

*SpeedView*TM
Traffic Data
Analysis
Software

**INSTALLATION AND
USER'S GUIDE**

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Section 1 – Set-up Information

System requirements

To successfully use the SpeedView analysis software, the following criteria are needed as a minimum:

- A Windows-based computer with the following:
 - Microsoft Excel, Version 2002 through Version 2007
 - At least one available USB port

The hard drive and memory requirements for the SpeedView software are small compared to most programs.

General information and cautions

Computer security settings and permissions

SpeedView Traffic Data Analysis software is essentially an integrated Microsoft Excel macro program which automates the analysis of the data collected by the SpeedView traffic data computer. Since it uses macros, the security setting of Excel must be set to allow the running of macros. You need to be cautious with your computer settings because macros can contain viruses.

MPH recommends setting the macro security level of Excel to Medium. This allows the SpeedView software to run, although the user must choose to “Enable Macros” when the program begins. We do not recommend setting the macro security to Low, since this leaves your computer vulnerable to any macro without the user’s consent. If the security level is set to High, all macros will be prevented, and SpeedView will not run.

The setup portion of the SpeedView installation will show the installer how to set the macro security level for Excel. The user must have the proper administrator authorizations to make this change.



The macro security level in Microsoft Excel must be set to Medium for SpeedView to run.

Compatible versions of Microsoft Excel

SpeedView Traffic Data Analysis software has been tested on versions of Microsoft Excel between Version 2002 and Version 2007. Proper operation of the software with versions of Microsoft Excel outside of that range is not guaranteed by MPH. If you have a newer version of Excel, you may have to upgrade your SpeedView software.

SpeedView End User License Agreement

Note: This license agreement extends only to the SpeedView software and not to any other software utilized with SpeedView.

MPH INDUSTRIES, INC. Software License Agreement for SpeedView™ Traffic Analysis Software

MPH Industries, Inc. (“MPH”), a Kentucky corporation, is willing to license the software identified above to the Customer (“Customer”) only upon the condition that you accept all of the terms contained in this license agreement. Please read the agreement carefully. By downloading or installing this software, Customer accepts the terms of this agreement. ***If Customer is not willing to be bound by the terms all of the terms, please do not install the software.***

1. DEFINITIONS.

“Software” means the software identified above in binary form, any other machine readable materials (including, but not limited to, libraries, source files, header files, and data files), any updates, supplements, or error corrections provided by MPH, and any user manuals and other documentation provided to Customer by MPH under this Agreement.

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2.1 Subject to the terms and conditions of this Agreement, MPH grants Customer a limited, personal, non-exclusive, non-transferable, non-assignable, license to install and use the Software complete and unmodified on one central processing unit in the United States.

2.2 Except as provided in this Agreement, no license under any patents, copyrights, trademarks, trade secrets or any other intellectual property rights, express or implied, are granted by MPH to Customer under this Agreement.

2.3 Customer shall not and shall not permit its affiliates or any third party to translate, modify, decompile, recompile, update, or reverse engineer all or any part of the Software for any purpose.

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2.6 Customer shall not allow any third party to have access to the Software without MPH's prior written consent.

3. TERMINATION

3.1 This Agreement is effective until terminated.

3.2 MPH shall have the immediate right to terminate this Agreement without notice, or at its option, take possession of the Software, if Customer fails to comply with any provision of this Agreement or otherwise misuses the Software in contravention of this Agreement.

3.3 In the event MPH shall be in material breach or default of any of the terms, conditions, or covenants of this Agreement, and such breach or default shall continue for a period of ninety (90) days after the receipt of Customer's written notice to MPH setting forth MPH's breach, Customer shall have the right to cancel this Agreement without obligation, except as to the payment for the Software already received and accepted by Customer.

3.4 Upon termination of this Agreement for any reason, Customer shall, without request by MPH, immediately remove the Software from the one central processing unit and return same to MPH.

3.5 Within ten (10) days of termination of this Agreement, Customer shall, upon MPH's request, certify in writing that all copies of the Software, in whole or in part, have been removed from Customer's one central processing unit, and returned to MPH and/or been destroyed.

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Subject to the limitations contained in this Agreement, MPH agrees to indemnify and hold Customer harmless, and Customer agrees to indemnify and hold harmless MPH respectively, from any liabilities, penalties, demands or claims finally awarded (including the costs, expenses and reasonable attorney's fees on account thereof) that may be made by any third party for personal bodily injuries, including death, resulting from the indemnifying party's gross negligence or willful acts or omissions or those of persons furnished by the indemnifying party, its agents or subcontractors or resulting from use of the Software furnished hereunder. MPH agrees to defend Customer, at Customer's request, and Customer agrees to defend MPH, at MPH's request, against any such liability, claim or demand. Customer and MPH respectively agree to notify the other party promptly of any written claims or demands against the indemnified party for which the indemnifying party is responsible hereunder. The foregoing indemnity shall be in addition to any other indemnity obligations of MPH or Customer set forth in this Agreement.

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6.1 MPH warrants to Customer that for a period of thirty (30) days from the date of purchase, the media on which Software is furnished (if any) will be free of defects in materials and workmanship under normal use.

6.2 Except for the foregoing, Software is provided "as is." MPH does not warrant that the operation of the Software will be uninterrupted or error free.

6.3 Customer's exclusive remedy and MPH's entire liability under this limited warranty will be at MPH's option to replace Software media or refund the fee paid for Software.

6.4 EXCEPT AS SET FORTH IN THIS SECTION, MPH MAKES NO EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE SOFTWARE OR ITS CONDITION, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE OR USE BY CUSTOMER. MPH FURNISHES THE ABOVE WARRANTIES IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

7. AMENDMENTS OR SUPPLEMENTS

Amendments or supplements to this Agreement shall be permitted, provided all such changes shall be in writing signed by the authorized representatives of both parties. If an update or supplement to the Software comes with its own license agreement, any additional terms or additional restrictions contained in said license agreement(s) will apply to Customer's use of that update or supplement.

8. NO SUPPORT SERVICES

MPH is not obligated to provide maintenance, technical or other support, or updates to Customer for the Software outside of the paid support window, if any.

9. GOVERNING LAW

Any action or proceedings arising in connection with Agreement shall be tried and litigated exclusively in State and Federal courts located in the county of Daviess, Commonwealth of Kentucky. The aforementioned choice of venue is intended by the parties to be mandatory and not permissive in nature, thereby precluding the possibility of litigation between the parties with respect to or arising out of this Agreement in any jurisdiction other than that specified in this paragraph. Each party hereby waives any right it may have to assert the doctrine of forum non conveniens or similar doctrine or to object to venue with respect to any proceeding brought in accordance with this paragraph, and stipulates that the State and Federal courts located in the county of Daviess, Commonwealth of Kentucky shall have in personam jurisdiction and venue over each of them for the purpose of litigating any dispute, controversy, or proceeding arising out of or related to this Agreement. Each party hereby authorizes and accepts service of process sufficient for personal jurisdiction in any action against it as contemplated by this paragraph by registered or certified mail, return receipt requested, postage prepaid, to its principal business address. Any final judgement rendered against a party in any action or proceeding shall be conclusive as to the subject of such final judgement and may be enforced in other jurisdictions in any manner provided by law.

10. WAIVER OF BREACH

No waiver of breach or failure to exercise any option, right or privilege under the terms of this Agreement on any occasion(s) shall be construed to be a waiver of the same or any other option, right or privilege on any other occasion.

11. SEVERABILITY

If any provision of this Agreement is held to be unenforceable, this Agreement will remain in effect with the provision omitted, unless omission would frustrate the intent of the parties, in which case this Agreement will immediately terminate.

12. EXPORT REGULATIONS.

All Software delivered under this Agreement is subject to US export control laws and may be subject to export or import regulations in other countries. Customer agrees to comply strictly with all such laws and regulations and acknowledge that Customer has the responsibility to obtain such licenses to export, re-export, or import as may be required after delivery to Customer.

13. NOTICES

All notices to be given or that may be given by Customer shall be deemed to have been duly given when made in writing and received by MPH, if deposited in the United States mail, postage prepaid, certified mail, return receipt requested, at MPH Industries, Inc., c/o SpeedView Traffic Analysis Software, 316 East 9th Street, Owensboro, Kentucky, 42303.

14. THIRD PARTY SOFTWARE

The Software may include software programs licensed by third parties. The terms and conditions of those licenses will apply to Customer's use of the third party software programs.

15. INTEGRATION

This Agreement is the entire agreement between Customer and MPH relating to its subject matter. It supersedes all prior or contemporaneous oral or written communications, proposals, representations and warranties and prevails over any conflicting or additional terms of any acknowledgment, or other communication between the parties relating to its subject matter during the term of this Agreement.

SpeedView software installation

To install the SpeedView software

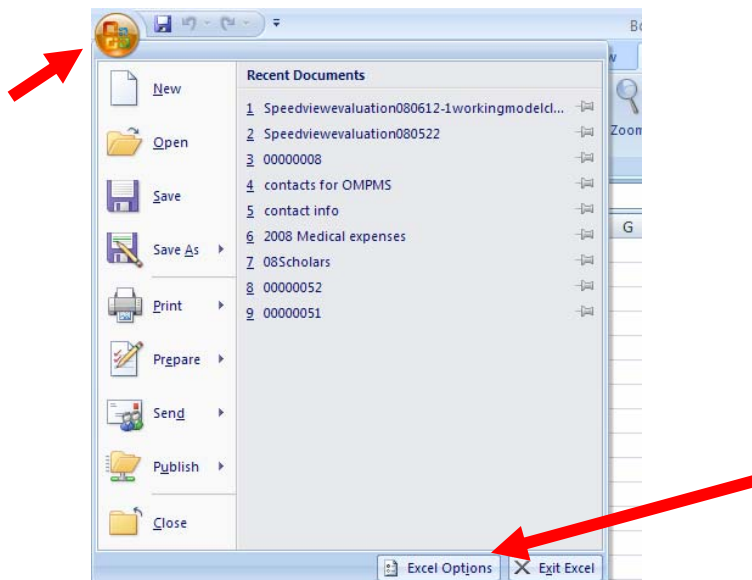
- Insert the memory device (CD, DVD, or USB memory stick) that contains the SpeedView software into your computer.
- On you main hard drive for your computer (normally C:), create a folder called “SpeedView”
- Copy the SpeedView file from the memory device to the SpeedView folder. The SpeedView file will have “SpeedView” in the name, but the exact name may vary based on the version of the program supplied to you. The SpeedView file will have the extension “.xls”.
- Installation is complete. You may want to create a shortcut to the file on your Desktop. Remove the memory device from your computer and put it in a safe place.

Microsoft Excel setup

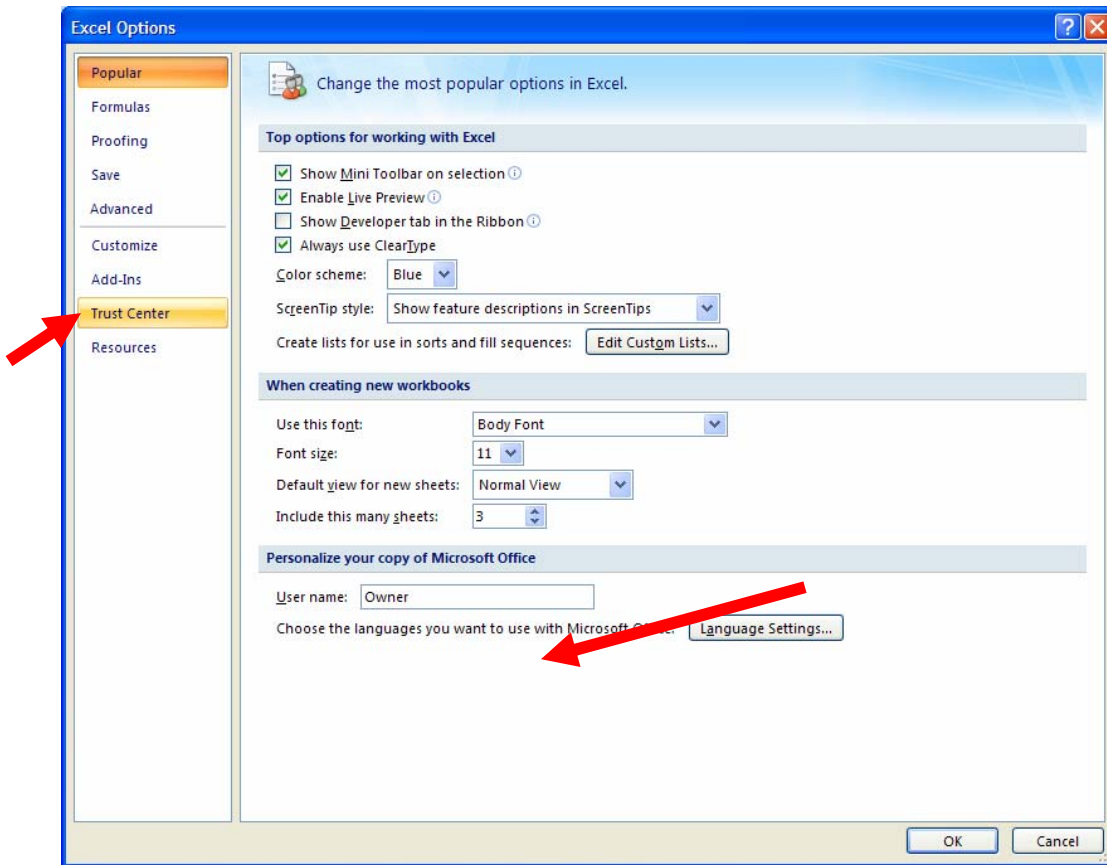
SpeedView analysis software operates using Microsoft Excel macros. In order to run the program, the “Macro Security” level of Excel has to be set up to allow macros to run. In this procedure, we will show you how to set up Excel to allow macros to run. However, rather than enabling your computer to run macros automatically, we will set up Excel to allow them to “Run with notification”, allowing the user to choose whether to allow a macro to run or not.

Example for Excel 2007 (XP Version)

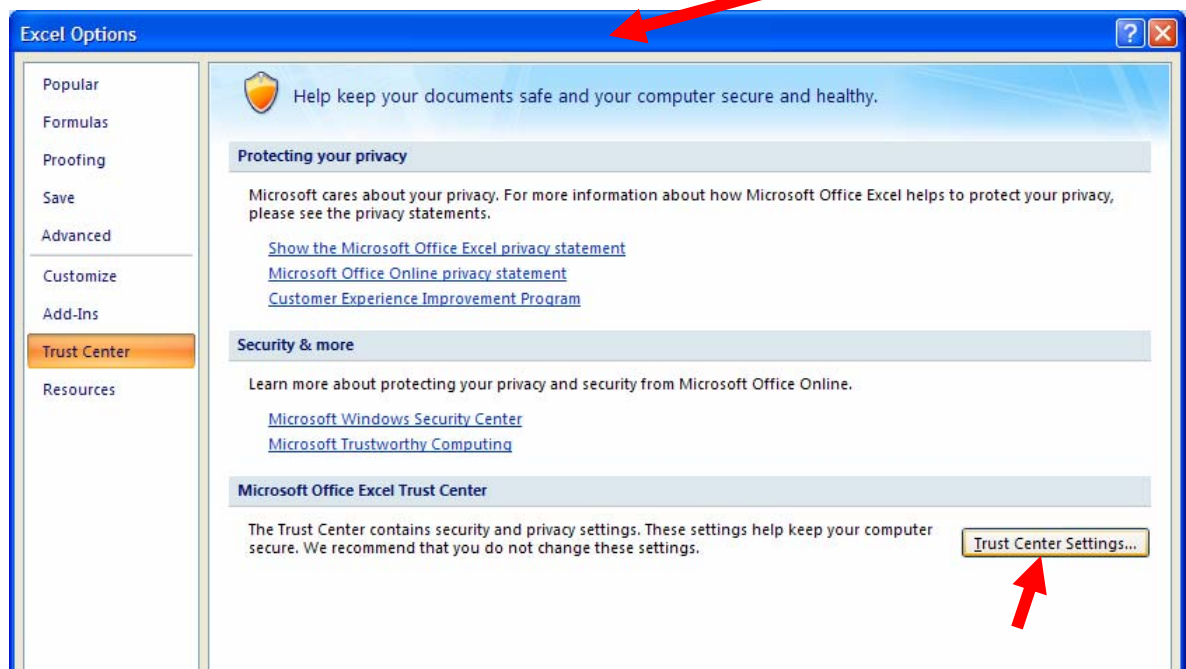
- Start Microsoft Excel on your computer
- As shown below, in Excel, press the Microsoft Office button. In the menu that pops up, press the Excel Options button



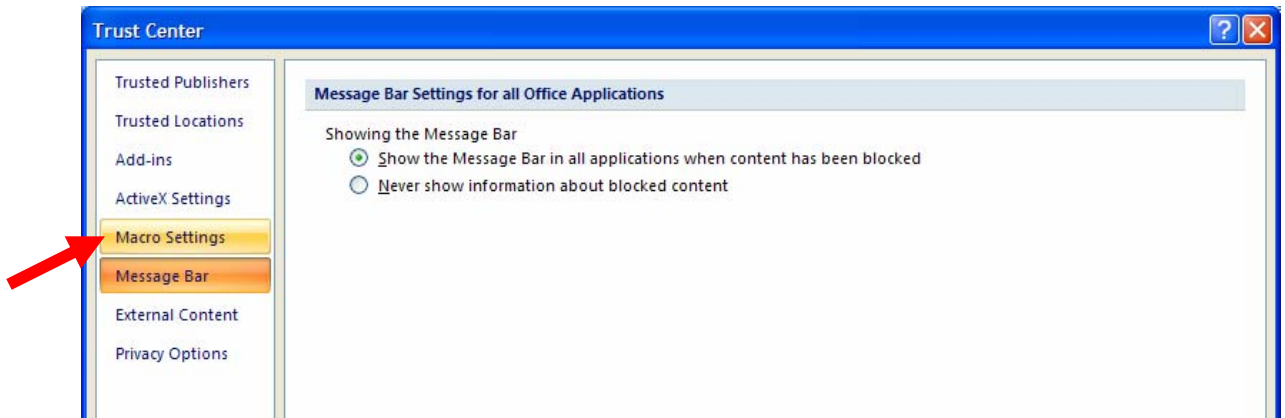
- The following window will appear, showing all of the selectable Excel options. Select the Trust Center on the left side of the window as shown



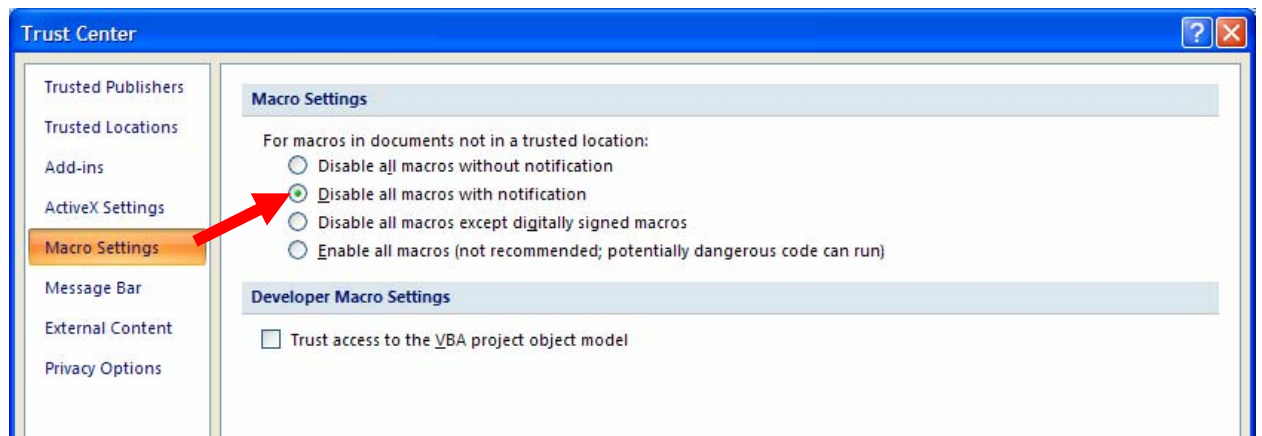
- The Trust Center will appear. Select Trust Center Settings



- In the Trust Center window, select Macro Settings



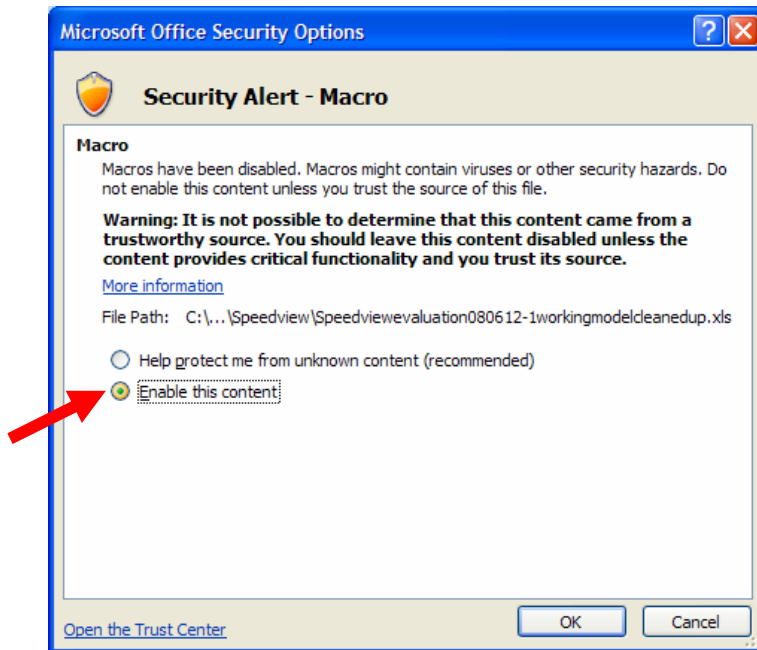
- In the new menu, select “Disable all macros with notification, as shown below.



With this setting, when a macro attempts to run, Excel will alert you with a notice, like the one shown in the following figure.



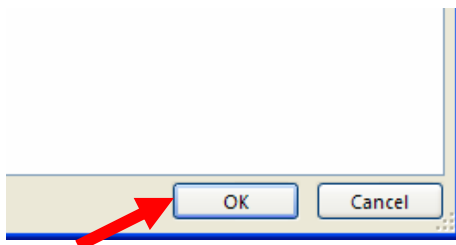
You can decide whether or not to allow the macro to run. Pressing the Options button next to the warning will bring up the following window, which is used to allow the macro to run.



Select “Enable this content”, followed by the OK button to allow the macro to run.

Selecting one of the other options in the Trust Center that begin with the word “Disable” will not allow the macros in the SpeedView software to run. Selecting the one that begins with “Enable” above is not recommended, because it allows any macro to run without your knowledge.

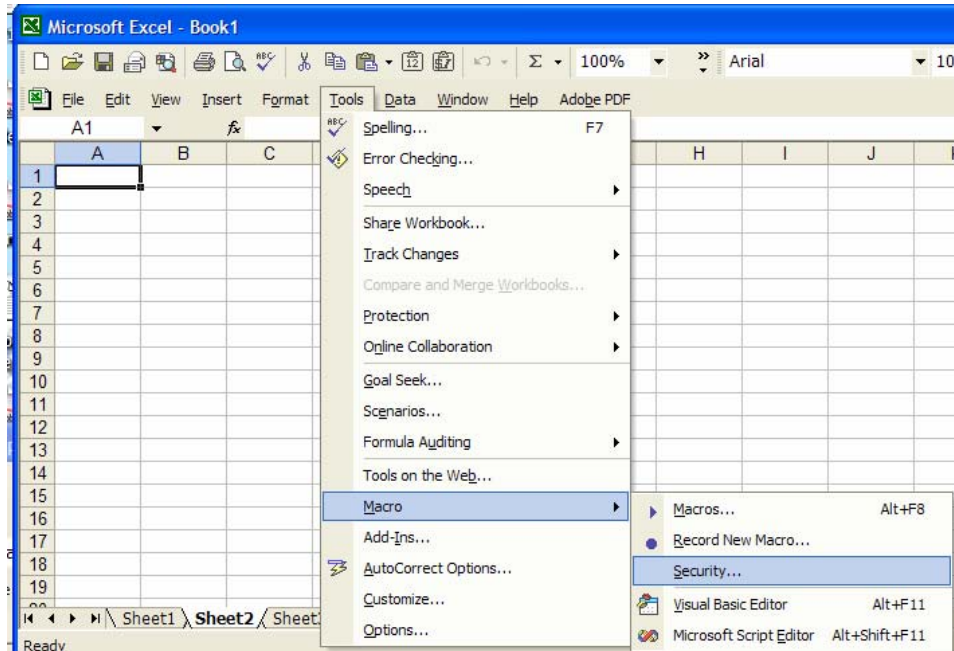
- To complete the setup, select OK on all of the open windows that have popped up during the setup procedure.



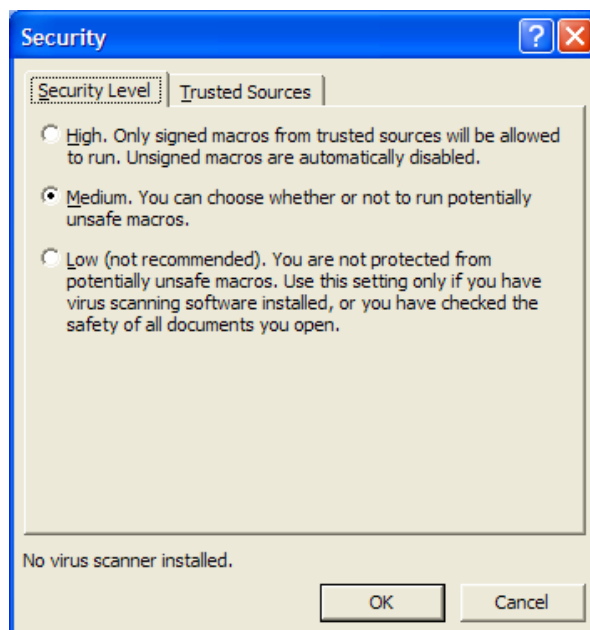
- Excel is now set up in a manner so that you can run SpeedView analysis software on a compatible version of Excel.

Example for versions of Excel prior to Excel 2007

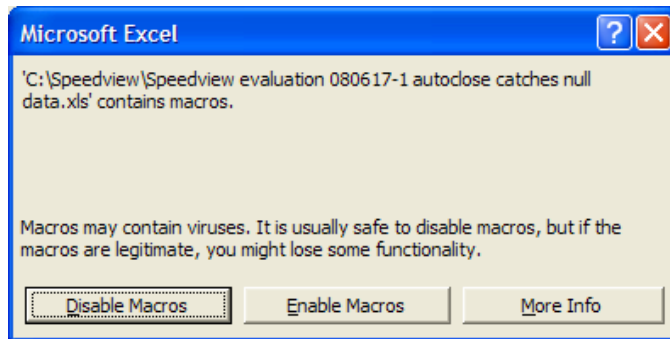
- Start Microsoft Excel on your computer
- As shown below, on the taskbar, select Tools. In the pull-down menu, select Macro, then select Security



- The following menu (or one like it, based on the version of Excel you are running) will appear. Select Medium security, and press OK.



When a macro attempts to run, Excel will alert you with a screen like the following figure. You can decide whether or not to allow the macro to run. Selecting High security above will not allow the macros in the SpeedView software to run. Selecting Low security above is not recommended, because it allows any macro to run without your knowledge.



- Excel is now set up in a manner so that you can run SpeedView analysis software on a compatible version of Excel.

Section 2 – Using the SpeedView Analysis Software

Starting SpeedView

General

SpeedView is started by double-clicking on the SpeedView program file. Go to the location to which you installed SpeedView, and click on the file name or icon to start SpeedView.

The SpeedView program will start Microsoft Excel and begin to run the SpeedView macros.

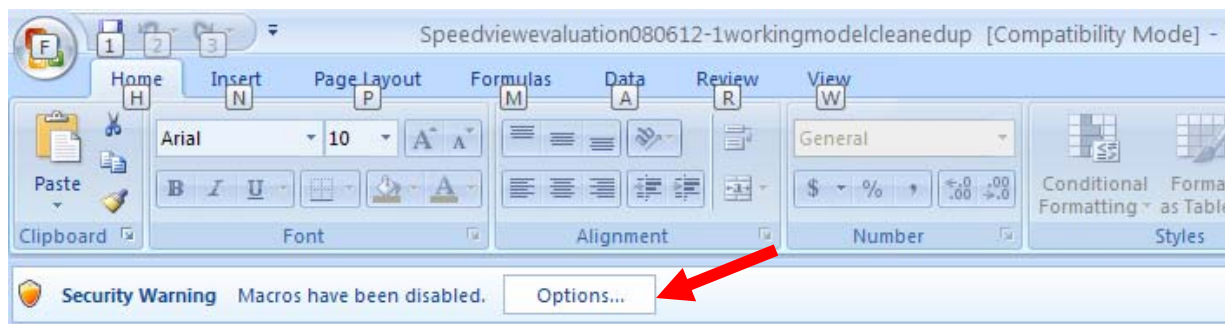
Enabling the SpeedView macros

The SpeedView software will begin to run, but the macros will be inhibited by the security settings of the computer. Their operation must be authorized by the user. The following section will show you how Excel alerts you to this, and what you must do to allow SpeedView to run.

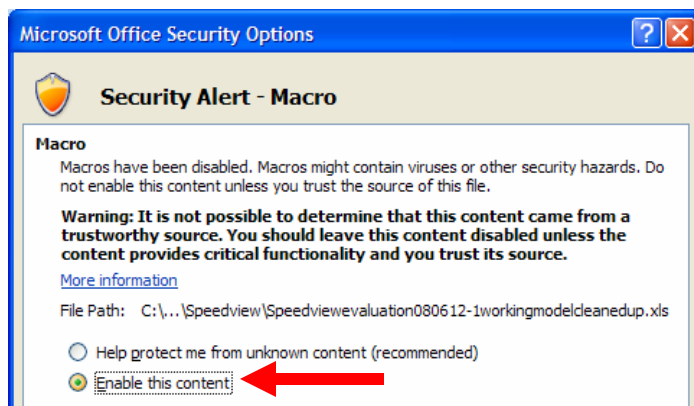
To get to this point, Excel must have been configured for the proper level of macro security, as described in Section 1 of this manual.

Enabling SpeedView in Excel 2007

- After Excel opens, it will display an alert that “Macros have been disabled”, like the following figure. This is because Excel sensed that a macro was attempting to automatically run, so it stopped the macro and alerted you to the condition. Excel is waiting for you to tell it what to do. Press the Options button in the alert message, as shown below.



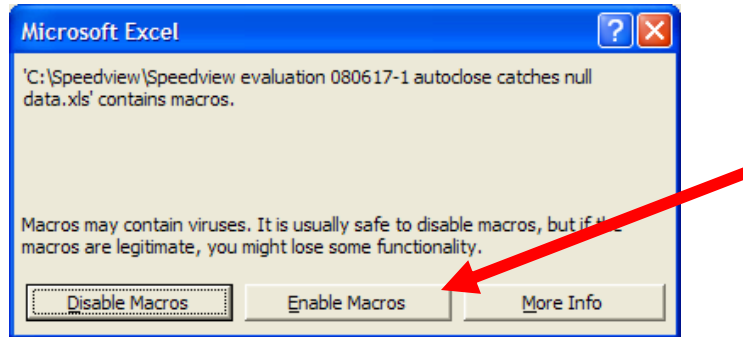
- Excel will display the following window. Select Enable this content, and press OK.



- SpeedView will now run.

Enabling SpeedView in Prior Versions of Excel

- After Excel opens, it will display an alert window like the following. This is because Excel sensed that a macro was attempting to automatically run, so it stopped the macro and alerted you to the condition. Excel is waiting for you to tell it what to do. Select Enable Macros to allow SpeedView to run.



- SpeedView will now run.

What happens if macros are not enabled?

If you choose to not allow the SpeedView macros to run, you will see a screen like the following, depending on the version of the SpeedView analysis software you have:

In order for SpeedView to run, you must enable the SpeedView Macros. Please refer to the user's guide for complete information, but in general:

- **With Excel 2007 and later, press the Options button on the Macros alert message. Enable the macro content.**
- **For prior versions of Excel, you must select Enable Macros in the pop-up box for SpeedView to run.**

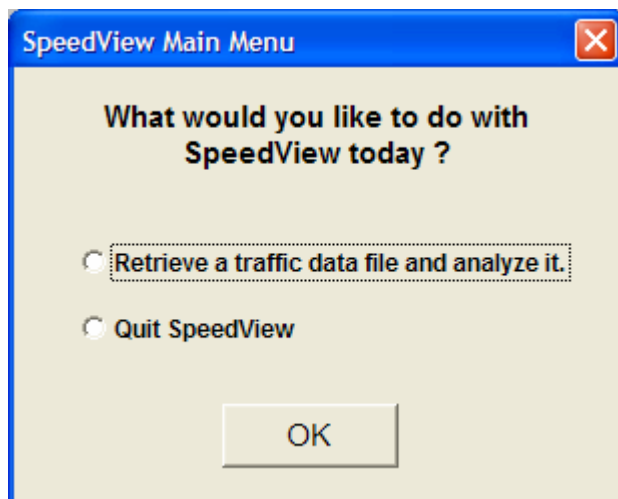
You must enable the SpeedView macros to run in order to use SpeedView. You may have to close Excel and restart the SpeedView program in order to run the program, depending on the version of Excel you have.

Initial screens and main menu

Once SpeedView begins to execute, you will see an initialization screen like the following in Excel:



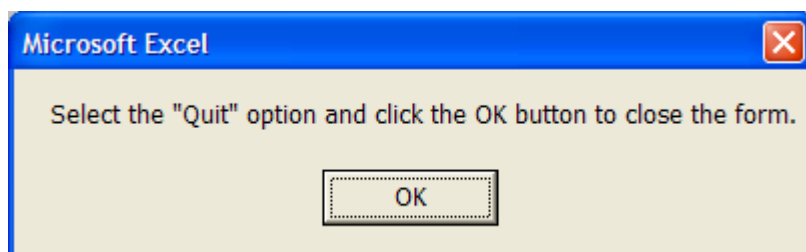
The welcome message will persist for a few seconds and then disappear. Then, the main menu of SpeedView will appear:



From this screen, you decide what you want to do. In most cases, you will select “Retrieve a traffic data file and analyze it”, unless you inadvertently started SpeedView.

SpeedView returns to the main menu whenever you leave the Traffic Analysis menu, so this is the screen that is also used to exit SpeedView. Selecting “Retrieve a traffic data file and analyze it” will take you to the next step in the analysis: The Analysis menu. Selecting “Quit SpeedView” will end the program.

Choose the options you want and press OK. The red “X” in this box and in the other boxes of SpeedView is inhibited so that the program cannot be inadvertently interrupted. Pressing a red X brings up the following message:



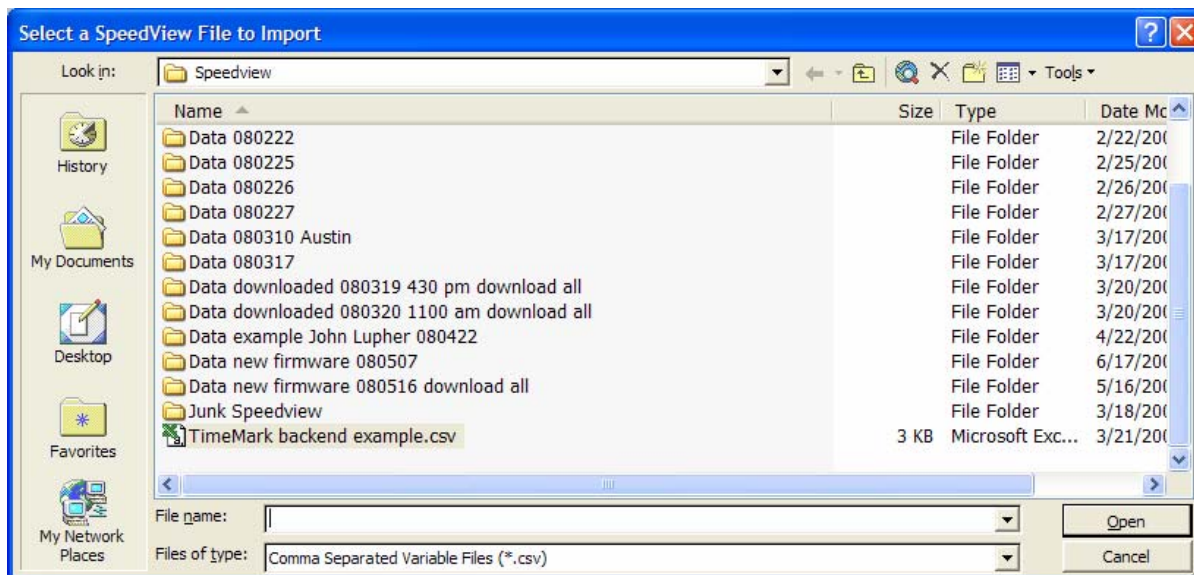
Selecting a SpeedView data file to analyze

General

- The SpeedView data is saved in a comma-separated variable (CSV) file format. All SpeedView files have the file extension of “.csv”.
- The SpeedView files are numbers sequentially. For example, 00000009.csv would be the ninth file recorded by the traffic computer during its life.
- During the file opening process, the SpeedView analysis software examines the data file to determine if it is a SpeedView file. If it determined to be a SpeedView file with valid data, the program will proceed to the next steps. If it so not a SpeedView file or has no data, the analysis software will alert the user and allow the user to select a new file for analysis.

Program steps for selecting a file

Once the user selects to “Retrieve a traffic data file and analyze it” in the main menu, SpeedView will respond with the following screen.



This format of a file selection screen should be very familiar to users of Microsoft Office. The user can select the drive or memory device that contains the data file that is to be analyzed. This could be the USB memory stick that the original file was downloaded to, or it can be a copy of a data file, stored on one off the host computer’s hard drives.

Use the pull-down menus to select the drive or memory device that contains the file that is to be analyzed. You will notice at the bottom of the window that SpeedView will only allow you to select files with the extension “.csv”.

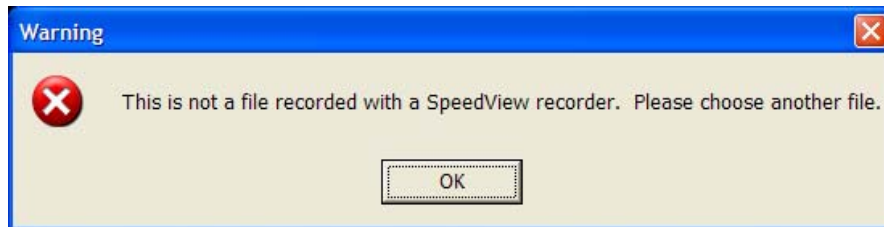
All SpeedView data files have the “.csv” extension, but not all files with that extension are SpeedView files. That is why the file will be checked to determine if it is a SpeedView file by the program in the next step.

When you have selected the file you want, you can double-click on it or select Open.

Error messages due to file selection

Wrong file format

All SpeedView files have a specific header that is recognized by the SpeedView analysis software. If the selected file does not have the correct header structure, it was not recorded with a compatible SpeedView traffic computer. In this case, the SpeedView program will respond with the following error message:



When the user selects “OK”, the analysis software will return to the main menu, where the user can choose to select a new file to analyze or to quit the SpeedView program.

SpeedView file with no speed data

SpeedView files can also be generated which have a header file but which have no data. This occurs if the SpeedView traffic computer is switched on for a short period and then turned off. The analysis software examines SpeedView data files to ensure that they contain speed data. If they do not, the program displays the following error message:

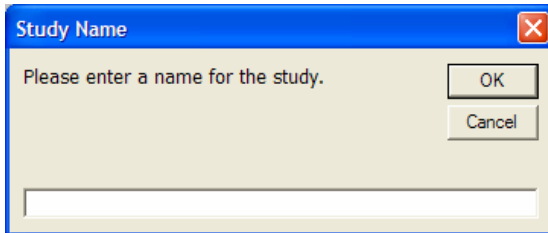


When the user selects “OK”, the analysis software will return to the main menu, where the user can choose to select a new file to analyze or to quit the SpeedView program.

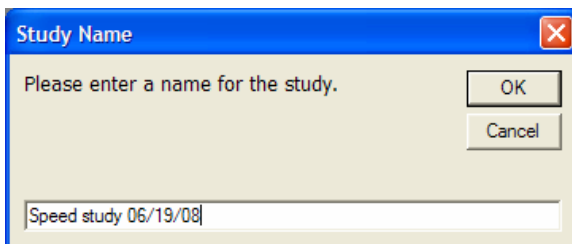
Defining the study parameters

Setting the location and speed limit for the study

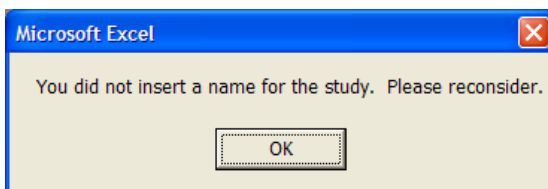
In the next step of the SpeedView analysis software, the user input the general information for the study. The following window appears first:



In the space provided, enter a name for the study. It is strongly recommended that you do this, since this information will print out on any charts you create. A simple example is

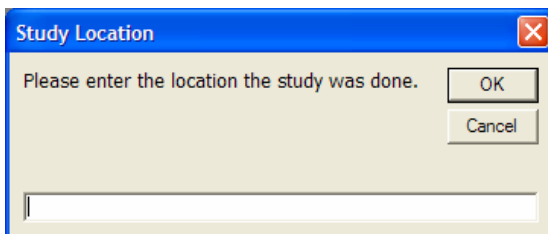


If you choose not to enter a name, the program will respond with the following warning:

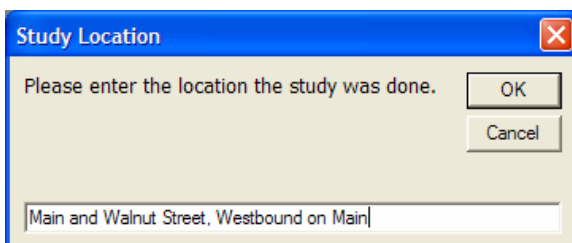


When you press OK, you will be given another opportunity to enter the data. If you choose not to do so for a second time, the program will continue and the graphs will have a “blank” for Study Name.

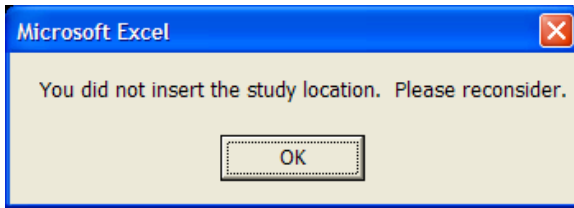
The program will then prompt you for the location where the study was performed:



In the space provided, enter a name for the study. It is strongly recommended that you do this, since this information will print out on any charts you create. A simple example follows:

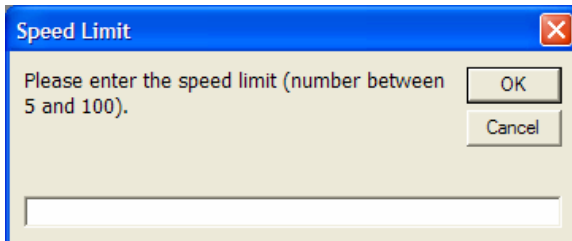


If you choose not to enter a name, the program will respond with the following warning:

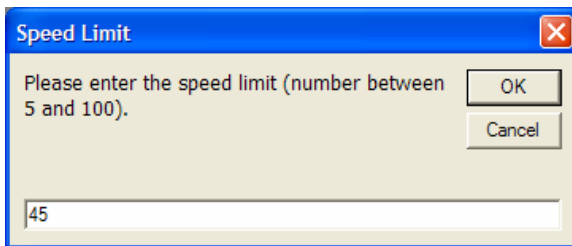


When you press OK, you will be given another opportunity to enter the data. If you choose not to do so for a second time, the program will continue without a study location and the graphs will have a “blank” for Study Location.

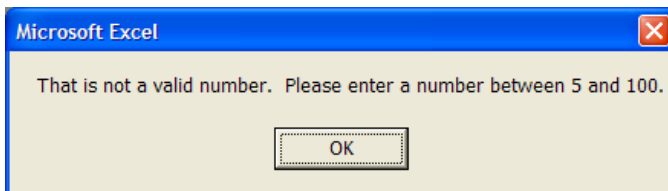
The program will then prompt you for the speed limit at the study location, using the following window:



Enter the information as a number (no “mph” or “km/h”). A simple example is



If you do not enter a speed limit, the program will respond with the following warning:



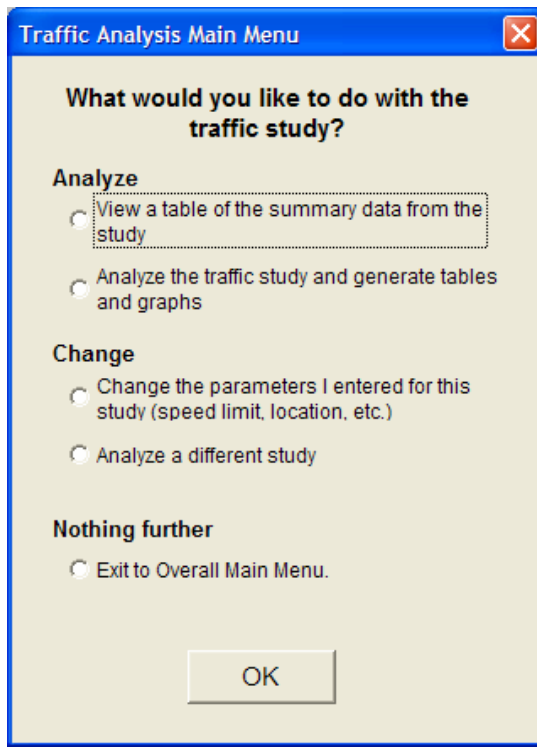
Since the speed limit is required for the SpeedView software to determine the number of speeders during the study, the program will not advance beyond this point until the user enters a speed limit.

Changing the parameters if you make a mistake

If you make a mistake and wish to change any of the parameters you entered, select the item “Change the parameters I entered for this study” on the Traffic Analysis Main Menu.

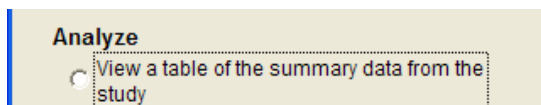
Traffic Analysis Menu

Following is a view of the Traffic Analysis Menu. From it, the user can access all of the analysis functions of the SpeedView software. We will explore each of these options in this section.



Summary data table

A very useful is viewing a summary table of the traffic study. This is done by selecting the first item on the Analysis Menu and pressing OK:



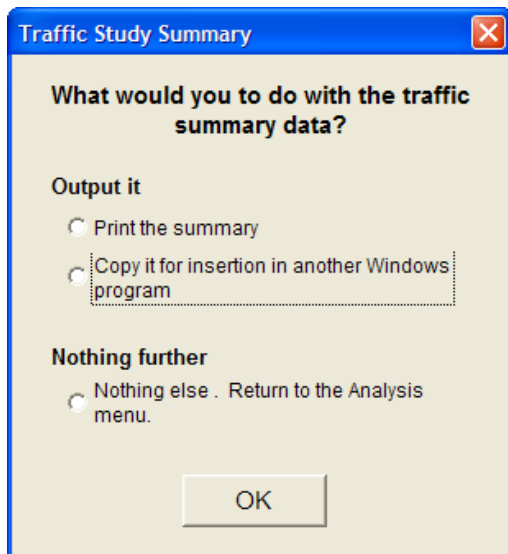
A table like the following is displayed in the upper right hand corner of the program window:

SpeedView Traffic Analysis Software	
Study Name	Speed Study
Study Location	Main and Walnut, westbound on Main
Start Date/Time	5/5/08 15:15
End Date/Time	5/7/08 10:35
Total Study Time	01 D 19 H 20 M
Total Vehicles	14270
Speed Limit	35 mph
Total Speeders	794
Percent Speeding	5.6%
85th Percentile	32 mph
Median Speed	26 mph
Maximum Speed	74 mph

This is giving you a simple overview of what happened during the study:

- Study name and location
- Study start and stop dates and times
- Total length of the study in days, hours, and minutes
- Total number of vehicles that passed in the given direction
- Speed limit, number of speeders, and percentage of vehicles speeding
- 85th percentile traffic statistic for the overall study
- Median and maximum vehicle speeds observed.

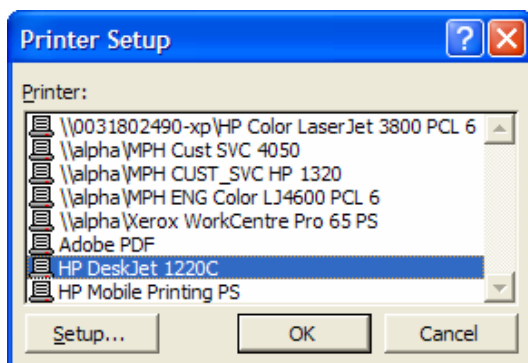
While the summary is displayed, the following Window is also displayed:



You can choose to print the summary, copy it for insertion in another Windows program, or if you are finished, to return to the Traffic Analysis Main Menu:

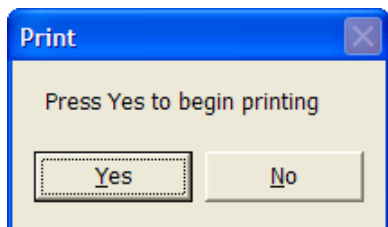
Printing the table

To print the table, select “Print the summary” and press OK. The program will then prompt you for the printer information with a data box like the following:



Select your desired printer from the menu. If you want to change the printer’s parameters (printing quality, etc.) select to Setup to change those parameters. When you are done, select OK.

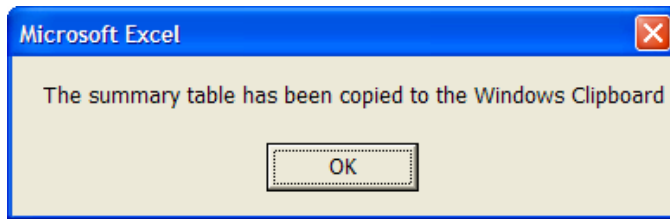
SpeedView will then give you the following prompt.



Pressing "Yes" prints the summary on the selected printer. Selecting No cancels the print job.

Copying the table

To copy the table for insertion in another program (for example, while creating a report in Microsoft Word), select “Copy it ...” in the menu. This will transfer the table to the Windows Clipboard. At the same time, SpeedView will respond back with the following notification:



You can now select the program and/or document where you want to paste the summary, then select the Paste command in that program.

Exiting to the Traffic Analysis Main Menu

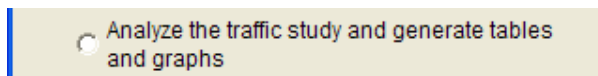
To exit to the Traffic Analysis Main Menu, select the “Nothing else” option and press OK.

Analyzing a study

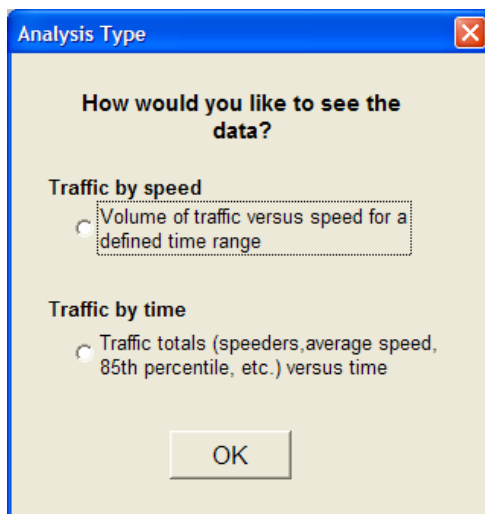
The SpeedView analysis software allows the user to generate tables and graphs of the data that was collected during the study. In general, this information can be looked at in one of two ways:

- Looking at traffic volumes based on the vehicle speeds, for a specified period of time
- Looking at how traffic volumes or speeds vary over time.

The second menu option in the Traffic Analysis Main Menu allows the user to do this:



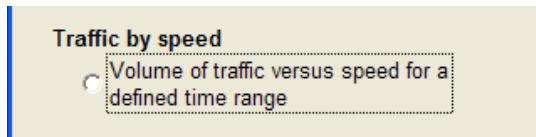
Selecting this option and pressing OK causes the Analysis Type to pop up. The menu describes two different ways of analyzing the data, corresponding to the two ways described above.



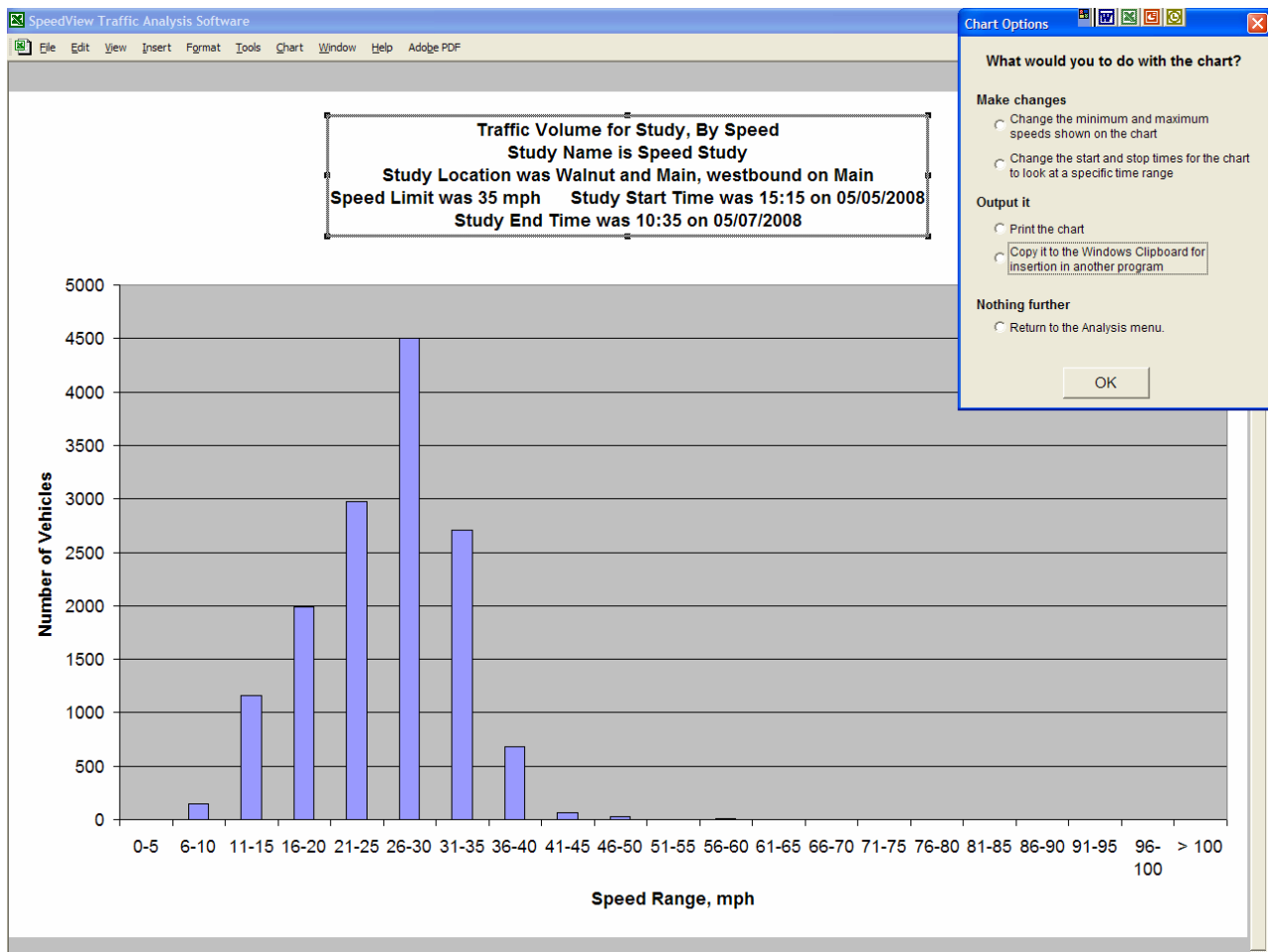
Choose the way you want to analyze the data, and press OK.

Speed-based analysis

To analyze the data based on speed, select the first item in the Analysis Type menu and press OK.

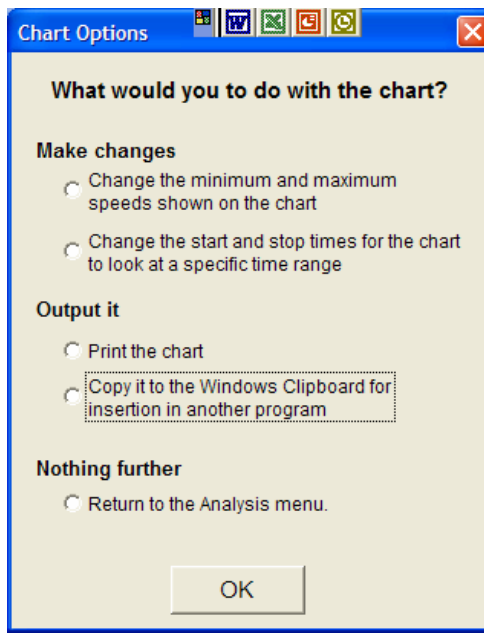


The program will generate an initial graph showing you the volume information by speed for the entire study:



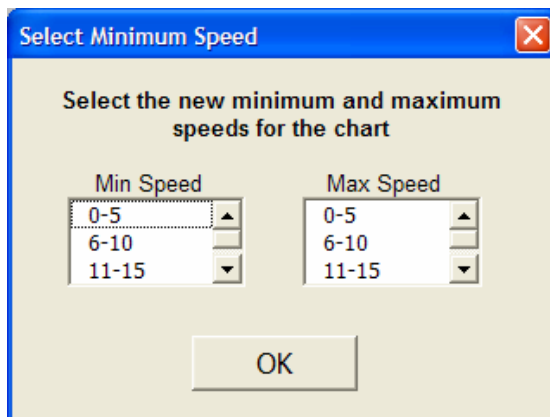
The graph shows you the traffic volume for the entire study, based on the vehicle speeds.

Notice the menu in the upper right corner of the screen. This lets you choose to change the graph's information. Here is a zoomed-in view of the menu.

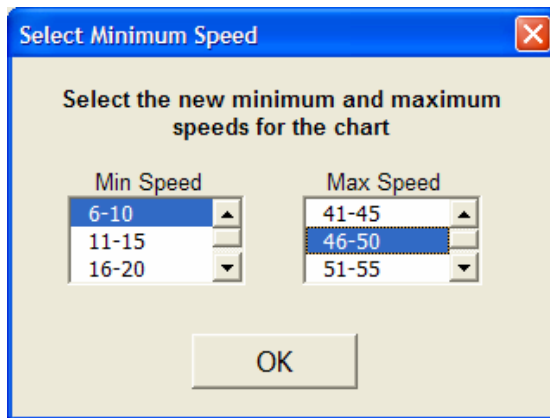


Changing the minimum and maximum speeds of the chart

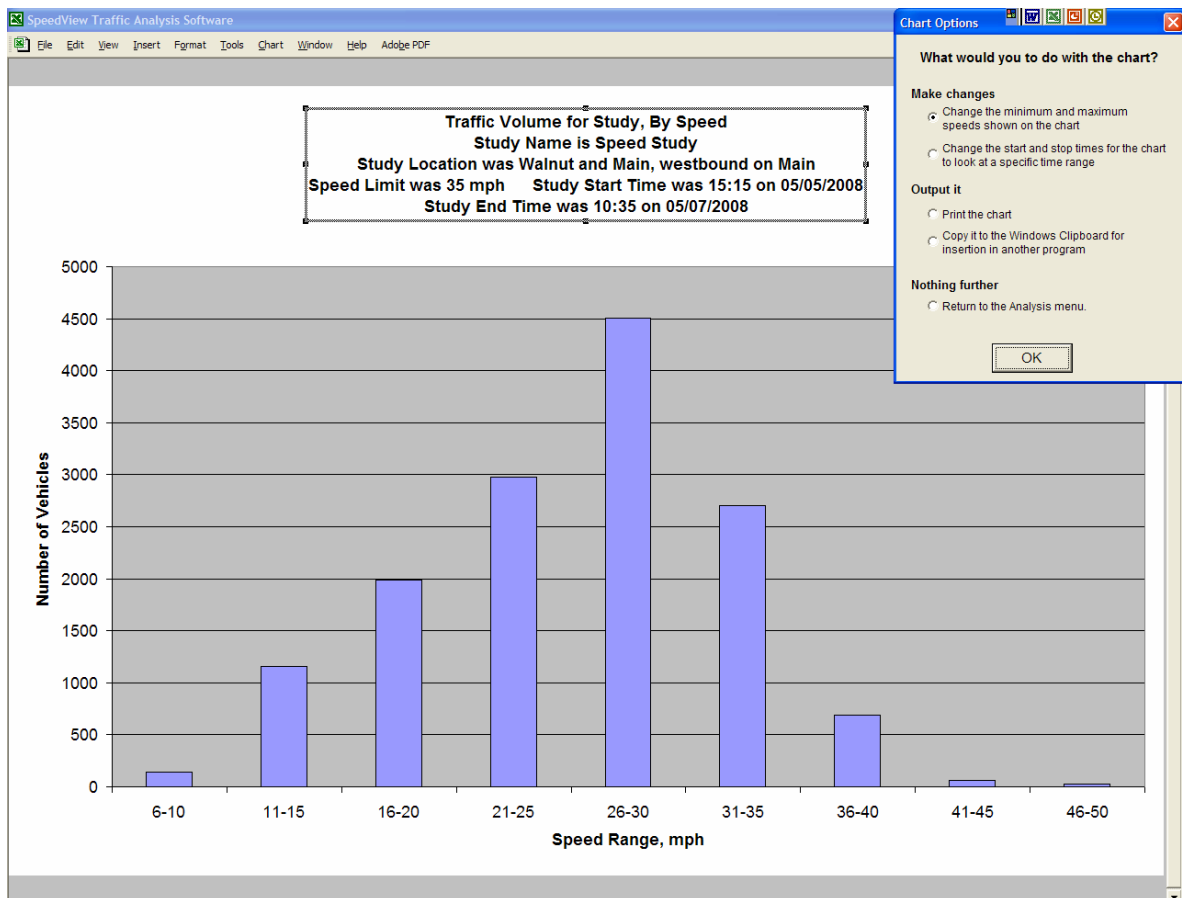
First, we can choose to eliminate the speed ranges where there were no vehicles. In the example, there were no speeds below 5 mph or any above 50 mph. To eliminate these ranges from the chart, select the first menu item, “Change minimum and maximum speeds”, and select OK. The following menu will appear:



Choose the minimum speed range and maximum speed range that you want displayed on the chart. In our example, we want to begin with the 6-10 mph range and stop with the 46-50 mph range, as shown below:



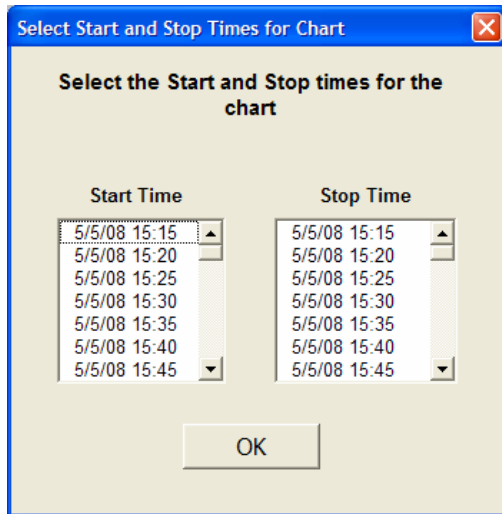
When you make the selections and press OK, SpeedView regenerates the chart with only the selected speed ranges:



The second item on the menu is used to choose to display the information for only a portion of the study. The study above covers more than one day. Let's choose the second menu item to choose only to look at one hour's worth of data.

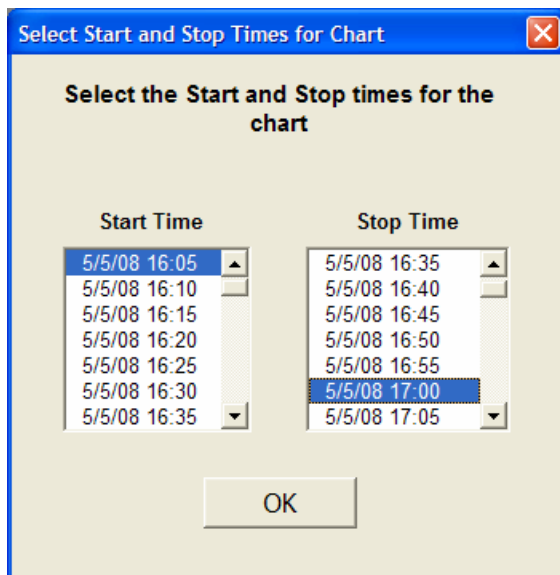
Changing the start and stop times of a chart

Select “Change the start and stop times” and press OK. SpeedView will give you a window like the following to select these.

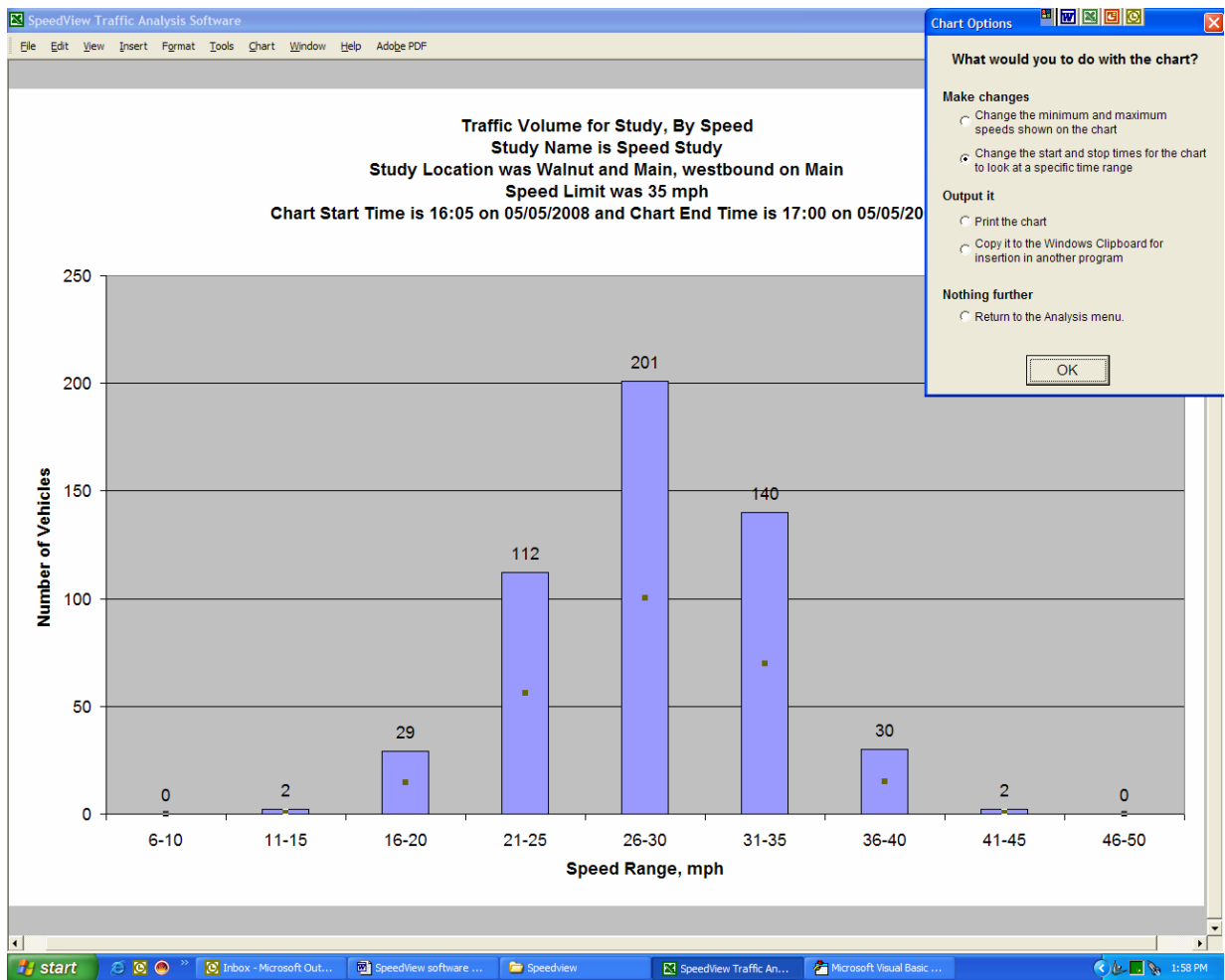


The window allows you to select any of the five-minute data points in the study as a start or stop time. (If you choose a start time that is later than your stop time, the program alerts you and lets you choose again.)

Let's choose to look at the hour from 4:00 pm to 5:00 pm on 5/5/08. We select a start time of "5/5/08 16:05" and a stop time of "5/5/08 17:00". We choose the first data point to be 15:05, since this contains all of the vehicles seen by the SpeedView traffic computer between 15:00 and 15:05. Here is the example:

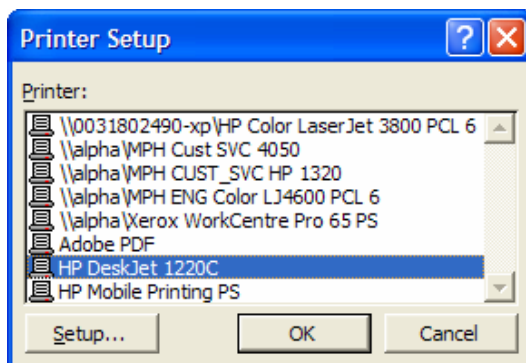


When you press OK, SpeedView regenerates the chart with only the selected data, in this case an hour's worth of data:



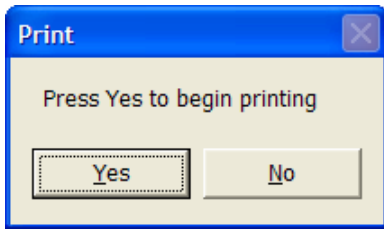
Printing a chart

To print a chart, select the “Print the chart” option. The program will then prompt you for the printer information with a data box like the following:



Select your desired printer from the menu. If you want to change the printer’s parameters (printing quality, etc.) select to Setup to change those parameters. When you are done, select OK.

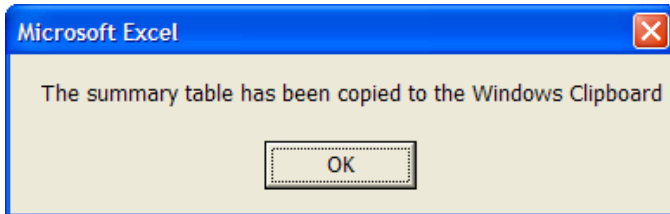
SpeedView will then give you the following prompt.



Pressing "Yes" prints the summary on the selected printer. Selecting "No" cancels the print job.

Copying a chart to another Windows-based program

To copy the table for insertion in another program (for example, while creating a report in Microsoft Word), select "Copy it ..." in the menu. This will transfer the table to the Windows Clipboard. At the same time, SpeedView will respond back with the following notification:



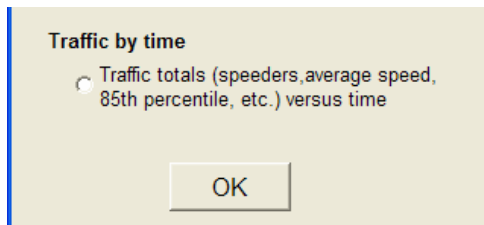
You can now select the program and/or document where you want to paste the summary, then select the Paste command in that program.

Exiting to the Traffic Analysis Main Menu

To exit to the Traffic Analysis Main Menu, select the "Nothing else" option and press OK.

Time-based analysis

To analyze the data for a specified time period, select the second item in the Analysis Type menu and press OK.



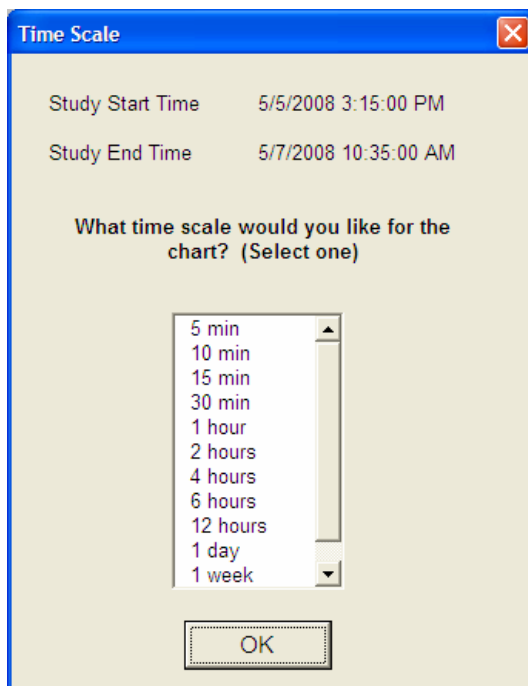
SpeedView will respond by asking you for the time period that you wish to analyze.

Selecting the resolution of the analysis

The SpeedView software first asks you the resolution you want on the chart. The study data will be analyzed and collected into the time period you select.

For example, if you select “1 hour”, SpeedView will collect all of the data for each hour and give you the hourly totals. SpeedView gives you a lot of different choices for the time resolution of the graph, so select the one that best suits your needs.

The resolution is selected on the following menu:

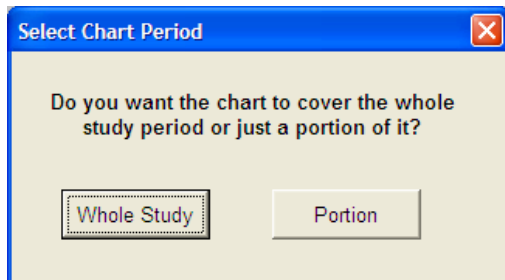


For our example, we will select “1 hour” for the resolution of the chart.

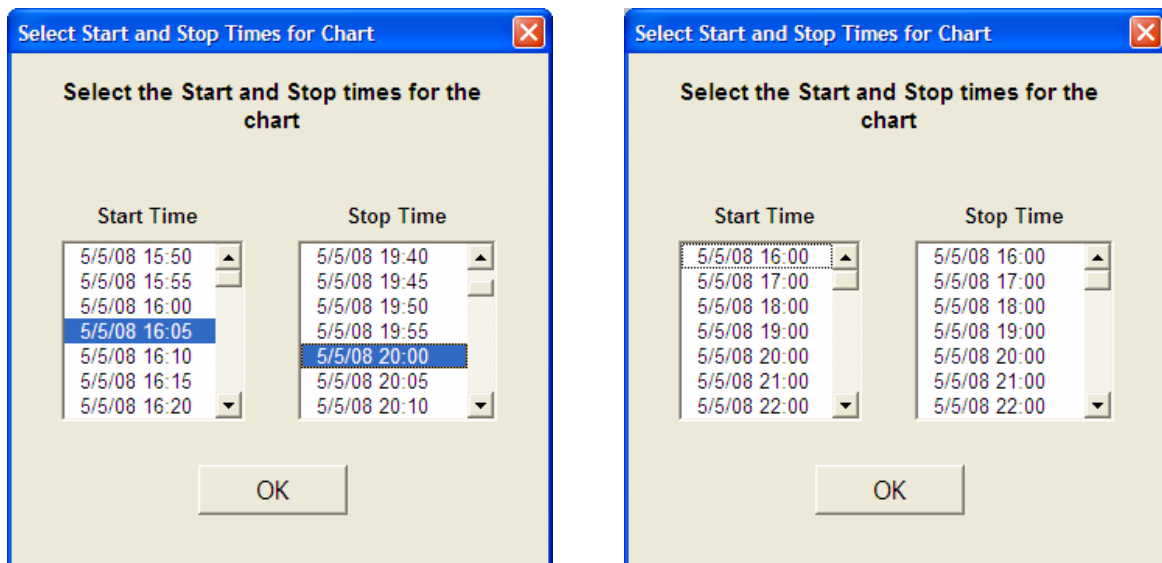
Selecting the start and stop times of the table

Now SpeedView allows you to select the start and stop times of the period you want to analyze. In some cases you may want to look at the whole study, but in most cases, you will want to pick a specific period of time, for example a rush hour period or the period when reduced speed limit is in place.

When you press OK on the previous menu, SpeedView gives you the following choices:



Select "Whole Study" to chart the entire study, or select "Portion" to only look at a portion of it. If you select "Whole Study", SpeedView will use the start and stop times of the study for its analysis. If you select "Portion", SpeedView lets you select the start and stop times for your analysis, so you can choose to look only at the times you care about. This is done with the following menu:



The menu on the left is generated if the resolution that was chosen is less than "1 hour". Each column has all of the times covered by the study in it, broken into five minute increments.

The one on the right is broken up into hourly increments, and is shown when a period of "1 hour" or greater is chosen. The partial hourly periods on each end of the study are not shown.

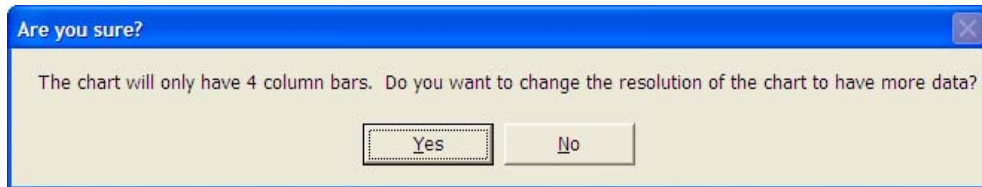
Select your start and stop times from the list. (SpeedView will warn you if you select a start time that is later than the stop time and let you choose again.)

Note that in the menu on the left, we chose a start time of "16:05". This is because the "16:05" time contains all of the cars that passed by the radar between 16:00 and 16:05. You will always want to add 5 minutes to your analysis start time to account for this. As a further example, selecting a start time of 16:05 and a stop time of 17:00 would select a full hour's worth of data. An easier way to do this is to select a resolution of 1 hour or greater, and let SpeedView do this for you automatically.

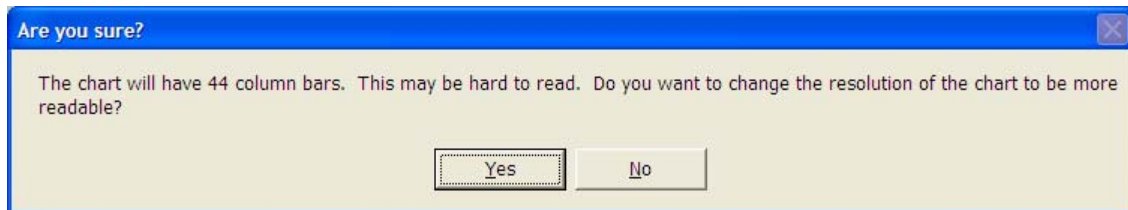
Cautionary warnings

SpeedView will then look at your selected resolution and the time period you have selected to look at. Based on this, it will alert you if it thinks you have too many or too few lines for a chart. Examples of caution warnings are

Too little data:




Too much data:



In each case, select “Yes” to re-enter the data and make the chart more readable. If you select “No”, the program will proceed with the choices you made.

Working with the Traffic Data Table

Once you have made your choices, SpeedView will show you a table of the data. The table will look something like this example. (Depending on your choices above, if you have more than 40 lines in the table, the data may extend past the bottom of the viewable screen.)


SpeedView Traffic Analysis Software

Period	End Time	Total Vehicles	Median Speed	Maximum Speed	85th Percentile	No. of Speeders
5/5/08	17:00	459	29	40	35.0	53
5/5/08	18:00	420	29	74	35.0	49
5/5/08	19:00	363	28	63	34.0	27
5/5/08	20:00	331	25	41	32.0	19
5/5/08	21:00	234	26	38	33.0	11
5/5/08	22:00	187	24	40	33.0	8
5/5/08	23:00	148	15	40	30.0	2

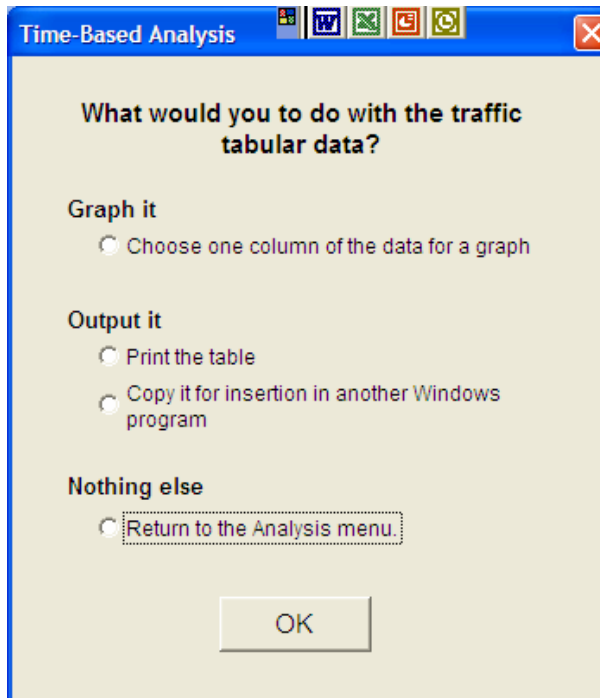
Since we chose a resolution of “1 hour”, the table shows the totals for each hour of time in the data for the period we selected. For this example, the start time was “16:00 5/5/08” and the Stop time was “22:00 5/5/08”

Each column shows one item of the data. The columns are

- Total Vehicles
- Total Median Speed
- Maximum Speed
- 85th Percentile Speed
- Number of Speeders

Additionally, please note that the time column is the end time of the data. Since the chart began at 16:00, the first time of the table is 17:00, one hour later than 16:00. This continues throughout the chart.

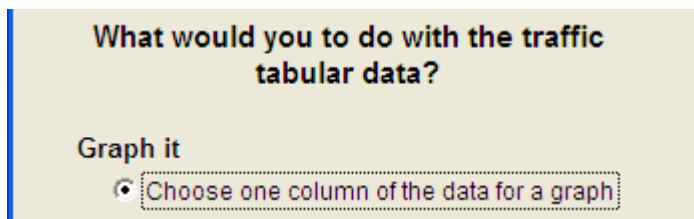
Along with the table, the following menu is shown. This outlines what you can do with the data from this point:



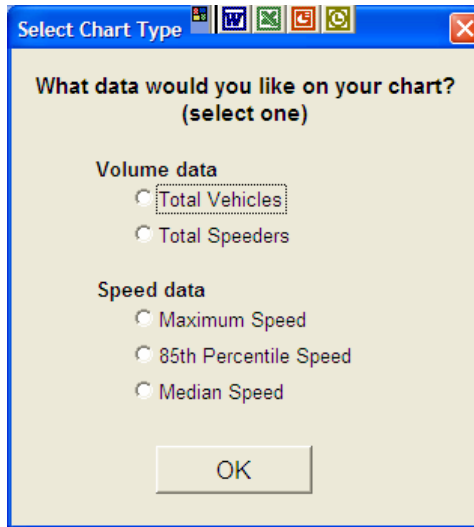
The choices of printing, copying, and exiting work exactly as they did for the speed based charts. Please refer to those sections on pages 28 and 29 of the manual.

Graphing the Traffic Data

Most of the time, you will want to create a chart to graphically show the study data. To do this, select "Choose one column of the data for a graph" in the menu.



When you select OK, the following menu will appear:

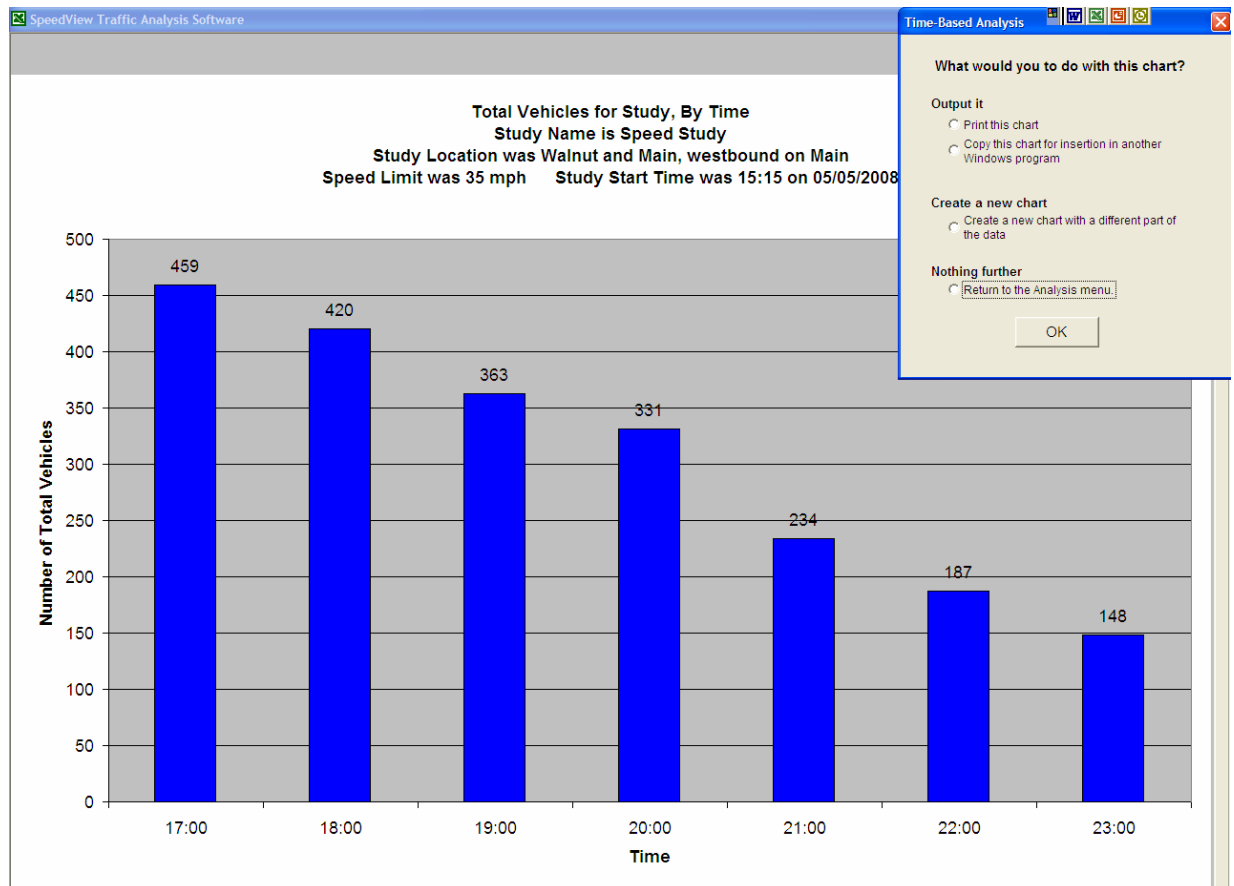


A dialog box titled "Select Chart Type" with a standard Windows window border. The text inside asks "What data would you like on your chart? (select one)". There are two main sections: "Volume data" and "Speed data". Under "Volume data", there are two radio buttons: "Total Vehicles" (which is selected) and "Total Speeders". Under "Speed data", there are three radio buttons: "Maximum Speed", "85th Percentile Speed", and "Median Speed". At the bottom of the dialog is an "OK" button.

Select from the menu which item you would like to create a chart of, and then select OK:

Total Vehicles

Selecting "Total Vehicles" will cause a chart like the following to be displayed:

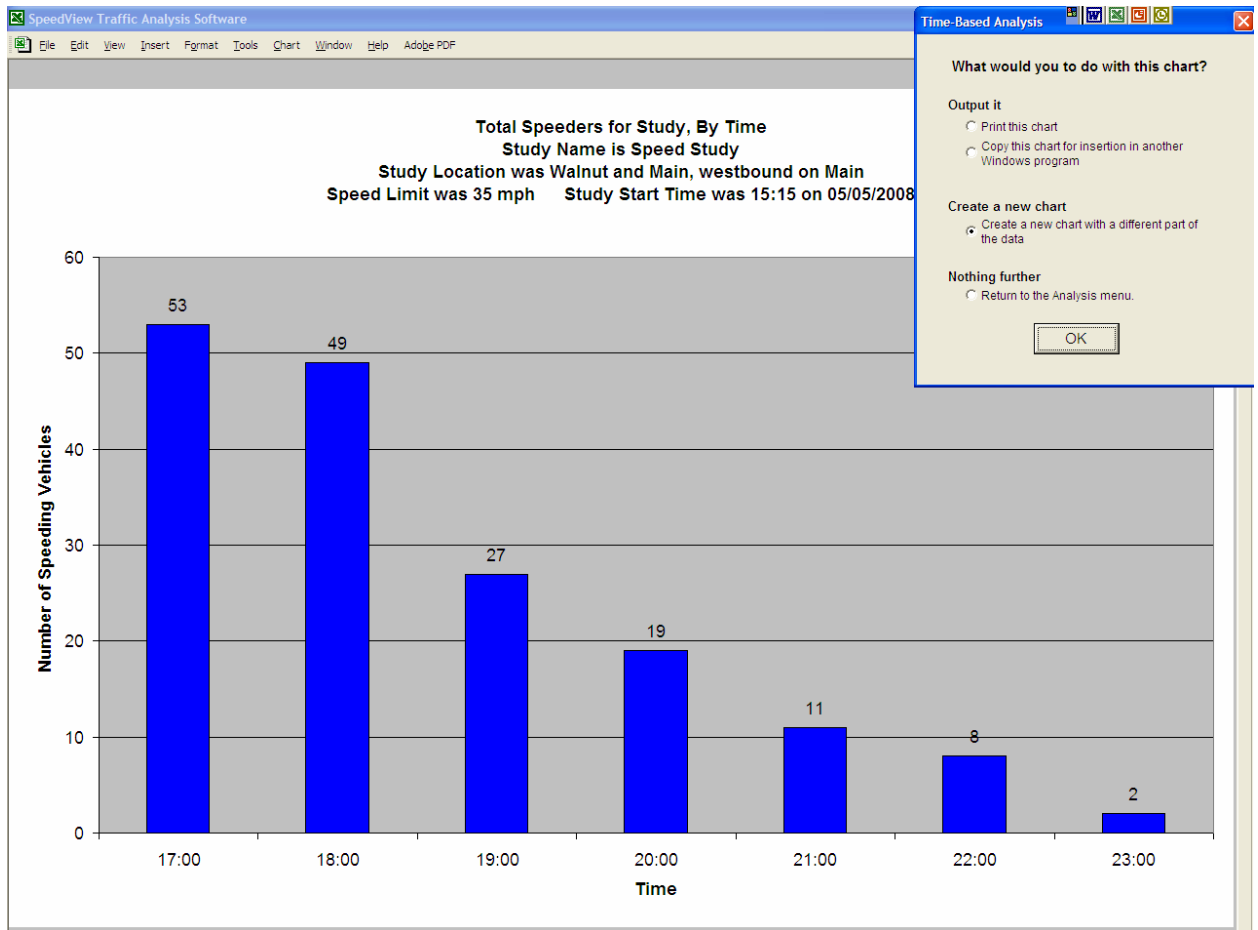


Each bar shows the total number of vehicles that the radar counted during the previous hour. For example, the 17:00 bar shows that 459 cars passed the radar in the westbound direction on Main Street between 16:00 and 17:00 on 5/5/08.

Using the menu in the upper right, you can choose to print or copy the chart, to graph a different part of the data, or to return to the Traffic Analysis Main Menu

Total Speeders

Selecting “Total Speeders” will cause a chart like the following to be displayed:

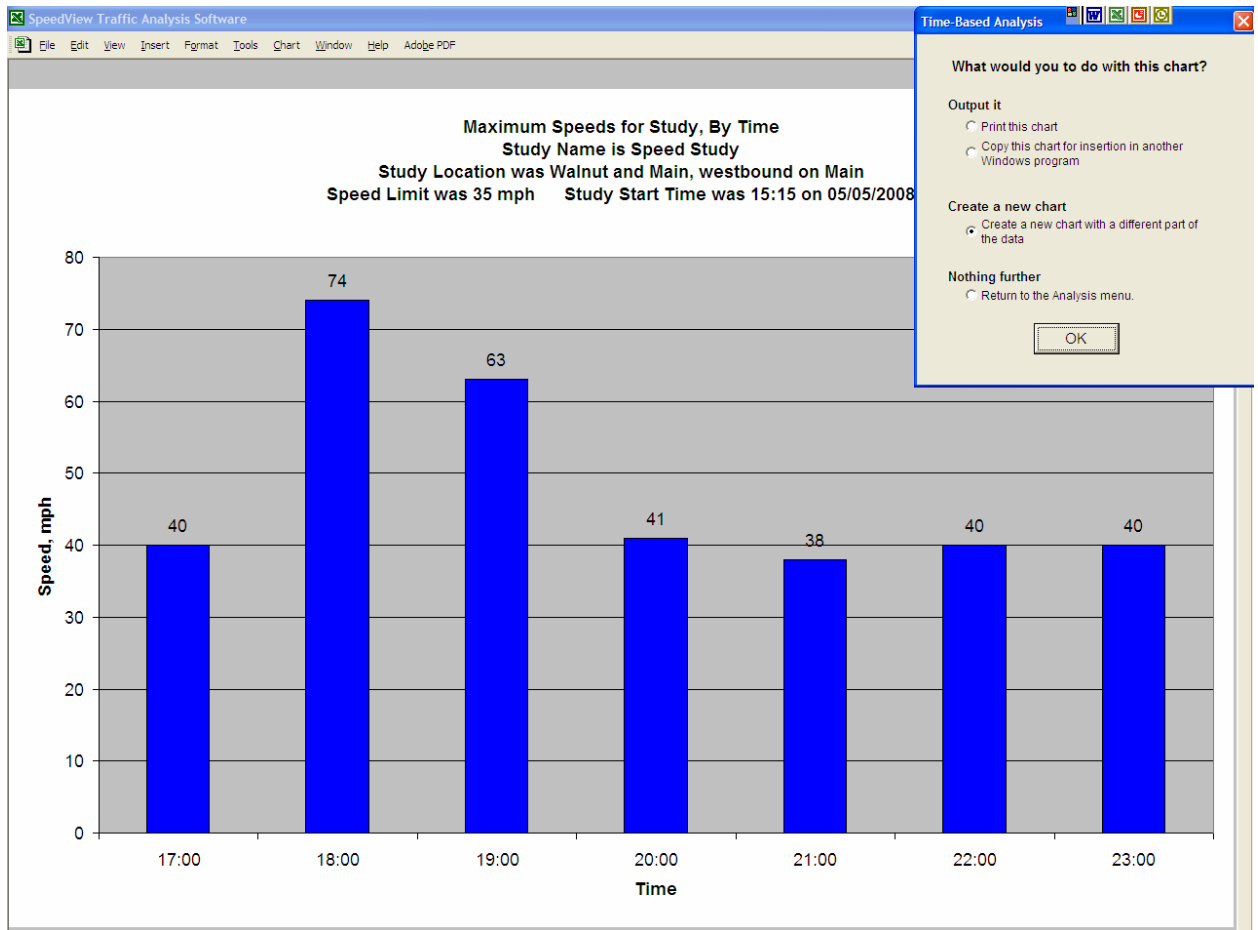


Each bar shows the total number of speeders that the radar counted during the previous hour. For example, the 17:00 bar shows that 53 cars exceeding the 35 mph speed limit passed the radar in the westbound direction on Main Street between 16:00 and 17:00 on 5/5/08.

Using the menu in the upper right, you can choose to print or copy the chart, to graph a different part of the data, or to return to the Traffic Analysis Main Menu

Maximum Speed

Selecting “Maximum Speed” will cause a chart like the following to be displayed:

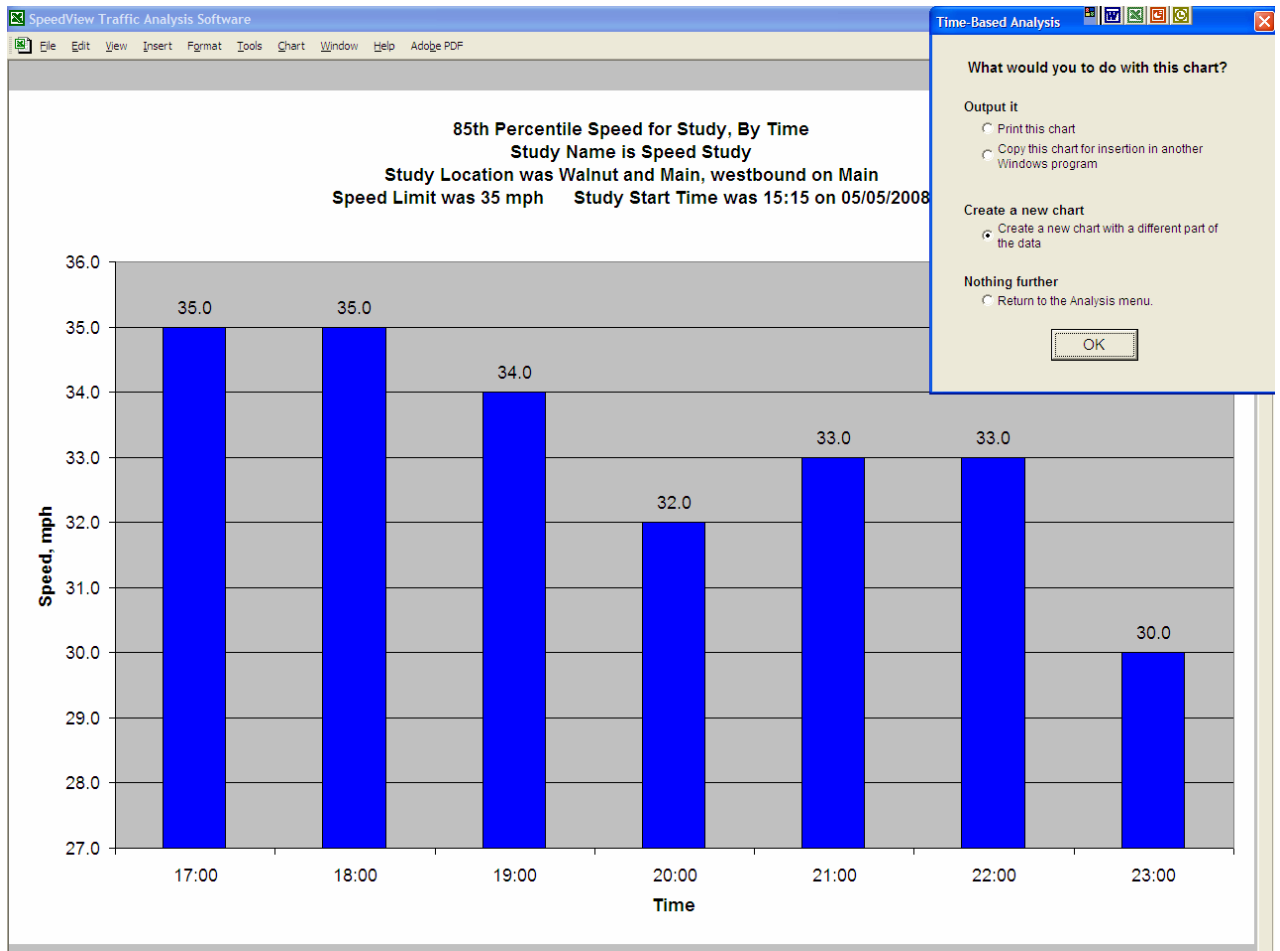


Each bar shows the fastest vehicle speed that the radar saw during the previous hour. For example, the 17:00 bar shows that the fastest vehicle that passed the radar in the westbound direction on Main Street between 16:00 and 17:00 on 5/5/08 was traveling 40 mph.

Using the menu in the upper right, you can choose to print or copy the chart, to graph a different part of the data, or to return to the Traffic Analysis Main Menu

85th Percentile Speed

Selecting “85th Percentile Speed” will cause a chart like the following to be displayed:

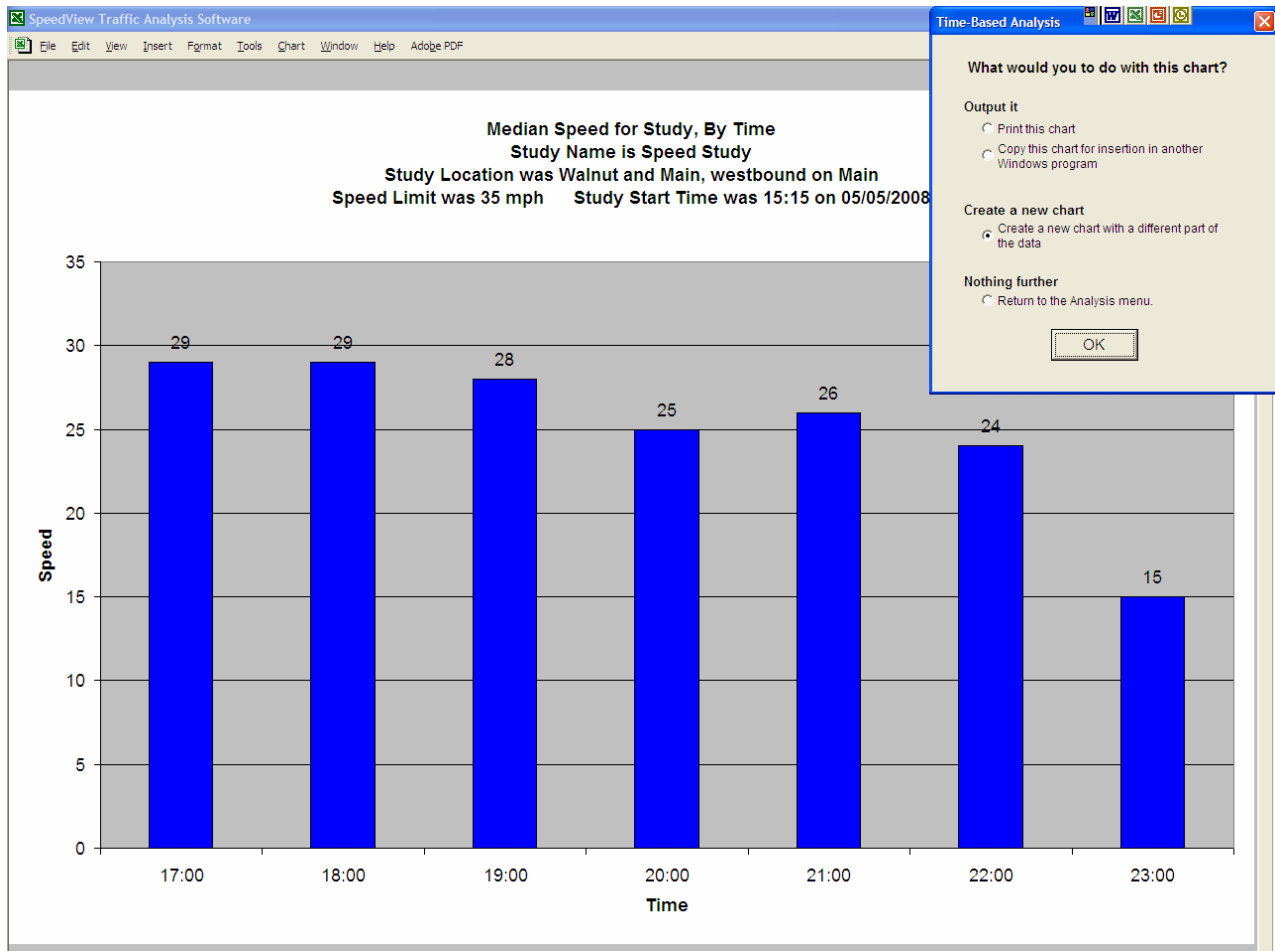


Each bar shows the statistical 85th percentile speed of the traffic during the previous hour. For example, the 17:00 bar shows that the 85th percentile speed of the westbound traffic on Main Street between 16:00 and 17:00 on 5/5/08 was traveling 35 mph.

Using the menu in the upper right, you can choose to print or copy the chart, to graph a different part of the data, or to return to the Traffic Analysis Main Menu

Median Speed

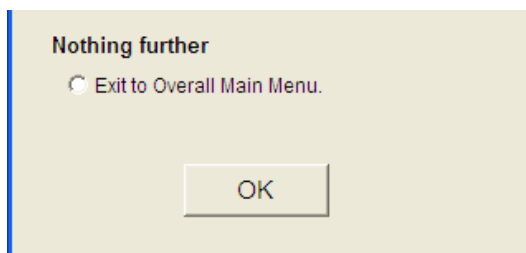
Selecting “Median Speed” will cause a chart like the following to be displayed:



Each bar shows the statistical median speed of the traffic during the previous hour. For example, the 17:00 bar shows that the median speed of the westbound traffic on Main Street between 16:00 and 17:00 on 5/5/08 was traveling 29 mph.

Using the menu in the upper right, you can choose to print or copy the chart, to graph a different part of the data, or to return to the Traffic Analysis Main Menu

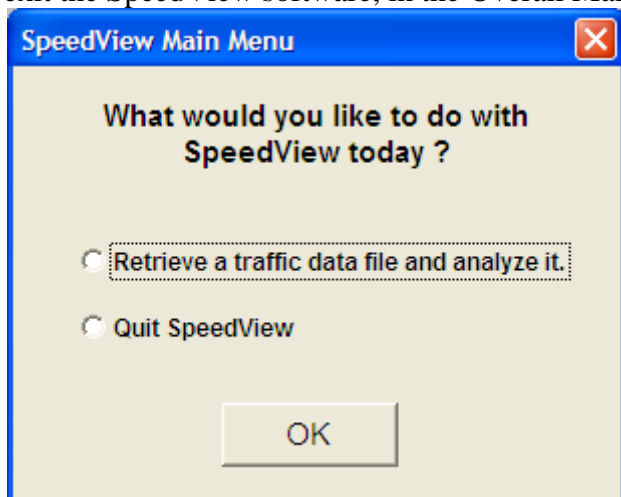
Exiting the Traffic Analysis Menu



To exit the Traffic Analysis menu, select “Exit to Overall Main Menu” and press OK

Exiting SpeedView

To exit the SpeedView software, in the Overall Main Menu, select “Quit SpeedView” and press OK.



The SpeedView software will then show you a final “goodbye” screen, and close the program.



No changes are ever made to the original data file by the SpeedView analysis software. This allows you to analyze the study at a later date and still have the original data you recorded.

Manual revision date: 6/18/08