



Family Software

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'Drag Racing Computers and Software' - www.iFamilySoftware.com

RaceLog Pro 9 Plus (Update Version 9.1) Windows 32/64 bit

RaceLog Pro 9 Plus™ is the Weather Station and Paging System enabled version of our popular RaceLog Pro software. You don't need a trailer station to use RaceLog Pro 9 Plus, but if you do, it supports all Atalab Instruments, Altronics, Davis Weather, and the LaCrosse Professional Weather Center (Models WS-2010, WS-2210, WS-2510, WS-7015) weather stations. Plus, several UHF Paging Systems. Also, free SMS paging with your cell phone or other wireless device! You can add a trailer station or UHF paging system at any time. RaceLog Pro 9 Plus is the software we include with every Weather Station Package.

What's New in Version 9.1

RacePak

The RacePak command exports weather and calculations for the current run to the RacePak software run log.

Added support for the Atalab Instruments Alta and AltaCom II trailer stations.

What's New in Version 9.0

- Zoom +

Computer display screens keep getting bigger so we've added the - Zoom + feature so that you can adjust the windows in the program to your screen resolution or taste.

SQL Query Database

Structured Query Language (SQL) is a powerful database tool. We can use the "SELECT" statement and the "WHERE" clause to find only the records in your database table that meet with specific criteria.

Interactive Custom Report

At times you'll want to view only certain fields in a record set for easy comparison, especially when using an SQL Search. We've added an Interactive Custom Report that is viewable and printable.

Opponent Database

We've added an Opponent Database for the "wheel racers" out there who need to know the performance data of their competition.

Export Database

We've added an "Export Database as CSV File" function for those wishing to export their data into Excel or other database program.

If you are using a weather station with RaceLog Pro Plus, it isn't necessary to enter the weather data to a new record manually. RaceLog Pro Plus maintains a separate Date/Time indexed weather database while it is running. When adding, editing, or inserting a new run, if weather data is available a Data Control appears allowing you to select the weather according to the Date and Time on your time slip and is entered automatically into the database record.

RaceLog Pro Plus will install on all Windows platforms. It comes completely setup to page up to four (4) different cars and/or Right Lane/Left Lane ET Predictions simultaneously. The installation program gives the user an option to place shortcuts (recommended) on the desktop during installation.

RaceLog Pro Plus uses **TrueWind™ ET Prediction**, an innovation from Family Software. **TrueWind™** is the actual amount of wind force that is capable of affecting your car's performance. TrueWind™ values are used in accurately predicting variations in elapsed time due to changes occurring in wind speed and wind direction.

Regardless of the wind direction and total wind speed, if we extract only the head wind or tail wind occurring on the race track, and express that wind force (mph) in positive (head wind) or negative (tail wind) values, then that is TrueWind™. We have always been able to measure just the head or tail wind using a hand held wind meter, and adjust the ET accordingly. In fact, we have been doing just that for almost 20 years. However, for the first time, using TrueWind™, a trailer-mounted weather station can also be used to measure only the actual head or tail wind occurring on the race track! Our PageAire Pro 9 software converts the total wind speed, and wind direction, from the anemometer on your trailer station into TrueWind™ values. The ET Predictor Pro uses the TrueWind™ values from your Base Run, the current TrueWind™ values, and a Wind Factor specific to your car, to produce a TrueWind™ adjusted ET, and sends it directly to your pager or cell phone in the staging lanes.

RaceLog Pro *Plus* has a separate ET Predictor for eighth mile racers. If you enter a zero (0) in the fields for 1000 foot ET and 1320 foot ET in your logbook, the program knows this is an eighth mile run. When you open the ET Predictor Pro, it will automatically select the 1/8-Mile Mode.

Pager messages received have a **Pager Identity** P1, P2, P3, P4, or P5. By adding the Pager ID to each message, it is easy to match a paging message with the instance of RaceLog Pro Plus that sent it. You can now send simultaneous messages for different cars, or right lane and left lane ET predictions to the same pager.

Here is an example Page:

P1- ET: 8.862 TS:1.379 B:30.03 T:67 RH:49 G:47 V:326 HC:1.0166 AD:97.96 DA:701 DP:47 W:3.0

Our pager units are the best in the industry, are brand new, not refurbished, and use the latest technology. Our pager LCD is the only pager in the industry that will show up to 8 lines of text. This means that you can see all your data on just one (1) screen and not have to scroll back and forth. Our competitors use pagers that cannot compare in features, quality, or value, yet they charge you \$\$\$ more!

RaceLog Pro *Plus* uses our proprietary Horsepower Correction formulas for ET Prediction, the only completely scientific formulas in the industry. Our ET Prediction is based on the amount of relative **OXYGEN** in the air and a **Computer Model** of your particular car's performance. We **do not** average weather data, run data, or use outdated and inaccurate Density Altitude calculations for ET Prediction. Our original formulas are perfectly accurate and have never needed updating. We are able to predict your performance within .001 of a second repeatedly. We are the original ET Prediction software developer and the innovator in this industry! We have been the "**ET Prediction Experts**" since 1986.

Our RaceLog Pro and ET Predictor software has always used Vapor Pressure and is the only ET Prediction software to handle humidity and water grains correctly. You won't find any "fudge factors" in our software.

Our **exclusive Run Segment Analysis™** feature is used to compare and graph runs with the ability to see as little as .001 of a second difference at different points on the racetrack that were not due to weather change. This is a feature that Bob Kodadek developed, copyrighted, and is a trademark of Family Software.

Installation

The CD will automatically start the installation. For correct operation, it must be installed into the default installation directory shown:

C:\RaceLog Pro 9

If you'd like to install shortcuts on your desktop for RaceLog Pro Plus and PageAire Pro, you can choose that option during the installation process. You may also add desktop shortcuts for Car2, Car3, and Lane2.

Registration/Activation

You can use the program for up to 15 days from installation without registering it, just click on the button labeled **Continue**, on the reminder screen that appears. Once the program is activated, the reminder screen will no longer appear. It is easiest to activate by email. You will need your Registration Number that appears

on the reminder screen from the computer you will be using at the racetrack. You can avoid errors by using Copy and Paste features. Place your mouse cursor over the Registration Number, Right Click, and select Copy. The Registration Number is copied to the Windows Clipboard. Then, in your email program, Right Click, and select Paste. Email the Registration Number, your full Name, Address, Phone Number, and your Invoice Number to:

[Register @ ifamilysoftware.com](mailto:register@ifamilysoftware.com)

We will email an Unlock Code and User Name for you to Activate the program. Just click on 'Unlock' and enter the code and user name that we send to you. If you upgrade later to a new computer, your license can be removed from one computer and transferred to another. Please contact us for help in transferring your license. If you need to install and use the program on a second computer, an additional license can be purchased. However, this is limited to a total of two (2) active licenses per registered user.

Starting the Program – Quick Start

The RaceLog Pro *Plus* system consists of two program files that are installed to your PC, PageAire Pro 9 and RaceLog Pro 9. PageAire Pro communicates and shares data with RaceLog Pro, your trailer station, and your UHF paging system. If you have a supported trailer/weather station, always remember to start PageAire Pro running first, and then start RaceLog Pro leaving PageAire Pro running in the background. You can start either program from your Windows Desktop by clicking on the shortcuts provided or from the Start Menu, Click on **Start**, Point to **Programs**, select **RaceLog Pro Plus**, select **More** and double-click on PageAire Pro 9. Then follow the same procedure for RaceLog Pro *Plus*. The Desktop Shortcuts are easiest to use.

The first time you start RaceLog Pro, it will load a database called “bob98.dat”. The program needs weather and performance data to function, so I’ve provided a few of my own runs so you can learn using the program. Once you are ready to enter your own data, you’ll want to create your own database. Click on “File”, and Select “Create New Database.” Enter a file name for your database, such as “Bob2014”, but use your own name. The program will load your new database, which will be void of data. At this time, only the “Add New Record” button will be active. Click on “Add New Record” when you have made a run and have accompanying weather data. Once you have more than one run entered and you go to add another new record, the program will ask if you want to copy the data from the preceding record. Selecting yes will copy all the data values over to the new record, then you only have to change the data that is different. You can only enter or edit the data in a record when the database is in the Edit Mode. Click on the Edit button when you wish to modify the data in a record.

After you have created your database, there are many data fields that can be used for whatever you wish. These are just text fields and have no affect on any calculations. By default, all of these text cells have been named and can be used as is. However, if for example, you wanted to store air/fuel ratio data, instead of the default “E.G.Temp” data, you can rename that label to Air/Fuel and store your own data there. You can see all the label definitions that can be changed by clicking on File and Selecting “Edit Label Definitions.” You can save your Label Definitions as a .def file, and load it into other instances of RaceLog Pro. Or, you can have a different Label file for different cars that you have created a database for.

Introduction

RaceLog Pro is the ultimate Drag Racing Logbook, and ET Prediction system for your personal computer. RaceLog Pro supports an unlimited number of databases each having an unlimited number of records. RaceLog Pro automatically tracks weather conditions, run information, weather corrected run segments, vehicle settings, component runs, track conditions, expenses, points, winnings, and more. Weather correction calculations support **E85**, **gasoline**, and **methanol** fuel. Any run can be located immediately by Run #, Track, Event, or Date. A Form-view allows the user to see and edit all the data on just one screen. An exclusive dual Table-view allows comparison of multiple runs within a database, or between databases. Records and reports can be printed instantly. RaceLog Pro can interface with many trailer stations and weather stations to automatically input the air conditions and do its computations without any help from the user. It will also interface with Family Software’s Weather paging systems to send your predicted ET or throttle stop prediction and all weather conditions directly

to the racer in the staging lanes. RaceLog Pro is the only program that incorporates TrueWind™ ET Prediction, another innovation from Family Software.

A large part of RaceLog Pro is a **relational database**. A relational database is like a big electronic filing cabinet with multiple drawers called **tables**. Each table has many folders called **records**. Each record has **fields** of data that is specific to its own table. In this program, the ‘Runs’ table stores all the information pertinent to vehicle performance, while the ‘Costs’ table stores the records for expenses, winnings, and points.

RaceLog Pro is compiled as a 32-bit Windows program so that it will run on both 32-bit and 64-bit operating systems. Each screen or ‘window’ that you see in a Windows program is a **form**. Forms are used to display information to the screen and to get information from the user. At the top of each form is a caption or title bar. Below the caption is a menu bar. The menu bar is used to display the various functions or procedures that are available to the user from this location in the program. When a program starts, it displays the main form. Every feature, or other form, in the program is directly or indirectly accessed from this main form.

Getting Started

RaceLog Pro conveniently stores the current database name and current record number at the end of each session. Each time that you start the program, it reads this information and reloads the last database used and repositions to the record that was being used. If the last database used is not found, an error message will alert you and prompt for a new database name. The first time you start the program, it will load ‘**bob98.mdb**’, a sample database that you can use to learn how the program works. Later on, after you have created your own database, RaceLog Pro will load it instead.

To handle multiple cars and/or to page Right Lane/Left Lane ET Predictions simultaneously, there are three (3) additional instances of RaceLog Pro installed into the subfolders:

C:\RaceLog Pro 9\Car2

C:\RaceLog Pro 9\Car3

C:\RaceLog Pro 9\Lane2

The installation program gives you the option of installing desktop shortcuts for Car2, Car3, and Lane2. You can therefore run up to four (4) copies of the program at one time, each working with a different database. This is only necessary if you have multiple cars in the staging lanes at the same time, or if you wish to send both Right Lane and Left Lane data to the same pager. To launch an additional instance of RaceLog Pro from “All Programs”, Click on **RaceLog Pro Plus**, select **More**, and then click on which one you’d like to use. For multiple cars, **create** a new database to use within the folder for that instance of RaceLog Pro. For Right Lane/Left Lane paging, **open** the same database in the new instance that you are currently using in the original instance of RaceLog Pro.

RaceLog Pro’s main form is a ‘form-view’ of the Runs table, in the current database selected. On the menu bar are several functions: **File**, **View**, **Expenses**, **ET Predictor**, **Run Segment Analysis™**, **Query Database**, **Custom Report**, **Opponent Database**, **RacePak**, **About**, and **Help**. These functions are fully described later on in this text. In form-view, all the data fields contained in the current record can be seen at one time. The Runs table holds all the information pertaining to your car’s performance. Each record is one run. You can move to any field in the record by clicking it with your mouse, or by pressing the Tab Key. On the right side of the form is a Control Panel with 12 control buttons. If you place the cursor on any control button in the program, you will get a brief description of that buttons purpose.

You can move to any record within the table by using the directional control buttons marked as follows:

- |<< - Moves to the first record in the table
- << - Moves to the previous record in the table
- >> - Moves to the next record in the table
- >>| - Moves to the last record in the table

Find/Find Next Buttons

You can quickly find any record in the table by using the Find and Find Next control buttons. Click on Find and the Find Record window opens. You can click on one of the option buttons to select the criteria for finding the record, either Date, Track, Event, or Run #. For example, if the Date option is selected, all the dates from every record in the table will be shown in the list box. To find a particular date in the list box, just type the first few characters of the date. When the date appears in the list box, just double-click on it, click on OK, and the record will be found instantly. If there are other matching records, you can click on the Find Next control button. If another matching record is found it will be displayed.

The remaining control buttons and their functions are:

Add New – This is the preferred method of adding a new run to the table. Clicking this button will add a new record to the end of the table. The record pointer is moved to the last record in the table. You can choose to copy the contents of the last record to the new record. If you copy the contents of the last record, you can save a lot of typing, since most vehicle settings aren't changed for every run. Also, if you copy the last record, the program will automatically increment the Component Runs for Engine, Trans, Tires, and Oil/Filter if their value is greater than 0. You can then enter data and/or Edit the record. When done editing, click on Save.

Weather Data Retrieval - If you are using a compatible trailer station with RaceLog Pro, it is not necessary to enter the weather data manually. Racelog Pro maintains a separate Date/Time indexed weather database while it is running. When adding, editing, or inserting a new run, if weather data is available, a "Weather Data Retrieval" button becomes active allowing you to import the weather by the Date and Time on your time slip. After clicking on the button, the background color of the weather data labels will change from Cyan to Red. The first weather data record to appear will be the most current one. Each one of these data fields will be updated as you move through the records in the weather data. Clicking on the button |> will move to the last record. Clicking on <| moves to the first record. Clicking on < or > will move one record at a time. Clicking on, and holding the < or > button down scrolls through the records and at a faster pace the longer you hold the button down. If no weather data is present, the weather data button will not be enabled and weather data can be entered manually. Weather data is available when Adding, Editing, or Inserting a record in your logbook.

After retrieving the weather data, enter your time slip information in the Performance Box. If you are running a throttle stop, enter the throttle stop timer duration in the correct box. Then click on Save.

Save – This option is only activated when the database is in Edit Mode. Clicking Save will store the current contents of the record into the database and then exit Edit Mode. As you are entering data, each field is validated for possible user errors. If a variable that you enter cannot be validated, the background color of that field will turn Red, and the cursor will be returned to that field to be corrected. You must correct the error in order to proceed.

Undo – This option also is only activated in Edit Mode. It allows you to abort the current operation without saving any information that you have entered or changed. It is not available in Insert Mode.

Insert – This option adds a new record between two other records. If you forgot to enter a time run and want it placed in the proper run order, you would use this option. Instead of copying the contents of the last record, it copies the contents of the current record in the table. It then updates the Component Runs for each record in the table. You can't use Undo to cancel this operation, but you can delete the record if you make a mistake. Use this command sparingly, in order to keep the Component Run counters accurate.

Edit – Clicking on Edit puts the database into Edit Mode on the current record. All the data fields change from a white background to a light blue background whenever the database is in Edit Mode to alert you that the data will be changed by this operation. Unless the database is in Edit Mode, none of the data in the record may be modified. You can use the Tab key, the Return key, or the mouse to quickly move from one field to another. Each time you enter a new field, the data value in that field will be highlighted. If you want to replace the value, just enter a new one. The old value will be erased as soon as you begin typing. If you want

to edit the value, use the arrow keys to move around in the field. You can then edit the individual characters or numbers in the field.

Delete – This operation removes the current record from the database and updates all component runs. It's best to avoid using the delete command, except to remove the last record in the table. When you delete records in the middle of a table, a lot of house keeping becomes necessary. The program has to renumber all the runs in the table, while trying to maintain the integrity of the Component Run counters.

Data Fields

Each data field on the form has two parts, a label and a text box. The label is the description of the data field. The text box holds the actual data value. Some data fields are **numerical** and some are **text based**. For example, the data field for **Barometer** is numerical. The label is "Barometer". The text box holds the value, for example, "30.02". If you place the cursor on the label of any numerical field, the expected range will be displayed. Place the cursor on "Barometer" and you will see "**12.00 to 35.00**" displayed. You must enter a number value in this field in this particular range to protect the integrity of the database. All numerical fields are validated when the Save operation is selected. If you enter a value that is outside the normal range for that field, the Save operation is canceled and the cursor will be placed in the data field where the error was found. If you place the cursor on a field label and a numerical range is not displayed, then this is a text-based data field. The Notes field is an example of a text-based data field. You can enter any characters in a text-based field because no validation is necessary.

Fuel Mode Box

The fuel mode box is used to set the weather correction calibration used in the program to either **E85**, **Methanol** or **Gasoline** and to display the current setting. When correcting elapsed time (**ET**) to Standard Pressure (**STP**) or when predicting ET, the program needs to know what fuel you are using. While in Edit Mode, clicking on one of the three option buttons will change the fuel mode. The current fuel mode is stored in the record as an "**E**", "**M**" or "**G**". When you are moving through the records, the program will automatically reset the fuel mode depending on whether it finds a "**G**", "**M**", or an "**E**" stored in that record. You can override this setting manually, so when saving your record, be sure that you have set the fuel mode properly for that run.

Air Calculation Box

While in Edit Mode, once you have entered the Elevation (**NOT TRACK ELEVATION, READ BELOW**), Barometer, Temperature, and Humidity, the calculated current Horsepower Correction Factor (**Current HCF**), Air Density Index (**ADI**), Density Altitude (**DA**), Vapor Pressure (**Vapor Press.**), Water Grains Per Pound (**Water Grains**), and Dew Point (**Dew Point T.**) are reported. If you've entered the Vehicle Weight and Ballast in the Vehicle Settings Box, the Horsepower Corrected Weight (**HPC Weight**) will also be reported. Our formulas for Horsepower Correction and ET Prediction are the most accurate to be found in this industry. The ET Predictor uses a standard of 0 elevation, 29.92 In Hg pressure, 60 degrees F, and 0 % relative humidity. Under these conditions the HCF equals 1.0000 and the ADI will equal 100.000 percent. Here is a further description of the input data used in these calculations:

Elevation - Range: -3,000 to +26,000 Feet – **Never enter the elevation of the racetrack!** This field should always be zero (0) unless using an **altimeter** or a **corrected analog** barometer. If you're using a digital barometer, set it to report **absolute pressure** and always enter 0 for Elevation. If you have an altimeter, calibrate it to 29.92 In Hg and enter the reported altitude as Elevation. If you're using an old analog (dial) barometer, then you should always enter the number of feet equal to the amount of correction if you had to calibrate the barometer to your physical elevation.

Barometer - Range: 12 to 35 Inches Hg - If you're using a barometer to obtain the air pressure, enter the barometric pressure from the gauge. When using an altimeter, you must always enter 29.92 in this field.

Temperature - Range: 10 to 130 degrees F - Enter the temperature from a digital thermometer or other temperature gauge. Never use the temperature readings reported on your time card. These sensors are not accurate! From round to round, temperature changes are apt to affect performance more than any other variable.

Humidity - Range: 0 to 100 Per Cent - You can use a digital hygrometer to find the relative humidity. At low temperature, relative humidity has the least effect on performance. However, at high temperatures, the effect is much greater. For example, 50% RH at 60 F will result in a .01 loss in power, while at 90 F the addition of 50% RH equals about a .03 loss in power. Changes in temperature are also more critical under high humidity.

Wind Speed – Range: -99 to 99 MPH – The value in this field is used in **TrueWind™ ET Prediction**. The ET Predictor screen uses the measured head or tail wind speed to adjust the predicted ET to accurately reflect changes in performance due to the wind. A head wind is entered as a positive number without any sign. For example, a 12-mph head wind would be entered as **12**. A tail wind is entered as a negative number with a minus sign. For example, an 8-mph tail wind would be entered as **- 8**. If you are using a hand-held wind meter, stand and hold the meter facing the starting line to measure only the true amount of tail wind. Then enter the mph read as a negative number. Stand and face the finish line to measure only the true amount of head wind. If you do not enable the TrueWind™ ET Prediction feature in the ET Predictor screen, this value will not be used in any calculation.

Wind Direction - This text field is not used in any calculation, just to log the observed wind direction.

Vehicle Weight - The Vehicle Weight (including driver) and **Ballast** is used in the computation for finding the Horsepower Corrected Weight. It is NOT used in calculating the predicted ET.

The following is more information on the resulting calculations:

Current HCF (Current HP Correction Factor) - The Horsepower Correction Factor is computed using the current weather conditions that you enter. In other words, the HCF equals the current elevation, barometer, temperature, and humidity. When the HCF is higher, fewer horsepower is produced, and the car will run slower. So, the lower the HCF is, the faster the car will run. You can use the HCF to determine the variance in horsepower or torque that is being produced under different weather conditions. For example, if your engine produces 400 horsepower with an HCF of 1.012, it will produce 404.80 horsepower at sea level conditions (STP) or 1.0000 ($400 \times 1.012=404.80$).

Air Density (Air Density Index) - The Air Density Index (ADI) is the computed ratio of the current density to that of STP with STP having an index of 100 percent. This factor is used to determine the correct jetting or pill size required under varying weather conditions. The higher the ADI, the more air there is available for combustion. Therefore, more fuel must be burned to maintain the correct air/fuel ratio. When using gasoline, a four (4) percent change in the ADI will usually necessitate a change in jet area in order to maintain the same level of performance. Holley jet sizes are about 4 percent apart in flow area. If the ADI goes up four (4) percent, for example 100.0 to 104.0, increase all jet sizes by one number. And, if the ADI goes down four (4) percent, for example 100.0 to 96.0, decrease all jet sizes by one number.

Density Alt (Density Altitude) – Density Altitude (DA) is the current air density expressed in feet of elevation. DA is also known as the corrected or relative altitude.

Vapor Press. (Vapor Pressure) – Vapor Pressure (VP) is the amount of water vapor (humidity) in the air expressed in inches of mercury. Absolute humidity, Water Grains, and Vapor Pressure calculations all express the amount of water vapor in the air.

Water Grains (Grains per Pound) - GRLB is a calculation of the mass of water to the mass of Dry Air. It is nothing more than Absolute Humidity or Vapor Pressure! Absolute Humidity, Water Grains, and Vapor Pressure calculations all express the amount of water vapor in the air.

Dew Point T. (Dew Point Temperature) – This indicates the amount moisture in the air. The higher the dew point, the higher the moisture content of the air at a given temperature. Dew Point Temperature is defined as the temperature to which the air would have to cool (at constant pressure and constant water vapor content) in order to reach saturation. When the Dew Point Temperature is reached, condensation will be present.

HPC Weight (Horsepower Corrected Weight) - The program uses the input variables, Vehicle Weight and Ballast, as the total vehicle weight and then corrects this weight to the current air conditions. The reported HPC Weight changes with the weather conditions entered. The HPC Weight should be logged for every run that you make. By adding or removing ballast, the car can be made to run the same Elapsed Time in different air conditions without changing the throttle stop. For example, under previous air conditions, the reported HPC Weight was 1720 and the car ran an 8.900 ET. Later on, the HPC Weight is now 1740 because of worsening air conditions. If you remove 20 pounds of ballast, the car will still run an 8.900 ET in this new air.

Performance Box

After you have entered the air conditions from when the run was made, next enter the data from your Time Slip into the fields in the Performance Box.

Round - This text field is for logging the type of run and what number round it was. I like to be able to differentiate between time runs and elimination runs, so I use T1, T2, T3, E1, E2, E3, etc.

Dial/Idx - This numerical field is used to enter your Index if you are an Index Racer (8.90, 9.90, 10.90). This value is copied over to the ET Predictor screen and is used there in the Throttle Stop Prediction.

Lane - This text field is for logging what lane you ran in. You can enter 'Left' or 'Right', '1' or '2', or whatever you are comfortable with. I use "L" for left and "R" for the right lane.

RT - This text field is used for logging your Reaction Time.

60', 330', 660', 1000', 1320' - These are numerical fields for the interval times on your time slip.

Note: If this is a run from an eighth mile track, enter a zero (0) for the 1000' and the 1320'. This is necessary for the Run Segment calculation and to alert the ET Predictor to start in the 1/8-Mile Mode.

MPH1, MPH2 - These text fields are for logging your 660 foot MPH and your 1320 foot MPH.

MOV - This text field is for logging the Margin of Victory recorded on your time slip.

STP Run Segment Box

Other than having an on-board computer, calculating the STP Run Segments is the ultimate method to help a racer obtain maximum consistency and performance. After entering the weather conditions and the interval times from your ET slip in the Performance Box, the program sees the track as six (6) separate distance segments. These are the 0'-60', 60'-330', 330'-660', 660'-1000', 1000'-1320', and 0'-1320' distances. The STP corrected time is reported for each of these segments. This allows you to quickly analyze what the car is doing at any point on the track. Because the times are all corrected to STP (standard pressure), you can compare every run you make at a glance and know to the thousandth of a second any variable that exists in your combination or driving style. Once your combination has been optimized, you'll be able to see the variance between lanes or from track to track.

If you are using a throttle stop, and you have entered your throttle stop duration (T.S. Duration) under Vehicle Settings and your throttle stop factor (T.S. Factor) under Observed Data, the program will calculate the STP W.O.T. elapsed time. It calculates what the car should have run without a throttle stop (Wide-Open Throttle) at standard pressure. This should be close to what the car really does run, wide open in perfect air conditions. If not, your throttle stop factor is wrong or your throttle stop is not working correctly. Be sure to use your actual T.S. Duration. Some throttle stop controllers use actual duration, but not all. With some older units, you have to subtract the first timer from the second timer to get the actual duration.

Component Runs Box

The program automatically keeps track of the component runs on your engine, transmission, tires, and oil/filter. When you create a new database and add the first record, enter the current number of runs for each of these components. If the engine has 100 runs on it, enter 100. If the tires have 30 runs on them, enter 30. After

this, every time you add a run, insert a run, or delete a run, these values are adjusted for you. To keep these counters perfectly accurate, you must be careful when inserting or deleting records at a previous point in the table. Ideally, you should only add new runs to the end of the table using the Add New command. You should also only use Delete to remove the last run in the table. Only use the Insert or Delete commands when absolutely necessary.

Observed Data Box

This box is used to enter all the data that is observed on the run. The only numeric field in this box is the TS Factor, which is used in calculating STP W.O.T. and throttle stop prediction. A throttle stop factor usually varies somewhat from run to run and must be continually monitored or observed. The Data #1 through Data #6 fields are text fields and are for entering any data that you want. If you are logging numbers from your data recorder, this is a good place for them. If you have a Family Software **DataMaster™** data recorder, data is automatically imported into these fields.

Vehicle Settings Box

The only numeric fields here are TS Duration, Vehicle Weight, and Ballast. The TS Duration is used in calculating STP W.O.T. and throttle stop prediction. Vehicle Weight and Ballast are used in calculating the HPC Weight.

Main Form - Functions

- Zoom +

Computer display screens keep getting bigger so we've added the - Zoom + feature so that you can adjust the program to your screen resolution or taste. The - Zoom + Control appears on the main program screen and the ET Predictor screen. Clicking on the "+" increases the size of the window while clicking on the "-" decreases it. On the main program window, all subsequent windows being opened adjust themselves to the size and position of the main program window automatically. Clicking on only the button labeled "Zoom" toggles the window between full screen and the last window size used. In full screen mode the "-“ and “+” buttons are disabled. In addition, all program windows are individually resizable by dragging a corner of the window, and movable by dragging the title bar of the window. The program will save the last size and position of the window for you at exit. If you're running more than one car at a time, you can decrease the main window size of each car and move them around on the screen. The next time you start the program they will appear where you left them. To return a window to a standard size, click on the "+" or "-“ button of the Zoom feature. If you click on the "Maximize" button on the main program window or the ET Predictor window, the Zoom feature becomes inoperable. Click on the "Maximize" button again, or click the Zoom button to return its function.

File Menu

Open Database – Click on this to open an existing database. All existing databases will appear in the list box.

Just double-click on the name of the database you wish to open. Or, highlight the filename and click on Open.

Create New Database – Click on this to create a new database. You can create a new database at the beginning of each racing season, for example, bob97.mdb, bob98.mdb, bob99.mdb. To create a new database, just type in a new file name and click on Save. It isn't necessary to add the file suffix '.mdb' to the file name that you enter. The program will do this for you. When you create a new database, it will not have any records until you add them. For this reason, all the buttons in the Control Panel will be disabled except for the Add New function.

Backup Database – This function backs up the current database to a floppy disk or other directory.

Import Database – This function will import a copy of an existing database from a floppy disk or other directory. Use this function to import your backed up databases or databases from a previous version of RaceLog Pro. Older versions will be updated to the new format used in Version 7 and up.

Export Database as CSV File (New) - This function is for those wishing to export their data into Access or other database program. Click on File.Export Database, then Export. By default the .CSV file will be named Export.csv or you may enter a file name of your choice.

Print Record – This function sends the current record to the printer function in Windows.

Shell – This function allows you to run another .exe program from RaceLog Pro. Our DataMaster™ data recorder software will run within RaceLog Pro allowing you to directly import data into a RaceLog Pro record.

Edit Label Definitions – This function allows you to edit the labels for text-only data cells and save the custom label definitions as .def files. These are data fields that you can use for any data that you choose.

Exit – This function closes all files and exits the RaceLog Pro program.

View Menu

Table View – This function brings up a dual table-view screen. A table-view is like a spreadsheet. Instead of being able to see all the data from one record at one time, you can see multiple records at the same time. However, you must scroll the table in order to see all the data in each record. Upon entry, both Table 1 and Table 2 are set to the current database. In this manner, you can compare any records within the same database with each other. Optionally, you can load a different database into Table 2. This way, you can compare records from different databases with each other. For example, you might want to compare the runs from a previous year at the same event. To accomplish this, just click on File, click on Open Database-Table 2, then double-click on the database name you want to open. In table-view, the records cannot be edited, therefore the only control buttons that are active are the Find, Find Next, and the directional control buttons. To scroll the tables, click on the left and right arrow buttons located in the lower left and lower right corners of each table. To make it easier to compare data between tables, you can highlight an individual row or column in each table. To highlight a table column, just click on the column label. For example, if you want to highlight all your reaction times, click on the column label RT. To highlight a row in the table, click on the control button located at the extreme left of the row. To turn the highlight off, press the Tab Key.

Expenses Menu

Clicking on Expenses brings up the Expense Form, which is a form-view screen of the 'Costs' table. The Costs table is used to record, and report on, your racing expenses, winnings, and points. You can add a new record for each event that you attend or an individual expense. When in Edit Mode, a Total button appears in the Expenses Box and the Winnings Box. Instead of having to use a calculator to total your expenses, just click on the Total button. The program will add up the fields and enter the total for you.

Expense Form - Menu Functions

Here is a listing of the Expense Form menu functions and what they do:

File

Print Record - The Print Record function sends the current record to the printer function in Windows.

Close - This function closes the current file and returns to the Main Form.

Report

Monthly Report - This function creates a monthly report window of your expenses, winnings, and points. Just select any record in the table for the **month** you want to report on, and click on this function. You can print the report by clicking on the Print function.

Annual Report - This function creates an annual report window of your expenses, winnings, and points. Just select any record in the table for the **year** you want to report on, and click on this function. You can print the report by clicking on the Print function.

ET Predictor™ Menu

Clicking on this function brings up the ET Predictor Form. When you click on this function, all the data from the current record is transferred to the ET Predictor. The ET Predictor screen will show what database and Run # the data is from. This way, if you want to predict your ET or throttle stop setting for your next run, you only have to select the run you want to predict from, and then click on ET Predictor. Since, it will already have all the base run information from your database, you only have to enter the new air conditions and the program will

automatically predict your new ET or throttle stop setting. You may also edit any of the base run information while in the ET Predictor or perform any of the other functions available. The ET Predictor form also works as a stand-alone program. You don't have to work from the data that is transferred from the current record. You are able to save all the current data you are working on as a separate data file. You can then Open your saved data files from within the ET Predictor.

ET Prediction Function

Using a base line of performance consisting of a previous ET (Base ET) and its associated Horsepower Correction Factor (Base HCF), this function will calculate and predict your ET under new air conditions. This is used to determine the proper dial-in or in determining a need to adjust a throttle stop. This program will also predict 60', 330', 660' and 1000' times if these are entered into the Base Run Info Box. Be sure that the Fuel Mode is set correctly. If entering your data manually, enter the Base HCF and Base 60', Base 330', Base 660', Base 1000', and Base 1320' times in the Base Run Info Box from the run you wish to predict from. Then, enter the new air conditions in the New Air Conditions Box. Next, click on the **Air_Calculate** button. The predicted ET's will appear in the Predicted ET Box. For automatic operation, see **Auto-Button** and **Page-Button**.

Throttle Stop Prediction Function

The function is used to predict a throttle stop setting based on a previous run, previous throttle stop duration (T.S. Duration), and existing throttle stop factor (T.S. Factor). First, calculate your Predicted ET. The Predicted ET is transferred to the Predict Throttle Stop Box automatically. In the Predict Throttle Stop Box enter the Dial or Index that you wish to use. If you want to use a different Predicted ET than the one shown, you can edit the one shown. This function uses the T.S. Duration and T.S. Factor values from the Base Run Info Box. Make sure that these values are correct and then click on the **Predict_TS** button. This function is performed for you in Automatic Mode.

Corrected STP ET Function

This function is used to quickly correct any ET (60', 330', 660', 1000', or 1320') to standard pressure (STP) conditions. It uses the air conditions entered in the New Air Conditions Box, the current Fuel Mode, and the Actual ET that you enter. First, set the Fuel Mode. Then, enter the air conditions that were present at the time of the run. Then, enter the Actual ET, and click on the **STP_Correction** button. As an example, for gasoline fuel and weather conditions of 0 elevation, 29.65 barometer, 75 temp, and 45% humidity, an ET of 9.337 would be equal to 9.204 after being corrected to STP. Comparatively, for weather conditions of 0 elevation, 29.80 barometer, 67 temp, and 68% humidity, an ET of 9.298 will also equal 9.204 at STP. Actually, the program calculates and then removes the effect that the current air density had on the run. This creates a basis to directly compare one ET against another regardless of the weather conditions associated with the run. Comparing these two STP ET's shows us that this particular car is responding perfectly to changes in weather conditions and is consistent right down to the thousandth. The corrected ET (STP ET) is how fast the car would have run under perfect (STP) weather conditions.

Run Completion Function

When you return from your run, provided that you had the ET Predictor running on "Auto" or "Page", the Run Completion Function is preset and ready to use. All the information is already there except for the 1000' time (660' for 1/8 mile) from your new time slip. Just enter the new 1000' time into the field labeled "New Seg" and click the Run_Completion Button. That's it!

If you want to use Run Complete function at another time you'll need the air conditions from the new run. Jot them down on your time slip. Make your Base Run, (the one you predicted from), the Current Record in RaceLog Pro. Then click on ET Predictor. Enter the air conditions from the time slip in the New Air Conditions Box and Click Air_Calculate. Enter the new 1000' time into "New Seg" and click the Run Completion Button.

Based on the information entered under your Base HCF, Base ET, and the New Air Conditions, this function will report a projected ET on a run where you had to hit the brakes or lifted off the throttle. It uses the Base 1000' time (Base SEG), assuming that you are running on a 1/4-mile track and that you ran the car on full throttle past the 1000' cone. If you lifted earlier, you can enter the 660' time for the Base SEG. Likewise, if you are running on a 1/8th mile track, you may use the 330' for the Base SEG. For the New SEG field, enter the corresponding time from your time card from the new run. If you used the Base 1000' time for the Base

SEG, then you must enter the new 1000' time from your time card for the New SEG. Click on the Run_Completion button and the program will compute the Projected ET, or what the car would have run in those air conditions.

Hint: When the TrueWind™ Option Box is checked, the Projected ET will be calculated using the current TrueWind™ settings.

ET Predictor Form - Menu Functions

File

Open - Click on this function to open an existing ET Predictor data file. All existing data files will appear in the list box. Just double-click on the name of the data file you wish to open. Or, you can highlight the filename and click on Open.

Save - Click on this function to save the current data in the ET Predictor workspace to a data file. Enter a name for your file in the file name box and click on Save. It isn't necessary to add the file suffix '.dbt' to the file name that you enter. The program will do this for you. Be sure to use a unique name for your data file so that you can remember what the data is for. I like to use the date and the round for my data files. For example, if you name the file, '021105E1.dbt', you'll know exactly what run the data pertains to.

Exit - This function closes the ET Predictor window and returns you to the Main Form.

Programs

Calculate TS Factor – This function quickly calculates a throttle stop factor (T.S. Factor) using two runs. The second run (STP ET #2) must have more timer duration and must be the slower run. You should first correct both runs to STP using the Corrected STP ET function. Otherwise, the two runs must have been made in exactly the same air conditions, or the result will not be accurate. Enter the STP ET from the first run in the field, STP ET #1. Then, enter the timer duration that was used on that run in the field, TSD #1. Next, enter the STP ET and timer duration from the second run and click on the Calculate button.

Pager Setup

Custom Page String – This function allows you to build a custom page string. You can select to use the default data string or one that you design. Build your string by clicking on the buttons for the data you wish to include and in the order you wish it to display on your pager. Click on Close to exit, Apply to Save changes, or New to start over. You may add up to 12 data items for your custom paging string. You can have a different custom paging string for each different database and/or car. This will not affect the Pager Log, which always uses the default data string.

Interval (In minutes) - Select the interval as to how often you wish to be paged by just clicking on one of the intervals shown in the menu list.

Set Pager Name – Select the Pager Name that you want the Paging system to use. The Paging Name is used to match the pager Cap Code stored in PageAire Pro with the correct paging data.

SMS Paging Setup

SMS Paging uses the same settings for “Customize Page String”, “Interval (in minutes)”, and “Set Pager Name” under the Pager Setup Menu.

Cell Number@Carrier and/or email address - Here you enter the phone_number@email address for your cell phone provider (for text) or your email address (for email) in the text boxes for SMS Pager 1 through SMS Pager 5. You may enter multiple addresses separated by a comma if you want copies of the message sent to other members of your race team via email and/or cell phones.

Buttons T1 through T5 - are used to test your cell phone and server setup. Clicking on the button will send the message, “Pager # - Testing 1, 2, 3... to your cell phone or email. You will be alerted of any errors.

Click on “**Save**” to keep changes or **Cancel** to restore previous values.

SMTP Server Settings

Sender Email: In this textbox, enter the email address for your free Gmail (or other) email account.

SMTP Server: In this textbox, enter the SMTP Server address for your free email account.

SMTP Username: In this textbox, enter your username for your free email account.

SMTP Password: In this textbox, enter your password for your free email account.

Port Number: In this textbox, enter the Port Number (usually 25) designated by the email provider.

Authentication: Requires a “0” (off) or a “1” (on). This is almost always required.

Use SSL: Requires a “0” (off) or a “1” (on). Sometimes required.

Time Out: This is 30 by default, but can be set higher if connection problems occur.

Click on “**Save**” to keep changes or **Cancel** to restore previous values.

Click on “**Help**” to find a list of SMS provider email addresses for the various cell phone providers. Also, listed are some free email services you can use such as AOL, AIM, Google (Gmail), MSN, and Yahoo.

I’ve created a free Gmail account as a working example for you to test with. However, you should create a free email account of your own and then enter the details for your account into the program.

SMS Enable Checkbox

Once you have your SMS setup information entered, tested, and saved, you can enable or disable SMS Paging by using this checkbox. During your paging session any SMS error messages will be reported in the Pager Log. It is possible to use SMS and UHF paging at the same time.

View Pager Log

This function opens the paging log window. You can open and close the window as often as you want and the data will remain. However, once you close the ET Predictor window, the paging log will be erased.

Auto Button

The Auto Button places the ET Predictor into Automatic Mode. In this mode, the weather data is retrieved automatically about every 15 seconds to one minute, depending on your weather station. All computations are done without any input from the user. Some functions are locked out, except for the “**OFF**” button, so that pressing a key on the keyboard or moving the mouse will not affect the operation. Push **OFF** to return to manual entry mode.

Auto Checkbox – The checkbox next to the Auto button shows if an error has occurred in the Auto Mode function. A check will appear in the box and a description of the error will appear in the Paging log.

Page Button

The Page Button starts the paging process. If ET Predictor is not yet in Automatic Mode, it will start it running for you. Based on the Paging Interval selected, the paging data will be sent to your pager, cell phone, and/or email.

Page Checkbox – The checkbox next to the Page button shows if an error has occurred in the Page function. A check will appear in the box and a description of the error will appear in the Paging log.

TrueWind™ Option Checkbox – If you place a check in this box, the ET Predictor will adjust the predicted ET using the TrueWind™ value in your Base Run, the Current TrueWind™ value, and your specific Wind Factor. If the box is unchecked, the TrueWind™ option is turned off and wind conditions are NOT used.

Wind Factor - The Wind Factor is saved by the program and associated with that particular database. Every car has a unique Wind Factor. For this reason, it may be a good idea to have a separate database for

each car and/or a separate database for eighth and quarter mile tracks. If not, the Wind Factor can always be manually edited at any time.

A vehicle's terminal speed, frontal area, and aerodynamics, are only a few of the variables that could be used in determining your wind factor. However, frontal area calculations are extremely crude and inaccurate. For this reason, frontal area can not possibly be used as a component in such an equation! The only way to ascertain an accurate Wind Factor is to use a computer model of your car's performance under varying wind conditions. Our exclusive **Run Segment Analysis™** feature allows you to do exactly that. Therefore, you can easily find the correct Wind Factor specific to your own car. Just compare runs having different wind conditions. Quarter mile racers will see the majority of wind effect in the 660 to 1000 foot segment, and in the 1000 to 1320 foot segment. The Wind Factor can then be calculated by using simple math. Just add the total time difference (between two runs) from these two segments and divide by the difference in MPH.

For example, on the first run you have a -3 mph tail wind. On the second run, you have a 5 mph head wind. The total difference in wind force is actually greater by 8 mph. The total time difference of the two segments on the second run is greater by .01 seconds. Divide .01 seconds by 8 mph and you get a Wind Factor of .00125. This shows that one (1) mph of wind effects your cars performance by .00125 in elapsed time.

TrueWind™ ET Prediction is purely optional. If you are not monitoring the wind, then you don't have to use it. Or, if you are unsure about using it, you can start out using a very small wind factor and track the results. And, if you are a low mph, eighth mile racer only, it may be insignificant. In testing last year, it has proved its accuracy and value to me as a racer. As a starting point, some approximate Wind Factors you may try are:

Dragster: .001 to .004 **Door Car:** .003 to .006 **Roadster:** .005 to .008

- **Zoom +** - (See - Zoom + under Main Form – Functions)

Run Segment Analysis™ Menu

Clicking on this function brings up the Run Segment Analysis™ Form. This form pops up next to the STP Run Segment Box on the current record. Initially, it loads the same database and the same record that you are currently on. It automatically compares the STP Run Segment times between runs. You can change the current record by clicking on the directional control arrows below the Run Analysis Box. Or, you can use the Find and Find Next buttons to locate any record in the current table. You can also click on File, and open another existing database so that you can compare runs between databases! The program compares the two selected runs and shows the plus (+) or minus (-) variance of each segment comparison. A graph overlaying the two runs appear at the bottom of the Run Segment Analysis™ Box for instant analysis!

While the uncorrected times from each run will (and should) vary with every pass, ideally the STP segment times between passes should be the same. By comparing the STP segments between two runs you can see traction variances, throttle stop function, wind, and other variables that affect performance and prediction. Traction problems will be seen at the 0-60 foot and 60-330 foot segments. Wind will affect the 660-1000 foot and 1000-1320 foot segments. Second gear shift variances will usually be seen at the 60-330 foot segment. Throttle stop function will be seen between the segments of activation and de-activation of the throttle stop.

Run Segment Analysis™ Form - Menu Functions

Here is a listing of the Run Segment Analysis™ Form menu functions and what they do:

File Menu

Open Database – Click on this to open an existing database. All existing databases will appear in the list box. Just double-click on the name of the database you wish to open. Or, highlight the filename and click on Open.

Exit - This function closes the Run Segment Analysis™ window and returns you to the Main Form.

Query Database

Structured Query Language (SQL) is a powerful database tool. We can use the "SELECT" statement and the "WHERE" clause to find only the records in your database table that meet with specific criteria. It can be as simple as finding all the records where one condition is met, or where multiple conditions in any number of fields are met. For example, you could want to find only those records where the Density Altitude (DA) was within a certain range AND the 1320' ET was equal to or less than a certain number OR the Relative Humidity (RH) was greater than or equal to some value and more. You decide what you want to see and an SQL STATEMENT will return those records instantly. The arguments (conditions) are set using these OPERATORS

= (equal to)
> (greater than)
< (less than)
>= (greater than or equal to)
<= (less than or equal to)
<> (not equal to)

AND
BETWEEN
LIKE
OR

The first part of the SQL SELECT STATEMENT and WHERE clause is hard coded in for you. You just need to pick the field or fields and the arguments. You don't see it, but it looks like this:

```
SELECT * FROM Runs WHERE (field name) (arguments)
```

The asterisk means to SELECT all the records. "Runs" is the name of our database table. When you open the SQL form for the first time you will see a simple statement there by default. It looks like:

```
Event = 'Super Chevy'
```

Very simple. This would return any records where the "Event" field contained the exact text value "Super Chevy". Notice the single quotes around the text string "Super Chevy." In our database there are fields that contain simple text and fields that contain numerical values. There is a rule that when a field contains a text value, you must enclose the value you are searching for in single quotes. In fields that contain numerical data you must NOT use any quotes around the value. A Date field value requires the format #01-31-2014# or #1-31-14#. Also, if a field name contains punctuation, the value must be enclosed in brackets "[1320]".

There are two List Boxes showing every data field name in the database. One contains the text fields, the other contains the numerical fields. To select the initial field name, double-click on the field name and it will appear as the first field in your SQL statement.

To add a Field or a Condition into the argument box, you can type it in, or left-click on the Field or Condition which performs a select and copy. Move your cursor to the position where you want it entered, right-click and select Paste. A more advanced SQL statement might be something like:

```
[1320] > 7.20 AND DA < '2000' AND Temp BETWEEN 75 AND 80
```

The program will trap any syntax errors you may make and give you the opportunity to correct them. Once you have an SQL statement that you wish to perform again, you can save it by just clicking on the button "Save Query to List Box". To delete a saved Query, select it and click on the button "Remove Selected Query From List Box." To perform your search, click on "Perform SQLSearch". From the Main Screen, to Cancel the SQL Search and open the full recordset in the database, click on "Query Database" and "Cancel SQL Search."

Custom Report

At times you'll want to view only certain fields in a recordset for easy comparison, especially when using an SQL Search. We've added an Interactive Custom Report that is viewable and printable. You can design a report "on the fly" by clicking on the field buttons, labeled 1 through 12, and selecting a field to include in the report. The report opens the current recordset with some fields. Click on any field button and select one of the listed fields with a left-click, or select "none" if you don't want to include a field in that position. The report is updated instantly. You can print the screen, preview a printer screen, or print the report to your attached printer. Use the File.Open and File.Save functions to save and be able to reuse your custom reports.

Opponent Database

We've added an Opponent Database for those "wheel racers" who need to know the performance capability of their competition. After adding your run to the database click on Opponent Database and "Add New" to enter your opponents performance data using their car number and/or name. The weather data is automatically transferred from your run, or if you are adding records at a later time, the weather data is available by date and time by clicking on Weather Data Retrieval. Weather data can also be entered manually. The Opponent Database is fully searchable using Query Database, Find, and Find Next.

RacePak

Clicking on RacePak sends the comma delimited file "altaracepak.dat" containing the weather data and weather calculations from the current run record to the "RacePakData/Weather" folder. The RacePak "Get Weather" routine accesses this file and imports the data into the RacePak log record for the run you are downloading.

Help Menu

Clicking on Help will load these instructions into a separate Windows Help style window. You can scroll through the instructions or optionally print a copy using your Windows compatible printer.

Screen Display Resolution

RaceLog Pro Plus was designed to work on a minimum display of 800x600 VGA.

Air Fuel Ratio Management

On gasoline burning engines, the air/fuel ratio must be about 12.5 to 1 to predict performance accurately. There is no benefit from running a lean mixture. When using a computer to predict your dial-in, you *want* the car to respond to changes in atmospheric conditions. There must always be enough fuel present to use all of the available oxygen or the car will be unpredictable.

Find a day when the air density is average for the racing season in your area. Then richen the mixture until the car slows down. The car may go faster at first, as it is probably too lean. After this, you shouldn't have to re-jet until the air density changes four (4) per cent or more. By adjusting the fuel mixture for an average air density of 96 per cent, for example, the air can range from 92 to 100 per cent, without having to re-jet. A quick way to check for proper fuel mixture is to check the color inside the headers. This should be a very dark gray, or almost black. If they are white to a light gray, the mixture is way too lean. As the air density changes from week to week, you can actually see the color change. The header color will appear lighter as the air density increases and darker as it decreases. You can also use an Exhaust Gas Temperature (EGT) gauge to evaluate jetting changes. **Call us for more information on our inexpensive digital EGT kits and innovative DataMaster™ data recorders**

PageAire Pro 9™ (Update Version 9.1) Windows 32/64 bit

Starting the Program

Once RaceLog Pro has been installed, you can start PageAire Pro from your Program Menu or the shortcut on your desktop. Click on **Start**, Point to **Programs**, **Select RaceLog Pro 9 Plus**, and click on **PageAire Pro 9**. A menu screen will appear listing all the compatible weather stations and paging transmitters. The Xlite transmitter is selected by default. If you have a different model, select it. If you don't have a UHF transmitter, you can leave it set to Xlite. Select your weather station by clicking on its button. This menu will not reappear unless you elect to change the weather station or transmitter.

Introduction

PageAire Pro is a Windows interface module that communicates with a UHF paging transmitter and a weather station. It's purpose is to transfer the weather data from temperature, humidity, barometric pressure, and wind sensors to RaceLog Pro *Plus*. Then, to send data that it receives to a paging transmitter. It manages up to five (5) pagers and many instances of RaceLog Pro for multiple cars.

This version of PageAire Pro is designed to be used with all Davis Weather, Altalab Instruments, Altronics, and select Professional LaCross Technology weather stations.

To use PageAire Pro, your computer must have an available USB port or serial port. If a UHF paging transmitter is also used, then your computer must have two (2) unused USB ports or 1 serial port and 1 USB port.

Once you have set up the Communications Ports, Outside Sensor, and Pager Capcodes, all this information will be stored on your hard drive and will be available to the program each time it is started.

To start the Program, press the **Start** button. To stop the program, press the **Stop** button.

File Menu

New Weather Database – This function creates a new database for storing the weather data. Weather data is stored for later retrieval in the RaceLog Pro logbook. However, once you've entered all your runs into the RaceLog Pro, the weather data for that event is no longer needed. Database files can easily become corrupted when the program, or computer, is not shut down properly as in during a power failure. The program compacts the current weather database during startup. If the database is found to be corrupt, you will be asked to create a new weather database. You can create a new database for each event or keep the same one for the entire season.

Change Weather Station – The program remembers your weather station and will always open to that selection. If you make a mistake, or decide to change weather stations at some point, use this function to start over.

Restore Default Settings – If at some point it becomes necessary to return to the programs default settings, this function will reset all variables and file paths to their original values.

Interface Setup Menu

Comm Port – This function is used to set the Communications Port that Windows has assigned to your weather station. This function will return all the connected Serial Ports available on your PC. Click on a port to select it. If working properly, the selected port will appear in the text box labeled 'Weather Port.' Once this is done, the selected port will be saved for future use, so you only need to use this function initially, or if you decide to use a different port on your PC. Com Port assignments can be found in the Windows Device Manager under Ports (Com and Lpt).

Initialize Interface (LaCrosse only) – This function is used to Initialize the PC Interface the first time it is used, or after the batteries, or outside weather sensor channel have been changed.

Outside Sensor (LaCrosse Only) – This function is used to select the outdoor temperature/humidity sensor channel. The outdoor sensor is shipped with the sensor channel set as channel 1 (sensor 1).

Pager Setup Menu

Comm Port – This function is used to set the Communications Port for your UHF transmitter. This function will return all the connected Serial Ports available on your PC. Click on a port to select it. If working properly, the selected port will appear in the text box labeled ‘Paging Port.’ Once this is done, the selected port will be saved for future use, so you only need to use this function initially, or if you decide to use a different port on your PC. Com Port assignments can be found in the Windows Device Manager under Ports (Com and Lpt).

Pager Numbers – This function is used to set the Cap Codes (Pager ID) and Baud Rate for each pager unit being used. The Baud Rate on the Xlite and GPX Transmitters is fixed at 1200 baud, so the Baud Rate function is disabled.

Version (Performaire Weather Center) – Sets the Version # of your Altronics firmware

Version < 3.51 Setting for firmware less than 3.51

Version 3.51 and > - Setting for firmware 3.51 and greater

Carrier Detect – (Tekk transmitter) This function allows you to turn the Carrier Detect Mode on or off. When Carrier Detect is ON, the paging transmitter will wait until the frequency is clear before sending the messages held in it’s Paging Que. In most cases, it is best to set the Carrier Detect mode ON.

Error Log

Any errors that occur during program execution are trapped and noted in the Error Log. The program will recover and continue to execute. If the Error Log heading is enabled, you can click on it to view any errors that may have occurred. The error description will give us an idea what may be at fault. Usually, this is due to having the wrong communication port. If you click on **Clear**, all the text is erased and the Error Log will close. Clicking on **Close** preserves the text and closes the Error Log.

Help Menu

Clicking on Help will load these instructions into a separate Windows Help style window. You can scroll through the instructions or optionally print a copy using your Windows compatible printer.

Function Buttons

T1, T2, T3, T4, and T5 - These function buttons are used to Test any pager that is currently assigned a Cap Code in the Pager Number box, or to send a message to any pager listed. Click on the button for the pager you wish to test. A pre-formatted message, “Testing 1, 2, 3..” is sent to the pager. To send your own message, just enter it in the text box that appears. Altalab AltaCom II with Internal Pager has just one function button, “T1”.

Sensor Status Boxes

Depending on the weather station, there are 3 or more green status boxes that show the current condition of each weather sensor. One for the Barometric Pressure, the Temperature/Humidity (Outdoor Sensor), and the Wind Speed/Direction sensor. In normal operation each sensor box should contain “Ok”, which means that the sensor is functioning and there have been no communication errors. Otherwise “Err” appears.

Weather and Pager Status Boxes

There is a status box for the weather input routine and the pager output routine which simply show the current status of each routine. The status will change each time weather data is retrieved and/or pager data is sent. The last string of data sent to a pager appears in the text box labeled, ‘Last Page.’

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