If you would like to set constraints on the configuration, use the **Edit Range Blinders** and **Manage Gains** buttons (see the *SmartSensor V User Guide* for more information).

4   Click the **Restart** button.

5   Confirm the configuration restart by clicking **Yes** in the box that appears. SmartSensor Manager will now automatically begin detecting and configuring lanes. Depending on the volume of traffic, the configuration process may take a few minutes.

6   After the lanes have been detected and configured correctly, save the configuration by clicking the **Finished** button.

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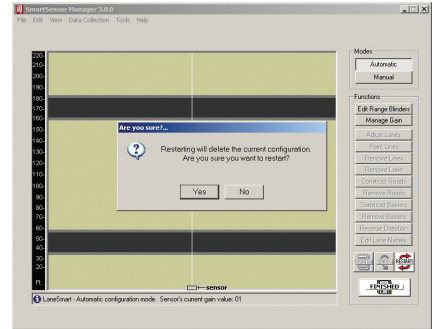
5   Manually configure the sensor

1   With the Lane Configuration page open, select the **Manual** button; this will activate all of the manual functions.

2   Selecting one of the following buttons in the Functions section will allow you to make changes to the roadview window on the left:

- **Adjust Lanes –** Allows you to click and drag shoulders, lanes and lines.

- **Paint/Remove Lines –** Allows you to add new lines by inserting lane dividers. Remove lines by clicking on the Remove Lines button and selecting the line you want to remove.

- **Remove Lanes –** Allows you to remove entire lanes.

- **Construct/Remove Roads –** Allows you to construct a lane anywhere in the khaki-colored background. To remove a road, click on the Remove Roads button and select the road you want to remove.

- **Construct/Remove Barriers –** Allows you to divide a road into two seperate roads. To remove a barrier, click on the Remove Barriers button and select the barrier you want to remove.

- **Reverse Direction –** Allows you to change the direction of travel depicted in SmartSensor Manager.

- **Edit Lane Names –** Allows you to change the lane numbers.

3   Once you have made the necessary adjustments, click the Finished button to save your changes.
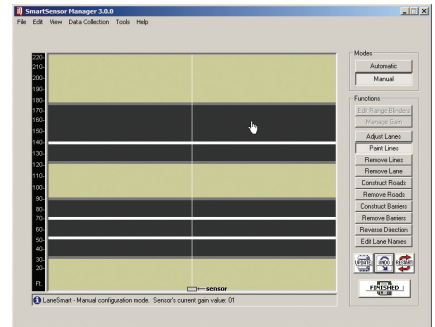
6   Verify the lane configuration

1. Click **Finished** on the Lane Configuration page and the View Traffic (Event Data) page will appear.
2. Compare the traffic on the road to the event information shown in SmartSensor Manager.

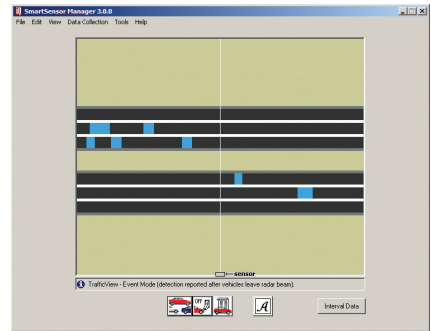🚗   **View Event Counter** – Allows you to verify real-time volume counter lane by lane

🚗   **Event Log On/Off** – Allows you to log the current info.

🚗   **View Event Log** – Allows you to open the current event log file in a text editor

$\boxed{\mathcal{A}}$ **Actuation/Event Toggle** – Allows you to change between Actuation and Event modes
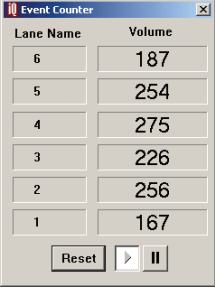
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7   Viewing lane data

Clicking on the **View Event Counter** 🚗 button will bring up a real-time volume counter. Each time a vehicle enters or leaves the radar detection zone, the volume for the corresponding lane will increment accordingly.

- Click the **Pause** button to pause the lane data counter.
- Click the **Play** button to resume counting.
- Click the **Reset** button to clear the volume count and begin a new count.

Any vehicles that were detected by the SmartSensor while the event counter was paused will not be shown in Volume.
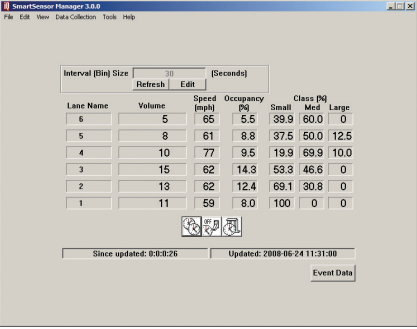
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8   Viewing interval data

The Interval Data screen allows you to verify interval data accuracy.

1. Specify the interval length in the Interval (Bin) Size field by clicking the **Edit** button.
2. Type the desired interval length in seconds.
3. Click **Submit**.
4. Synchronize the sensor time to your computer's UTC time, by clicking the **synchronize** button (the button with two overlapping clocks). This will cause intervals to begin and end at the expected time.


The other two buttons allow you to turn the interval data logging on/off and view the interval data log.

9 Set up data collection

1 Go to **Data Collection > Setup**.

2 Specify the Interval (Bin) size. This setting specifies the interval of time over which traffic variables are aggregated.

3 Check or uncheck the **Enabled** box. If unchecked, the study will run only until the sensor's flash memory is full.

4 Click the **Start** button to begin the study. As soon as the study begins, the View Interval Data Buffer Status window will appear showing how much of the onboard storage space is filled with interval data.

5 To download the data from the study, go to **Data Collection > Download**.
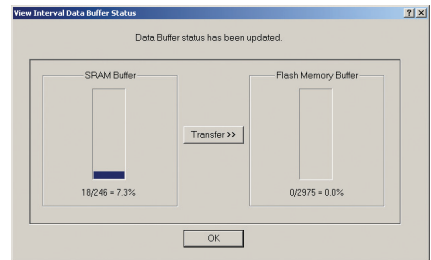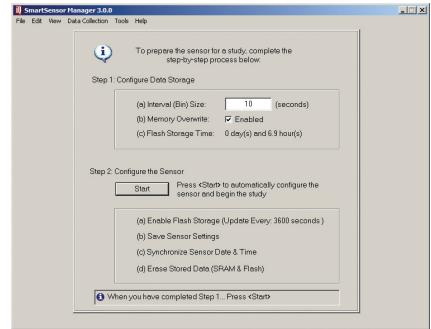
10 Download interval data

1 Under the Download Interval Data section, click the **Browse** button. This will open a directory where you can either create a new data download file log or locate an existing download file log.

2 Once you have selected an existing file or created a new file, click **Open**.

3 Select the type of download to perform.

■ **Normal –** Retrieves all interval data.

■ **Incremental –** Retrieves only interval data recorded after the indicated date and time.

■ **Error Recovery –** Retrieves entire content of flash buffer.

4 Once you have selected the type of download, click **Download**.