User's Guide

Auto-Trax

ATLite

Traffic Data Collection System
Windows 95, 98

Ingram Technologies
3200 W 2440 So, #11
West Valley City, Utah 84119

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Introduction:

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Welcome to Auto-Trax Lite

Auto-Trax Lite is a windows 95/98/2000 program that allows you to download and extract traffic survey data from a remote radar sign or trailer.
With ATLite you can...

- Download data from Ingram Technologies speed signs or speed trailers
- Convert raw sign data to standard database formats
- Automatically analyze data and create summary data in the database
- Perform in-depth anslysis of collected data on a survey-by-survey basis
- Print reports for traffic management personnel
- Print accurate traffic volume counts, 85th Percentile charts & time bin breakdown of traffic in a given area

With the ATLite traffic management program, traffic analysis and reports need not be a time consuming and tedious process. Complete survey data is displayed by a single click of the mouse by just selecting a survey from a list. Graphic displays of bar charts, traffic flows, percentages and time graphs are also a single click of the mouse away. In total, one click reporting is a reality with the new ATLite program.

Terms Used in This Manual

- Comm 1, 2, - has reference to the serial port located on the back of your portable or your desktop computer. This port is usually used for communication devices, mouse connections, and occasionally some types of printers. If it is not identified by name (comm 1, comm 2) then you can identify it as a small rounded corner plug with nine male pins.

Product Contents

Your package should include...

- This printed manual
  (Adobe "PDF" format is included on the CD)
- A CD Rom disk containing the programs and manuals
- Download cables
  (For connecting the remote speed sign to the download computer - Cb4 to Db9)

Installation of Software

To install the ATLite program, locate the "package" folder on the installation CD and open it. Inside the folder is a file called "SETUP". Double click the setup icon and follow the on screen prompts. The program will prompt you to install the ATLite program in its default directory. You may install the ATLite program in any folder you wish. It is important that the program itself is located in the same folder that the data files reside, for this reason you should not move the actual program icon to another location. If you want to start the ATLite program from another location, it is suggested that you create a shortcut to this folder from which you can run the atlite2.exe program.
To create a shortcut, access the folder where the atlite2.exe is located and use the mouse to right click on the icon. When the menu pops up, select "Create shortcut" and click on it. Windows will create a second copy of your program icon as a shortcut. Just click and drag or copy this shortcut icon to any folder or location that is most convenient for you to access. When you double click on this new icon, windows will launch the program ATLite2.exe.

Directory Structure:

When the installation is completed, your directories should look like this example.

If you desire you can create a new folder in your ATLite6 directory and name it "Backup Database". Copy the new installed database from ATLite6 to this new folder for safe keeping. The files to copy are "atlite.mdb" and "atlite.ldb". If you ever completely trash your database file, you can just copy this database file back to ATLite6 and the program can function as it was at the beginning. You will however loose any downloads and previous data that you had processed into the first database.
You can accomplish the same feature by using the "Database Management" function found on Administration (tab 4). Use "Replace Database" and the file called "Atlite.emp" will copied into the directory as "Atlite.mdb"

Technical Support:

Technical support is only provided to registered users of Ingram Technologies porducts. Our records will confirm current users of the data collection program for the Ingram Technologies speed signs or speed trailers.

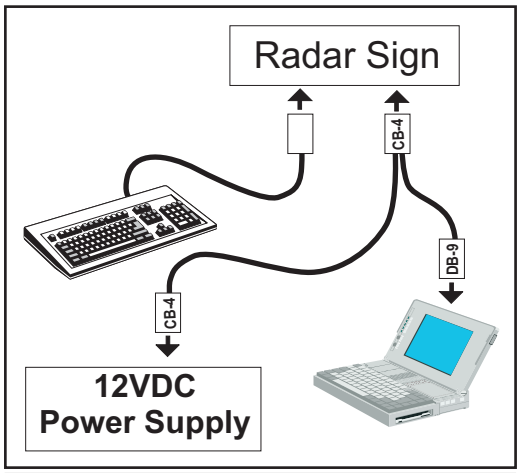
Technical support is first provided by Email at "support@ingram-tech.com". We will try and resolve any problems or concerns within 24 hours of your email contact with us.
If your problem is immediate and cannot wait for an email response, you may contact us at (801) 966-7735 from 9:AM to 4:PM weekdays (Mountain Time Zone)

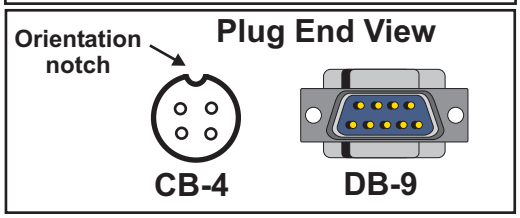
Auto-Trax

ATLite Download

Setting Up The Download

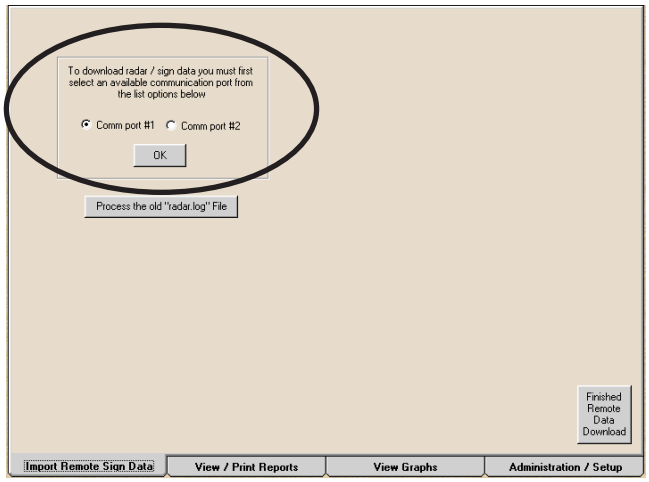
To set up your system for downloading remote sign data, you must first connect the radar sign to your download computer with the serial cables supplied with your data collection package.. Connect the CB4 cable with the 2 wires to the sign and the other Cb4 end of the cable to the power jack on the trailer box. Next connect the Db9 plug to the #1 comm port on the computer you plan to use for the download. Usually this would be a laptop computer. To perform a download of data, you must first have the program "ATLite6" installed on this computer. You will also need to connect a standard computer keyboard (supplied with the download kit) to the keyboard input of the sign to allow activation of the download process.





Which Port do you use?

When the program first starts, you must choose the comm port that you will use to download data. On some computers comm 1 port is used by other devices like a mouse and you must choose comm 2 to download data. The program will warn you if the comm port of choice is in use by any other devices and allow you to choose another. After you choose a comm port, click OK to prepare for sign data download



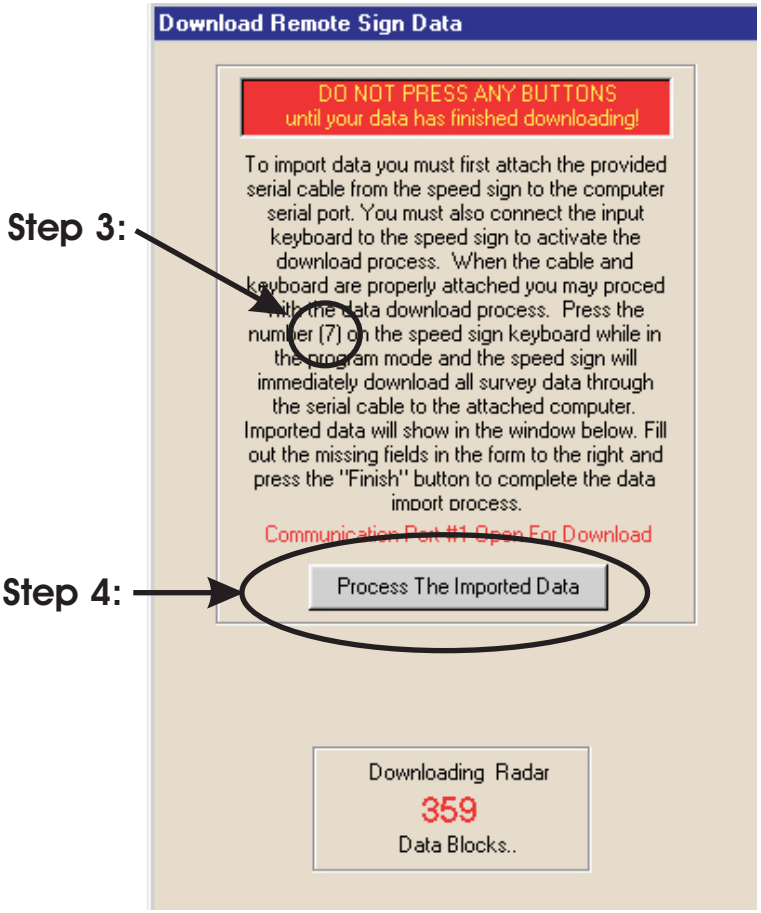
Your First Download

Step 1: To begin a download session, complete the hookup as previously outlined. Start the ATDownload program.

Step 2: Click on your choice of comm ports and click OK. (if comm 1 is in use, the program will notify you of such and you can choose comm 2 in stead.)

Step 3: Supply power to the sign and wait for the test cycle to complete. When the left digit begins to flash, press the #7 key on the keyboard attached to the sign and the download process will begin. A small data box on your computer screen will flash numbers as blocks of data are being downloaded to the computer. (these numbers do not reflect the number of vehicles surveyed but are there to show when the download process is active)

Step 4: When the numbers stop changing and the sign is flashing, the data is completely downloaded. At this point you may turn off the sign and complete the rest of the download process.
Press the "Process The Imported Data" button and the computer will begin the conversion of raw data to the proper database format.

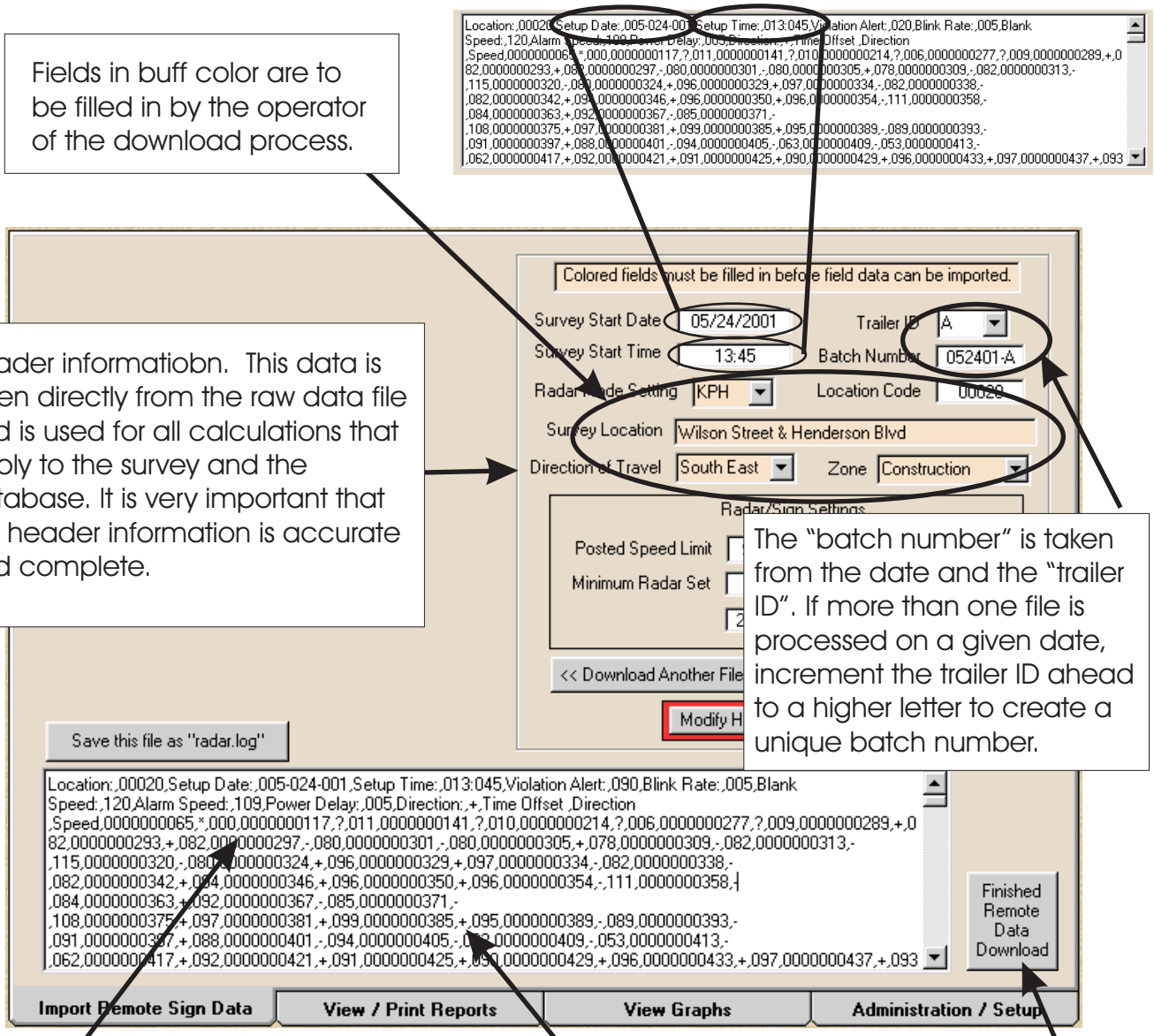


Process the data...Overview of the main screen

After you press "Process The Imported Data", several new windows and buttons will come in to view. You will need to accurately fill out the four buff colored fields to complete the download process.

Fields in buff color are to be filled in by the operator of the download process.

Header informatiobn. This data is taken directly from the raw data file and is used for all calculations that apply to the survey and the database. It is very important that this header information is accurate and complete.



The "batch number" is taken from the date and the "trailer ID". If more than one file is processed on a given date, increment the trailer ID ahead to a higher letter to create a unique batch number.

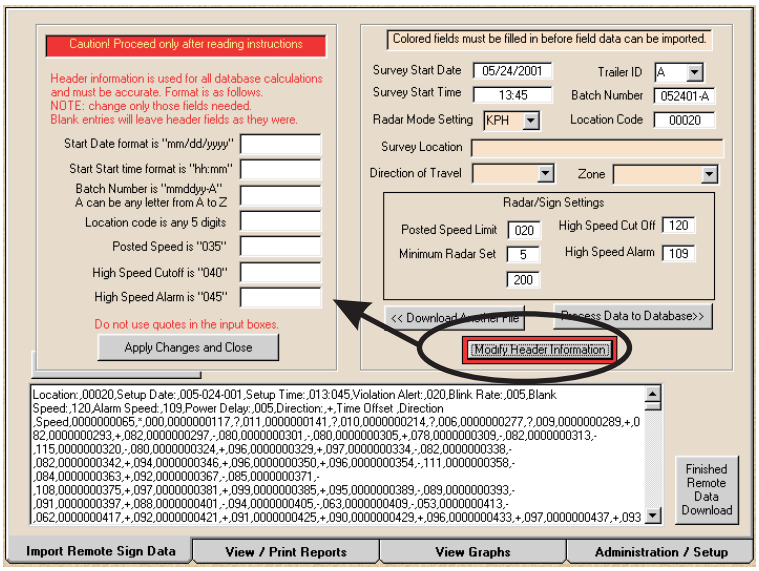
Save this data file as "radar.log in the ATLite directory. You may use this log file to reprocess the data or it may be loaded into a spread sheet file like Excel.

Raw data file as imported from the speed sign. Compare the header from this file with the extracted header in the box above and correct if necessary.

Closes out the data collection process - does not EXIT the program.

Correcting mistakes in the header.

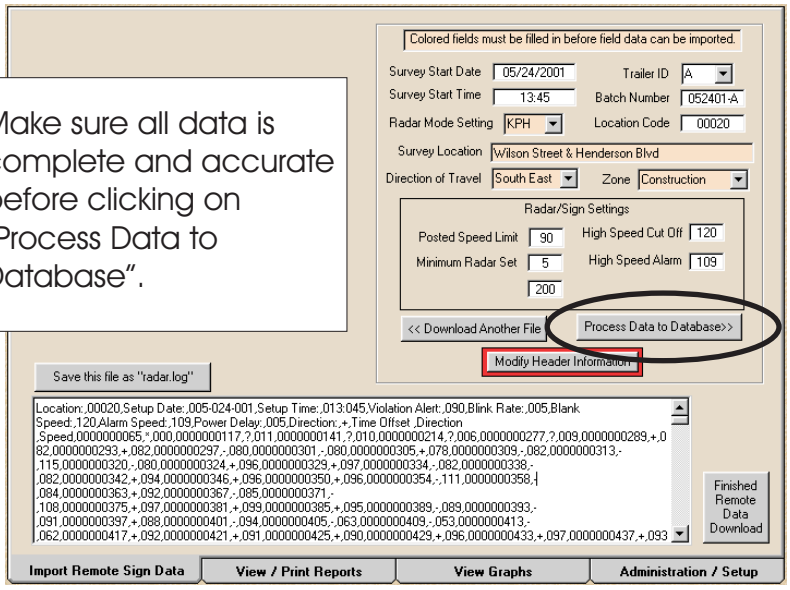
If you encounter any errors in the header, you may change them by simply pressing "Modify Header Information". A new text frame will pop up to the left of the header and here you can make any changes you need. You may change one field or all at any time and you can repeat the process as many times as needed. Accuracy in the header is necessary for a meaningful survey.



CAUTION: Invalid data in these text boxes can cause the program to fail and you will have to exit and restart again.

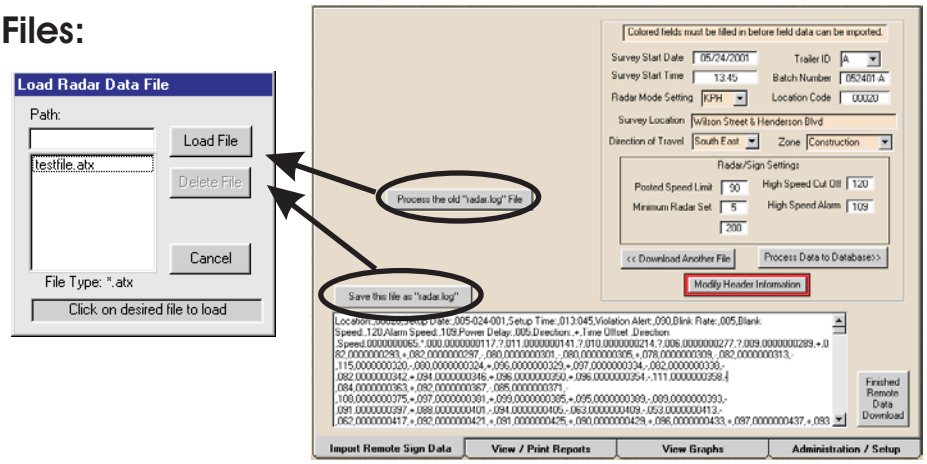
Finishing the download process

Make sure all data is complete and accurate before clicking on "Process Data to Database".



After all the data is imported from the sign and the header information is complete and correct, you may process the data to the ATLite database. During the process, the data is converted to standard database format and summary calculations are made to the data. Depending on the size of the data file, this may take several minutes to complete. When the data is finished, a message box will appear in the center of the screen telling you how many records have been added to the database.

Load & Save Radar Log Files:

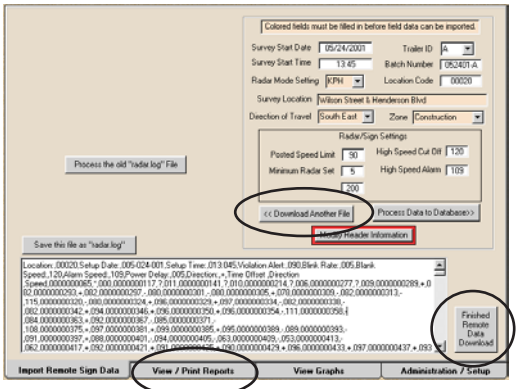


If for any reason, you want to re-process a survey, you may do so by clicking on the button called "Process an old radar.log file". A file load dialog will pop up and allow you to select a previously saved radar text file. All files will have the (.atx) file extension. After selecting a file you may process it the same as any download file. To save a radar log file, click on the "Save this radar log file" and the same file pop up list will appear. Just type in a file name and the program will supply the extension and send it to the proper location. All radar log files are stored in the same directory that the program Atlite was first installed in.
Do not change this directory or move the files - the program won't be able to find them if you do.

What next?

Once a data file is complete you may download another file by pressing "Download Another File". This will clear all the screens and allow a new download process to begin.

If you are finished with the downloads, just press "Finished Remote Data Download " on the bottom right of the screen to finish the process and reset the download process. This will not force an exit the ATLite2 program.



After finishing the download process, you can activate the ATLite2 traffic management program and process the data you downloaded, print reports, analyze the data and see how traffic is flowing in you area. Just click on tab2, "View / Print Reports"

Auto-Trax

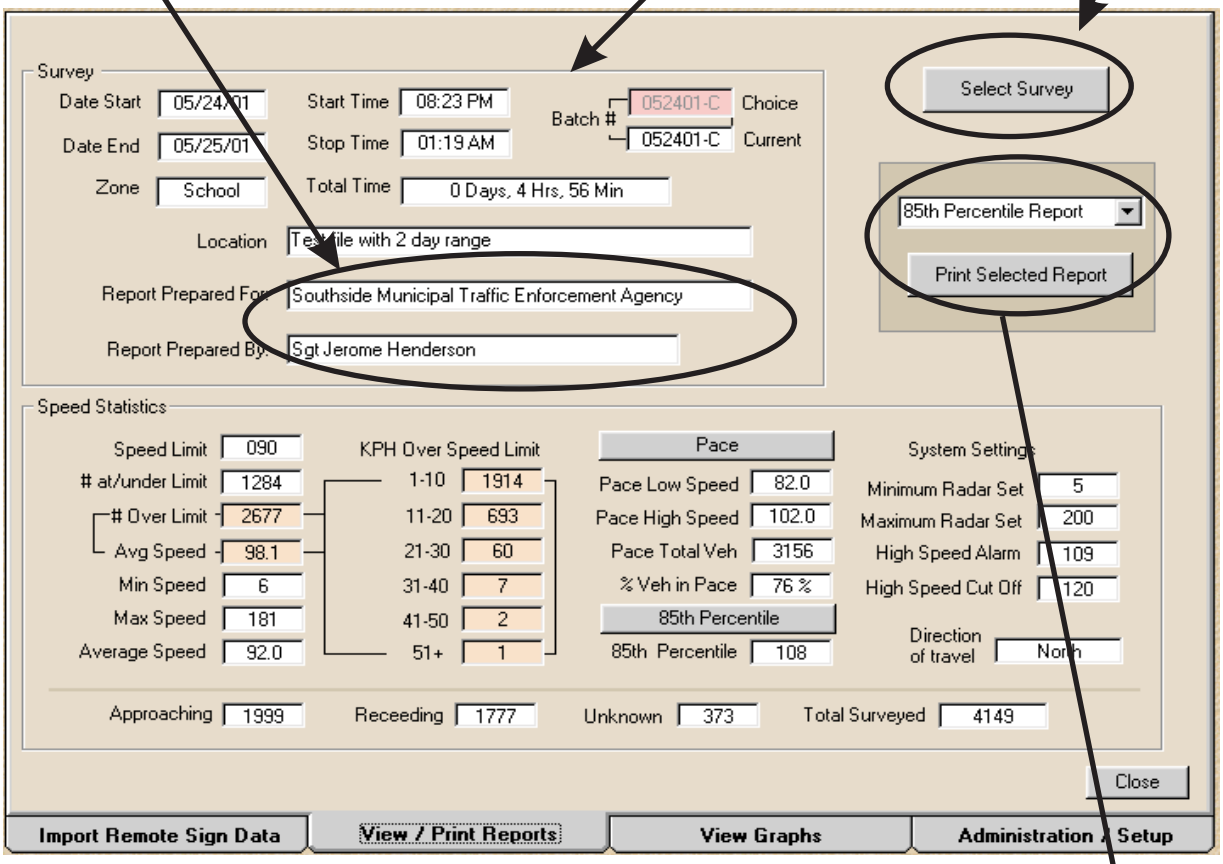
ATLite Reporter

Overview of the Process Data tab:

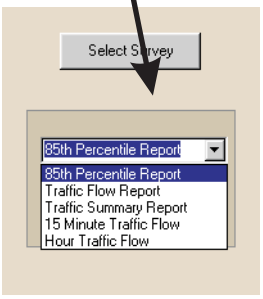
Information for list taken from the Adminsitration tab

Header information from Download file process

Choose the survey upon which you want to perform reports.



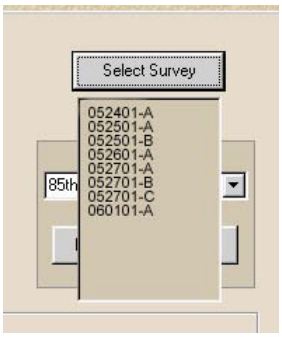
Complete "Survey Summary Report" shown.



Choose and print all reports from single drop-down list.

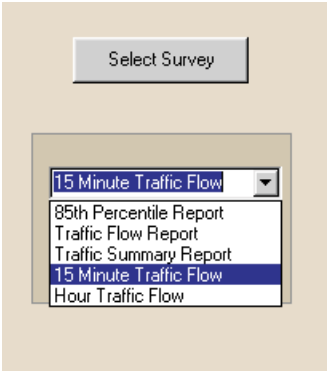
Where to start:

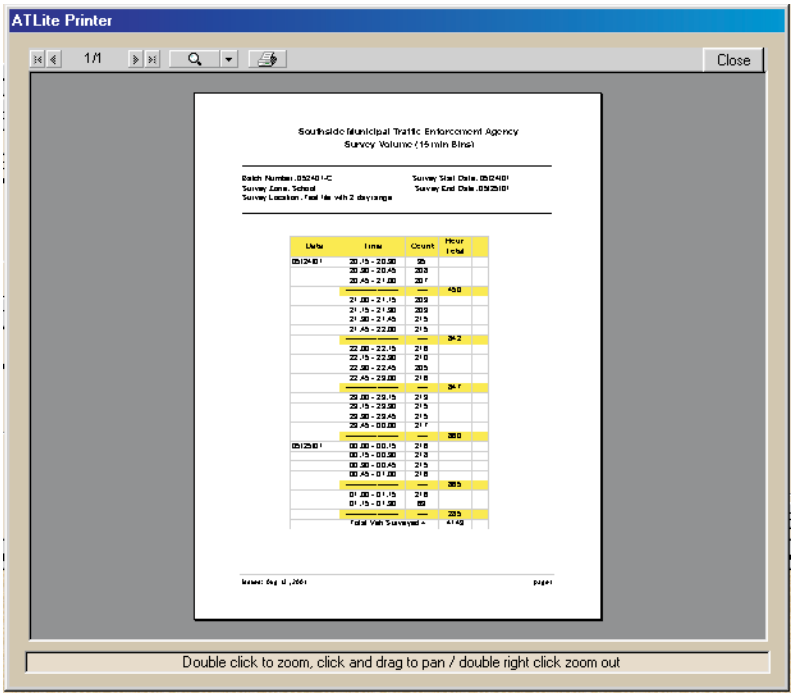
To begin processing any data, you must first select a survey from the list available. All surveys imported by the ATDownload program will be shown in the dropdown list. Click on any survey you wish to process and the data will immediately be displayed in the summary area of the visible tab.



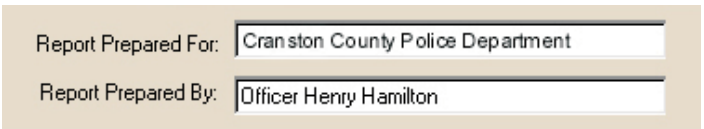
Printing a report:

To print any report you need only select the type of report wanted from the drop-down list and press the button named "Print Selected Report".
The program will switch to another screen showing a preview of the report as it will print to the selected printer. You will be able to zoom in on the report for a finer view, send the report to the printer or cancel and return to the working program screen.





Note:
Before printing any reports, you need to select the name of the agency for which the report is being prepared and the name of the person preparing the report. If the agency name or preparers name are not visible, you can add the needed name to the field by going to the administration tab (See "Adding New Names" to the name list under Administration) and adding the name needed.
Once you have chosen the "Agency and Reporting Person", you can proceed to print the selected report.

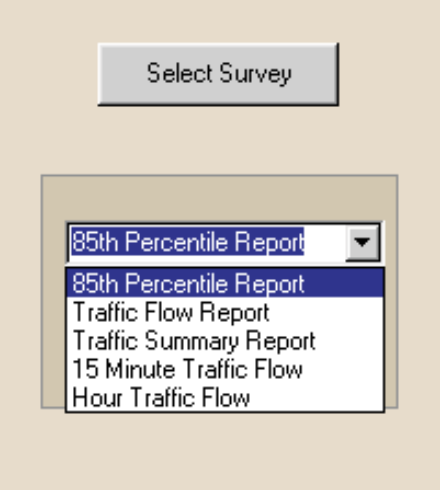


Report Choices:

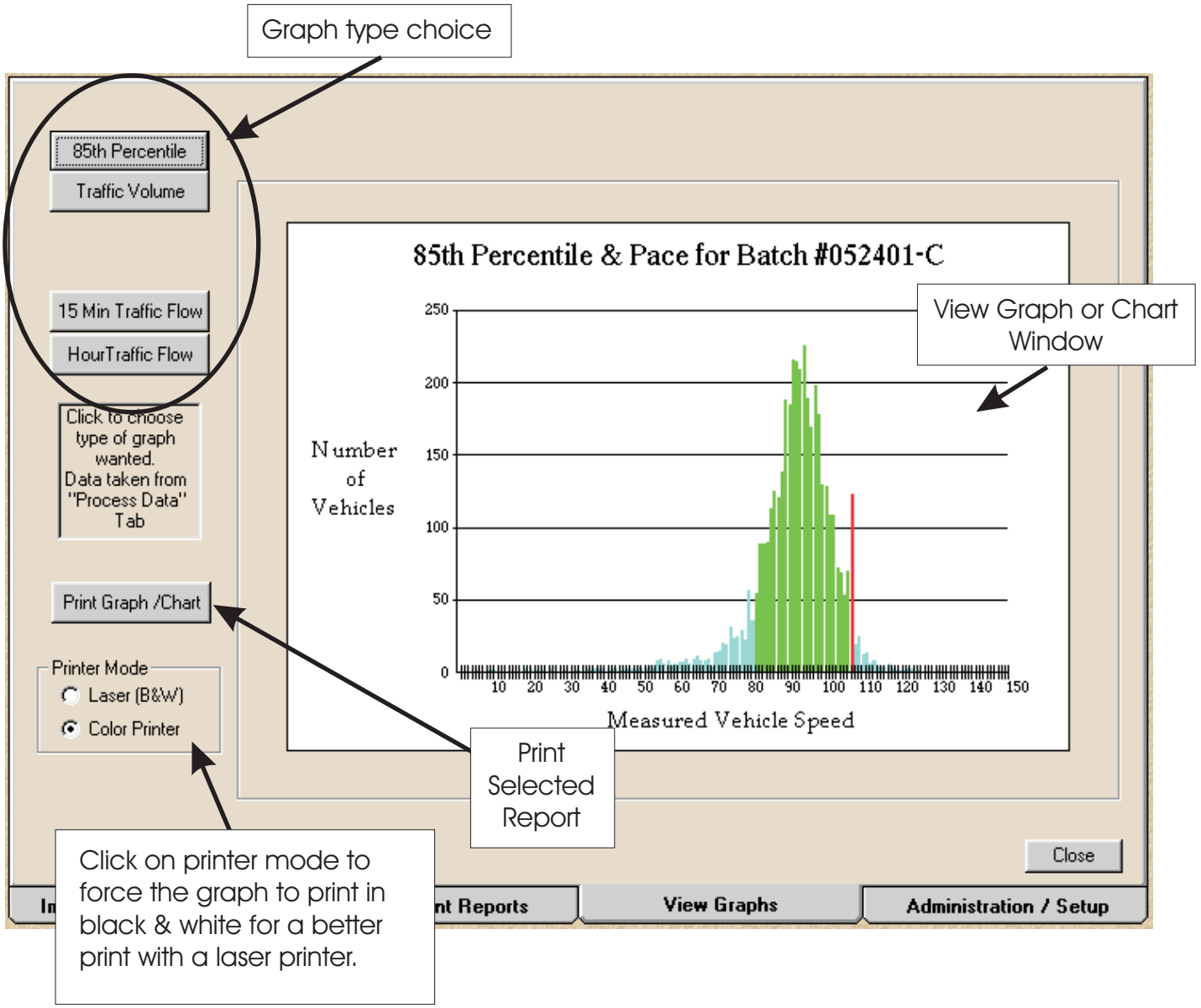
All the other reports on the drop down list are available to print from this tab with just a single click.
If you desire to view the graphs and charts that will be included on the printed reports you may switch to "View data graphs" tab. From this tab you can preview the graph or data grid that will be printed. Any viewed graph or grid can be sent to directly to the printer by clicking on "Print Selected Graph". The printed chart will be the same as if it was called and printed from the "Process Data" tab.

Current Available Reports:

85th Percentile Report:
Traffic Flow Report:
Traffic Summary Report:
15 Minute Traffic Flow:
Hour Traffic Flow:



Overview of the Data Graph tab:



Viewing a Graph:

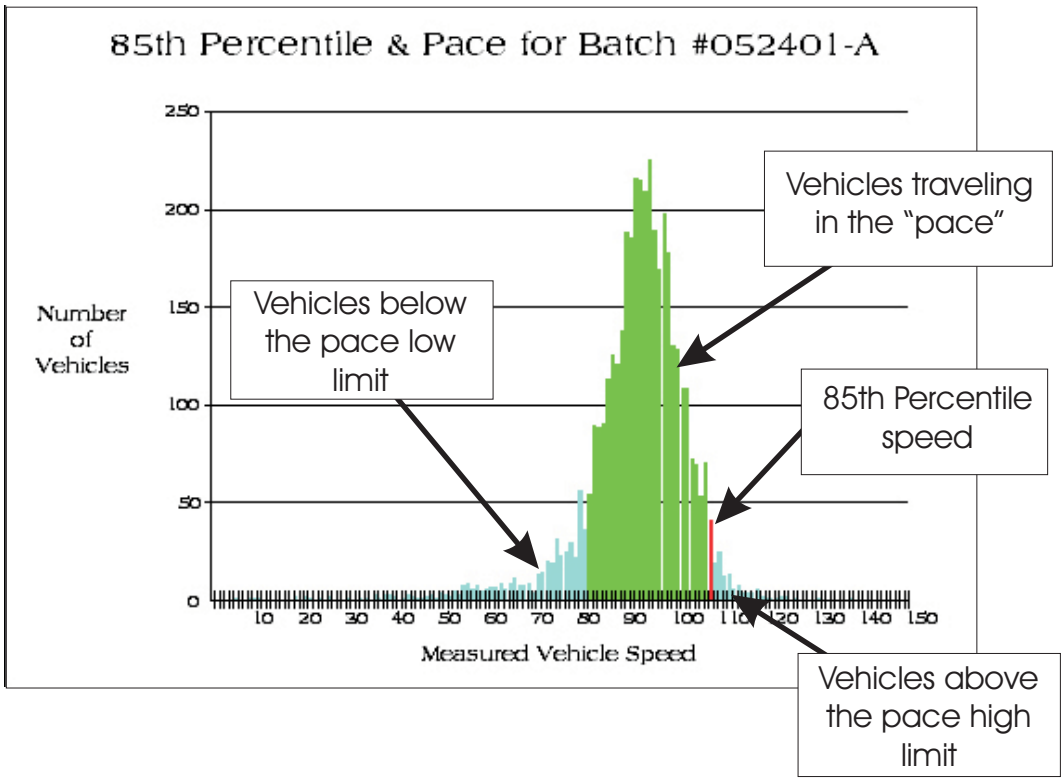
To view any graph or chart, you must first select a survey. do this by choosing a survey from the "Process/Print Data" tab. Once a survey is chosen, just click on the type of graph or chart you wnat displayed. Graphs and charts are not editable by the end users and reflect only the data set provided by the survey.

Printing a Graph:

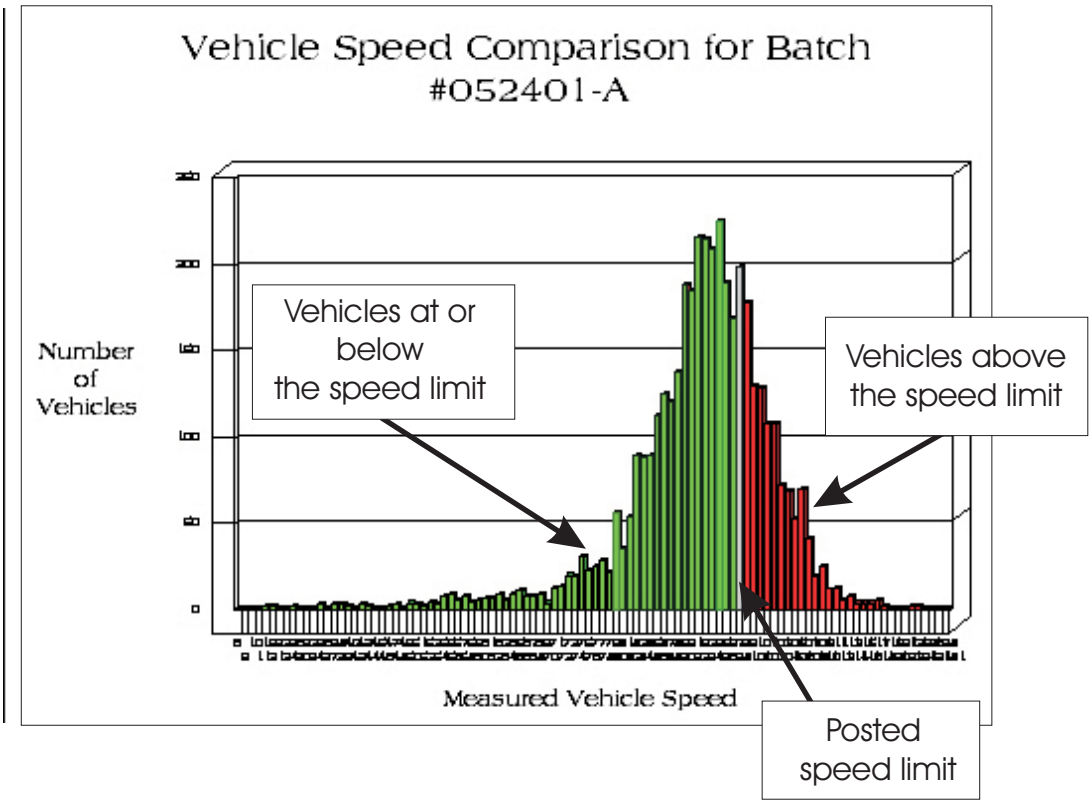
For any given graph or chart that is displayed, you may print a complete report based on this graph. Just click on the "Print Graph/Chart" button. A new window will show the complete chart as will be printed with the option to view, print or return to the current screen without printing anything.

Sample Graphs and Charts:
How to read the data graphs...

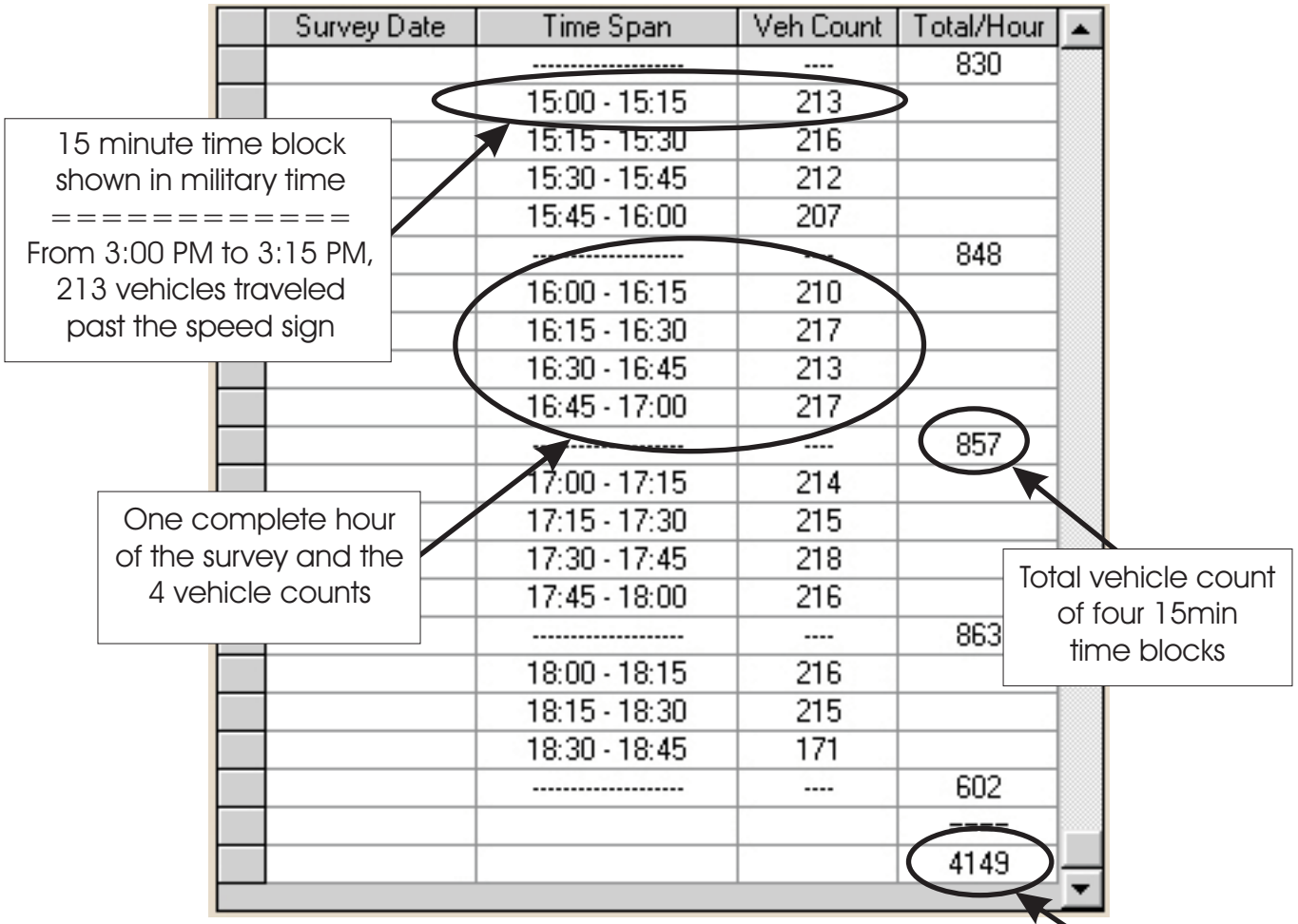
85th Percentile:



Traffic Flow:



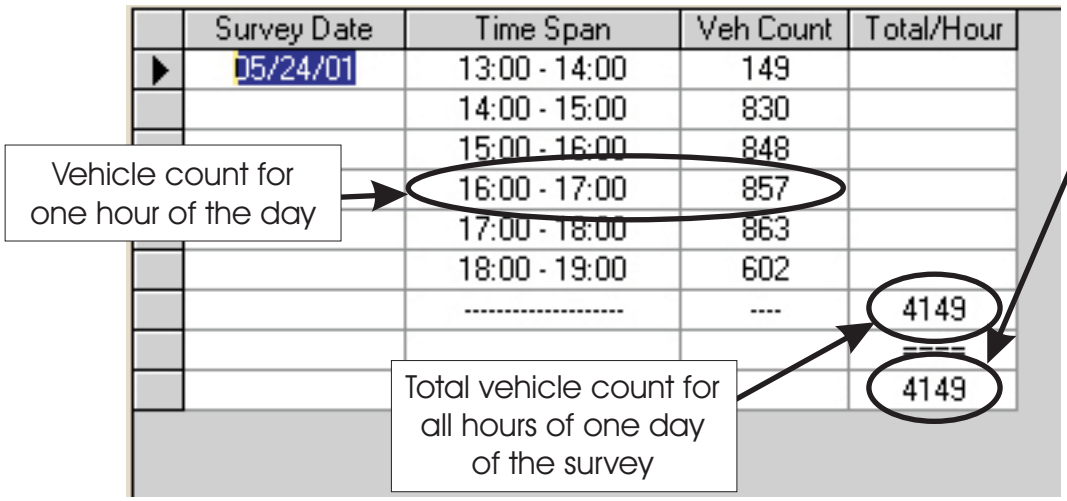
15 min Breakdown: what they mean...



Survey Date	Time Span	Veh Count	Total/Hour
	----------	----	830
	15:00 - 15:15	213	
	15:15 - 15:30	216	
	15:30 - 15:45	212	
	15:45 - 16:00	207	
	----------	----	848
	16:00 - 16:15	210	
	16:15 - 16:30	217	
	16:30 - 16:45	213	
	16:45 - 17:00	217	
	----------	----	857
	17:00 - 17:15	214	
	17:15 - 17:30	215	
	17:30 - 17:45	218	
	17:45 - 18:00	216	
	----------	----	863
	18:00 - 18:15	216	
	18:15 - 18:30	215	
	18:30 - 18:45	171	
	----------	----	602

			4149

Hour Vehicle Breakdown:



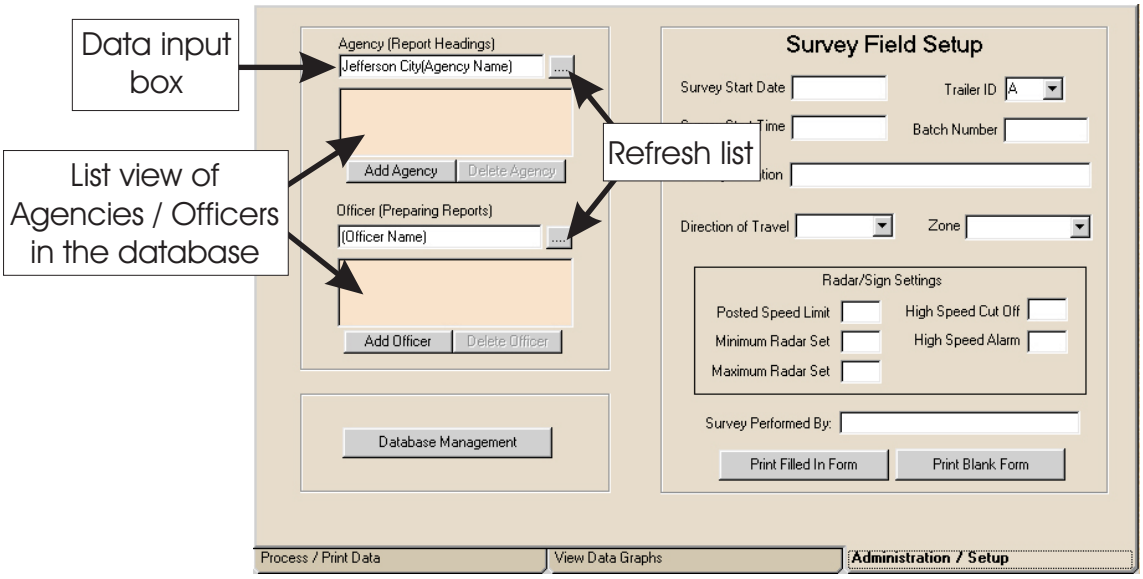
Survey Date	Time Span	Veh Count	Total/Hour
05/24/01	13:00 - 14:00	149	
	14:00 - 15:00	830	
	15:00 - 16:00	848	
	16:00 - 17:00	857	
	17:00 - 18:00	863	
	18:00 - 19:00	602	
	----------	----	4149

			4149

Overview of Administration / Setup:

Field Setup:

Field Setup is provided to give you a record of where and how the speed sign was set up on location. You can either print a blank form to fill out on site or you may fill out the blanks on screen and print a field ready copy.



View the list:

To view the current list of Agencies / Officers, click the refresh button. 

Update "Process/Print Data" tab:

Click on the desired "Agency or Officer" in the list of available names. Clicking on (highlighting) a name will make that name the currently selected name and wil thenl be the name displayed on the "Process/Print Data" tab.

Adding an Agency or Officer:

1. Click on "Add Agency" or "Add Officer" button
2. Click on the data input box (cursor will change to an I beam)
3. Type the name of the agency/officer as you wish it to appear on the reports
4. Press the enter key or click on the refresh list button to add the name

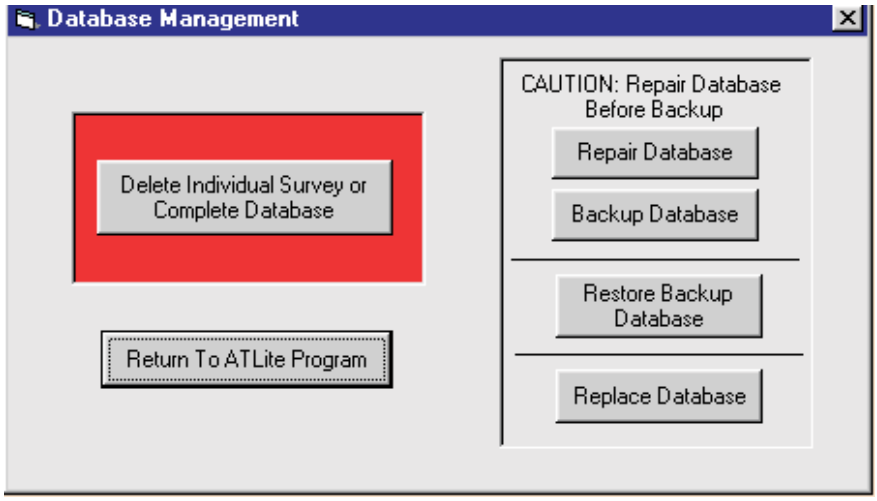
the name you just entered will now be available for printed reports. Just follow the update "Process/Print Data" shown above. to make this name the current choice.

Deleting an Agency or Officer:

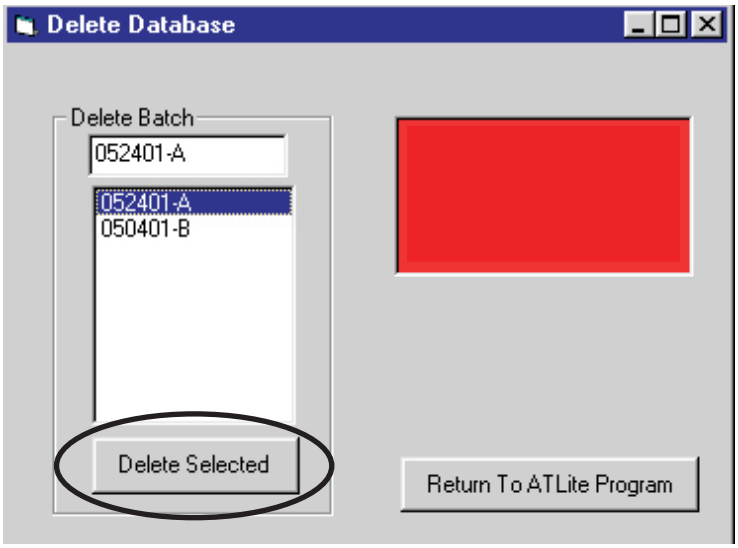
1. Refresh the list if necessary
2. Click on the name you want to delete (name will be highlighted)
3. Click on the delete button below the list
4. Name will be removed from database list
5. Refresh list if necessary

Database Management:

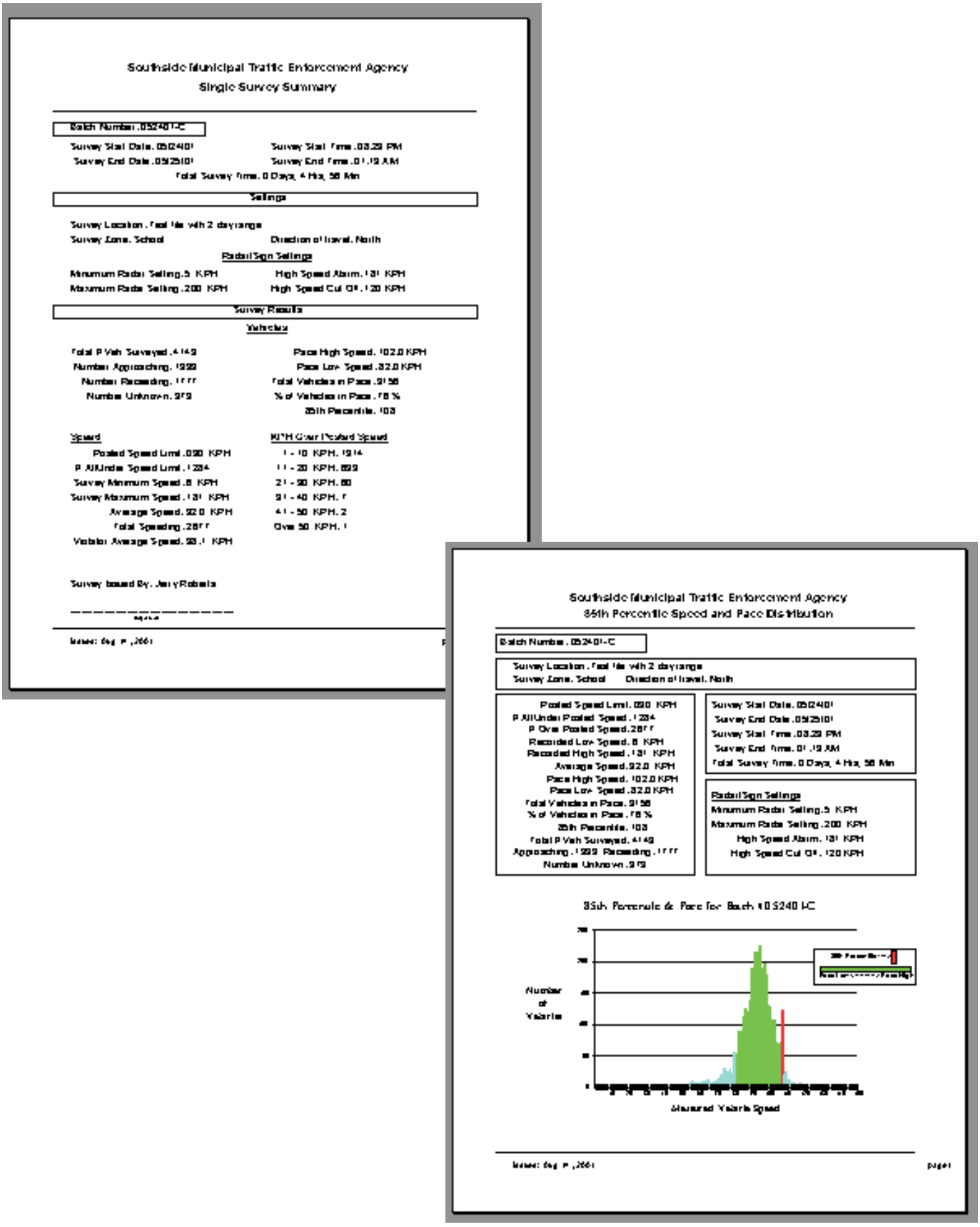
Complete database management is available from the Administration page. Just click on the "Database Management" button. The window shown below will appear. You can repair and backup the database or delete those files you no longer wish to process or report on.



Individual surveys that are no longer needed can be removed from the database with this screen. Click on an individual survey number to highlight it. The survey will show in the field above the survey list. Click on "Delete Selected" button and the selected survey will be removed from the database.
To remove all records in the database, click on "Delete Complete Database". All records will be removed and you can start over with a clean database.



Report Samples:



Southside Municipal Traffic Enforcement Agency
Single Survey Summary

Batch Number .052401-C

Survey Start Date .052401 — Survey Start Time .03:29 PM
Survey End Date .052510! — Survey End Time .01:19 AM
Total Survey Time .0 Days, 4 Hrs, 56 Min

Settings

Survey Location . Fast file with 2 days range
Survey Zone . School — Direction of Travel . North

Radar Sign Settings

Minimum Radar Setting .5 KPH — High Speed Alarm .131 KPH
Maximum Radar Setting .200 KPH — High Speed Cut Off .120 KPH

Survey Results

Vehicles

Total # Veh Surveyed .4143 — Pace High Speed .102.0 KPH
Number Approaching .1999 — Pace Low Speed .32.0 KPH
Number Receding .1777 — Total Vehicles in Pace .2156
Number Unknown .979 — % of Vehicles in Pace .78 %
85th Percentile .103

Speed — KPH Over Posted Speed

Posted Speed Limit .090 KPH — 1 - 10 KPH .1214
All Under Speed Limit .1234 — 11 - 20 KPH .699
Survey Minimum Speed .8 KPH — 21 - 30 KPH .80
Survey Maximum Speed .131 KPH — 31 - 40 KPH .7
Average Speed .92.0 KPH — 41 - 50 KPH .2
Total Speeding .2877 — Over 50 KPH .1
Violator Average Speed .93.1 KPH

Survey Issued By . Jerry Roberts

Issued: day #, 2001

Southside Municipal Traffic Enforcement Agency
85th Percentile Speed and Pace Distribution

Batch Number . 052401-C

Survey Location . Fast file with 2 days range
Survey Zone . School — Direction of Travel . North

Posted Speed Limit .090 KPH
All Under Posted Speed .1234
Over Posted Speed .2877
Recorded Low Speed .8 KPH
Recorded High Speed .131 KPH
Average Speed .92.0 KPH
Pace High Speed .102.0 KPH
Pace Low Speed .32.0 KPH
Total Vehicles in Pace .2156
% of Vehicles in Pace .78 %
85th Percentile .103
Total # Veh Surveyed .4143
Approaching .1999 Receding .1777
Number Unknown .979

Survey Start Date .052401
Survey End Date .052510!
Survey Start Time .03:29 PM
Survey End Time .01:19 AM
Total Survey Time .0 Days, 4 Hrs, 56 Min

Radar Sign Settings
Minimum Radar Setting .5 KPH
Maximum Radar Setting .200 KPH
High Speed Alarm .131 KPH
High Speed Cut Off .120 KPH

85th Percentile & Pace for Batch # 052401-C

Number of Vehicles

Measured Vehicle Speed

Issued: day #, 2001

page 1

Southside Municipal Traffic Enforcement Agency
Survey Volume (15 min Bins)

Batch Number .052401-C
Survey Zone. School
Survey Location . Foot file with 2 day range

Survey Start Date. 052401
Survey End Date .052510

Date	Time	Count	Hour Total
052401	20.15 - 20.30	95	
	20.30 - 20.45	203	
	20.45 - 21.00	207	
			450
	21.00 - 21.15	209	
	21.15 - 21.30	209	
	21.30 - 21.45	215	
	21.45 - 22.00	215	
			842
	22.00 - 22.15	218	
	22.15 - 22.30	210	
	22.30 - 22.45	205	
	22.45 - 23.00	218	
			841
	23.00 - 23.15	219	
	23.15 - 23.30	215	
	23.30 - 23.45	215	
	23.45 - 00.00	217	
			860
052510	00.00 - 00.15	218	
	00.15 - 00.30	218	
	00.30 - 00.45	215	
	00.45 - 01.00	218	
			865
	01.00 - 01.15	218	
	01.15 - 01.30	89	
			235
	Total Veh Surveyed =		4143

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Southside Municipal Traffic Enforcement Agency
Single Survey Summary

Batch Number . 052401-C

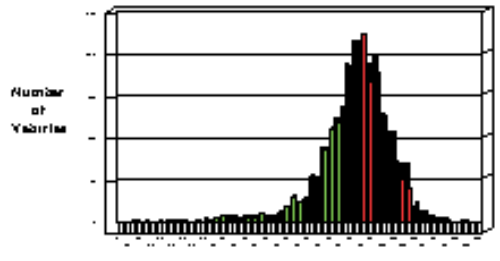
Survey Location . Foot file with 2 day range
Survey Zone. School Direction of travel. North

Posted Speed Limit. 030 KPH
P All Under Posted Speed . 1234
P Over Posted Speed. 2877
Recorded Low Speed. 8 KPH
Recorded High Speed . 131 KPH
Average Speed. 52.0 KPH
Pace High Speed. 102.0 KPH
Pace Low Speed .32.0 KPH
Total Vehicles in Pace. 3158
% of Vehicles in Pace . 76 %
85th Percentile. 103
Total P Veh Surveyed. 4143
Approaching . 1393 Receding . 1777
Number Unknown . 973

Survey Start Date. 052401
Survey End Date .052510
Survey Start Time .03.29 PM
Survey End Time. 01 .19 AM
Total Survey Time. 0 Days, 4 Hrs, 56 Min

Radar Sign Settings
Minimum Radar Setting. 5 KPH
Maximum Radar Setting .200 KPH
High Speed Alarm. 131 KPH
High Speed Cut Off. 120 KPH

Vehicle Speed Comparison for Batch #052401C



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