PETRAPro

Traffic Data Analysis Software

- **Downloads Data from the TDC Ultra**
- **Produces Comprehensive Reports**
- **Data Analysis for:**

- Turning Movements
- Roundabout Movements
- Saturation Flow Rate
- Stop Sign Delays

- Vehicle Classifications
- Multi-direction Gap
- Speeds with Class
- Signalized Delays

NORTH LINE

Making Data Collection Easier

PETRAPro is the software for analyzing data gathered with the TDC Ultra hand-held data collectors. This program processes data that includes Turning Movements, Roundabout Movements, Vehicle Classification, Multi-direction Gap, Stop Sign Delay, Signalized Intersection Delay, Spot Speed and Saturation Flow Rate. The program allows you to create a variety of reports and graphs.

Turning Movement Data Analysis

Turning Movements are the studies most commonly used with PETRAPro and, as such, the program gives you a great deal of options on how to present your data. Intersections can be done with up to eight separate approaches, with a wide variety of movement directions.
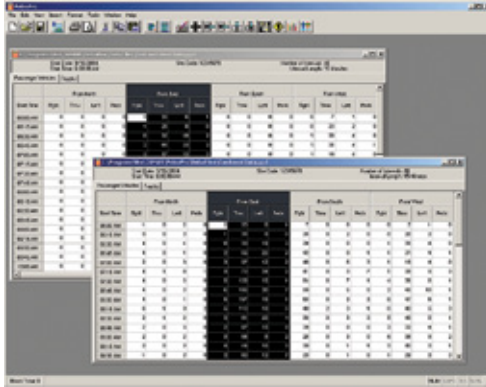
• Easy Data Editing & Processing

The familiar spreadsheet style makes processing your data easy. You can view and edit your data before printing, open multiple files at one time and move data from one file to another using standard Windows Cut, Copy and Paste commands. Turning Movement data can be processed for anywhere from one group of data up to 14 separate groups. With this ability, you can provide turning movements for all classes of vehicles in the Federal Highway Administration's classification scheme.
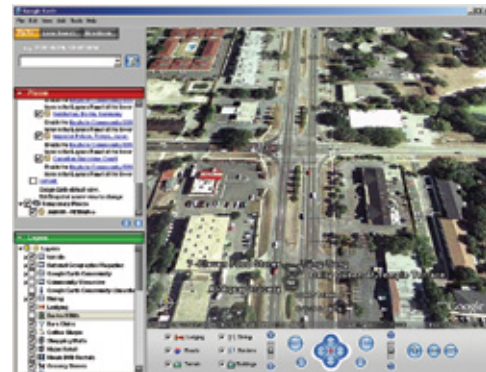
• View Multiple Files

The program allows you to view multiple files on the screen at the same time in a variety of formats. Compare data collected recently with older files. Quickly move data from one file to another or to any other Windows program that supports standard cut, copy and paste functions.
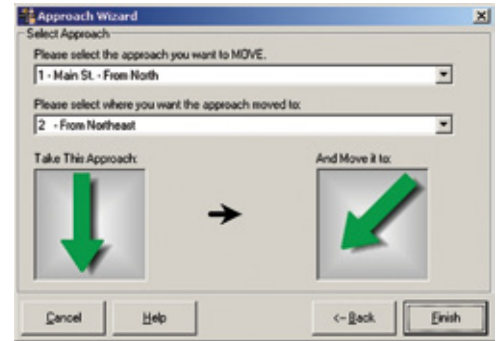
• Access Aerial Views and Other Data

Using your computer's Internet connection, any files that have GPS coordinates saved as part of their header can be used to directly access the Google Earth and Microsoft Live Local mapping applications. With one click of the mouse, you can bring up an aerial view of the file's location, and map various other information.

• Approach Wizard

The new Approach Wizard in PETRAPro allows you to quickly and easily modify the approach information for a file. With the Approach Wizard, you can create a 3 or 5 legged intersection with one click of the mouse. The wizard will automatically add or delete entire approaches, along with all references to the approach. In addition, you can use the Approach Wizard to delete sets of movements, change the order of approaches and rotate the data.

• Intersection Design

The Intersection Design in PETRAPro allows you to configure the lanes of traffic approaching the intersection, giving people viewing the data a clear view of the location where the data was collected. In addition, you can enhance this design by placing graphical icons on the intersection. These icons include lane markings, street signs, control devices and data collection locations. You can also add text information to the design.

• Include Digital Photos

In a unique feature available only in PETRAPro, the program allows you to attach digital photographs to your data file. This lets you give people a better sense of the data they are seeing by showing exactly how the intersection looks in real life. The digital photos could be line-of-sight photos, or even aerial photos to give a bird's eye view of the intersection. Whichever format you choose, the photos can be included with the reports you generate.
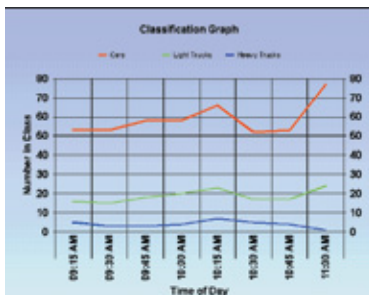
Additional Traffic Data Analysis

In addition to Turning Movement studies, PETRAPro allows you to process and analyze a number of other types of traffic data that can be collected with the TDC Ultra. With all of these studies, the program's user-friendliness and powerful capabilities makes downloading and reporting an easy task.
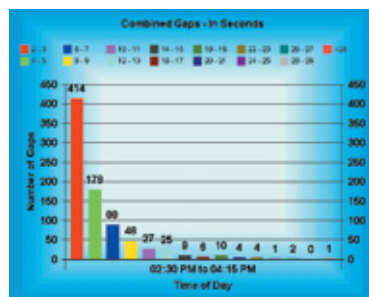
• Vehicle Classification

Classification reports, which determine the types of vehicles using a road, can be generated using either the FHWA scheme F or with a classification scheme created by the user. Multiple sets of schemes can be saved in the program for quick access.

• Multi-Direction Gap

Gap studies are used to determine the amount of breaks in traffic on a particular road. Study can be recorded for multiple lanes and can also include combined gap information for times when there were gaps in both lanes of traffic simultaneously.

• Signalized Intersection Delay

Signalized Intersection Delay studies are based on standard methods used by traffic engineers and provide a statistical method for measuring delays. Reports provide total volume recorded during the study, broken down into vehicles that were delayed at the signal, and those that went though without delay.
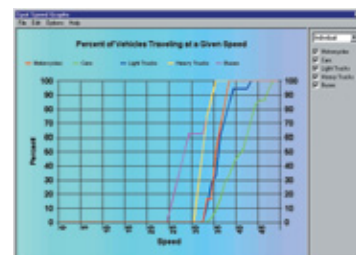
• Time-Stamp Data

Create your own traffic data study using the time-stamp download of PETRAPro. Using a TDC Ultra, you can record the time-stamp of every button you push. This data can then be downloaded into PETRAPro and exported into other applications, like Excel, to allow you to create your own data analysis.
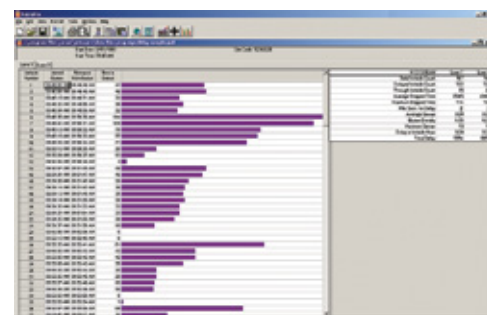
• Spot Speed with Classification

Spot Speed studies allow you to measure speeds at a specific location, often times at locations in which the use of an automatic traffic recorder (ATR) would not be possible. They can also be done for short term studies where the time to set up an ATR would not be justified. The speed data can be recorded in one group or broken down into various vehicle classifications.

• Stop Sign Delay

Stop Sign Delay studies are used to determine the length of delays occurring at a specific approach to a stop sign. The data can be collected and reported for multiple lanes and is shown for each individual vehicle with a graphical representation of the delay. The overall data is analyzed for Average Stopped Time, Maximum Stopped Time, Average Queue, and Queue Density, among other statistics. This type of study can also be done for an approach to a signalized intersection.

• Saturation Flow Rate

PETRAPro allows you to quickly and easily produce reports for saturation flow rates at intersections. These rates are based on actual real-time data, and not on predefined values that may or may not be accurate. Depending on how the data has been collected in the field, PETRAPro can process and analyze the data for not only Saturation Flow rate, but also vehicle headways, lost times, arrival types, signal timings & approach volumes.
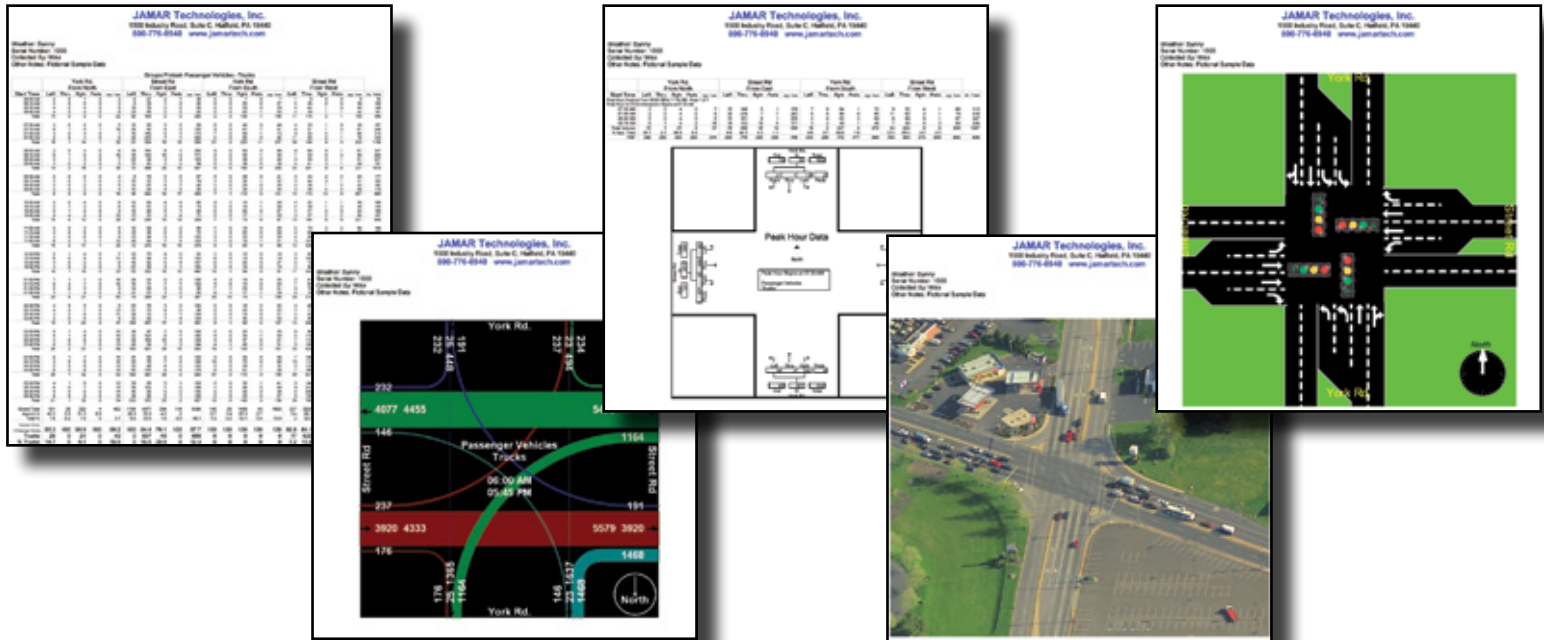
Specifications

- **Downloads data from:** TDC Ultra, TDC-12, TDC-8, DB-400, DB-100
- **Windows XP, Vista or 7 Operating System**
- **USB Port for Download**
- **Data Analysis for: Turning Movements, Roundabout Movements, Vehicle Classification, Multi-direction Gap, Stop Sign Delay, Signalized Intersection Delay, Spot Speed, Saturation Flow Rate**
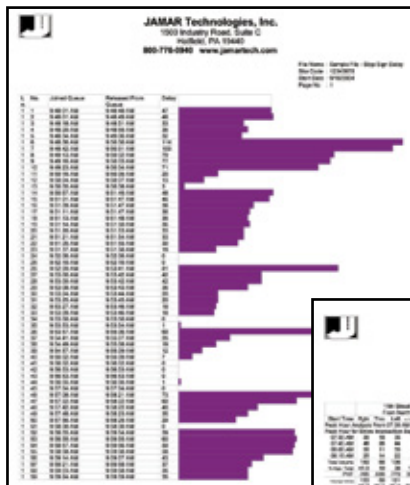
Extensive Report Options

PETRAPro provides you with a variety of ways to report your data in a professional and concise manner. Reports can be produced in color and sent directly to a printer, or saved in an electronic format (PDF or Rich Text) for e-mailing or posting on the Internet.
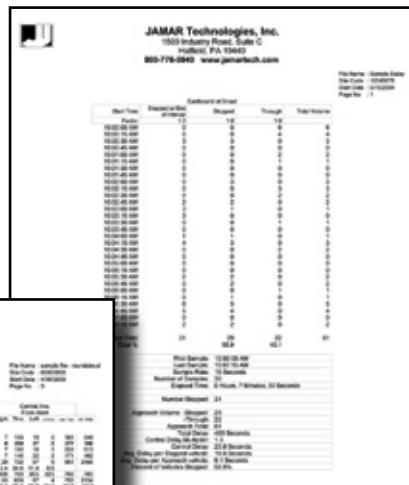
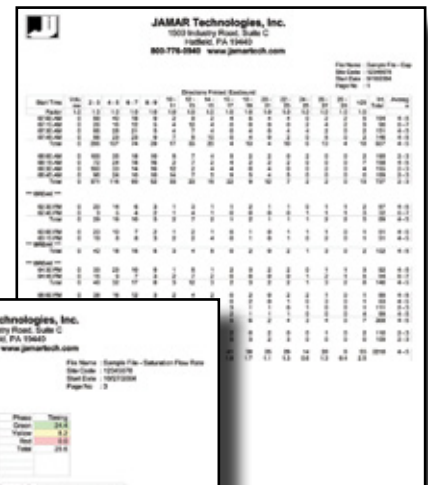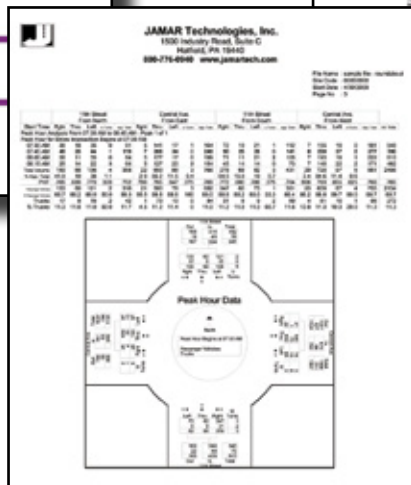## Turning Movements

Stop Sign Delay

Signalized Intersection Delay

Multi-direction Gap

Roundabout Movements

Saturation Flow Rate

NORTH LINE