Westhold Corporation

Westhold
Race Manager
User Manual

Version 1.39.1.04

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User Manual

1. Introduction

1.1 General Information

The Westhold Race Manager Software is used to control the **Westhold Race Management System** electronic race timing system. It has a simple and clean interface to facilitate the operation by the user.

1.2 Requirements

In order to install and use Westhold Race Manager, you must have the following:

IBM PC or compatible with 256M Bytes of free memory or more and at least 50M Bytes of free hard drive space on your computer.

Microsoft Windows 95/98/ME/XP, Windows NT 4.0, Windows 2000, Windows XP Pro, Windows XP Home, Windows Vista, Windows 7, Windows 8/8.1. It is recommended that you have the latest service pack for each operating system.

1.3 Installation

Place the CD in the computer. The installation program will automatically start on most computers. Some computers will not do this. If this is the case click on the Windows <START> button and then click on **run.** Type in <CD DRIVE LETTER>:\Setup.exe

Example:

D:\Setup.exe

This will start the installation program. Follow the instructions for installation. A Windows Desktop icon will be created along with a program folder under the <START>\<Programs> location.

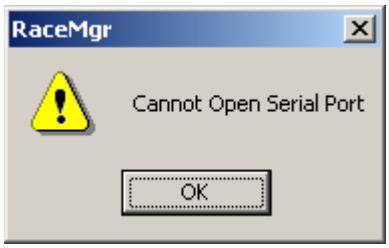
1.4 Quick Start

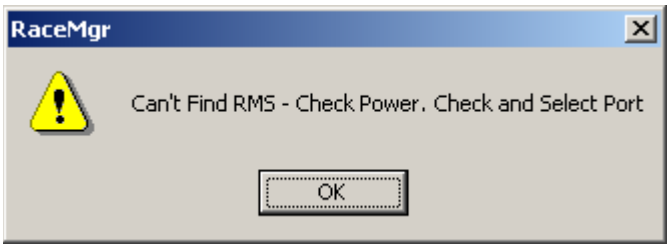
Before starting the software, verify the hardware has been configured properly. Be sure all the cables are connected and secure. Make sure the PC is connected to the IDU or the IDEC box via a RS232 serial cable or CAT5 network cable.

Power on the IDU or IDEC. A green power indicator on the front of the unit will light up.

Start the Race Manager program by double-clicking on the Desktop icon or selecting the program from the <START>/<PROGRAMS>/RaceManager location.

When the software is started for the first time some warning messages may appear regarding the setup of com ports and the RMS. This is normal. Click on the ‘OK’ buttons for the warning messages.





2. Overall Description

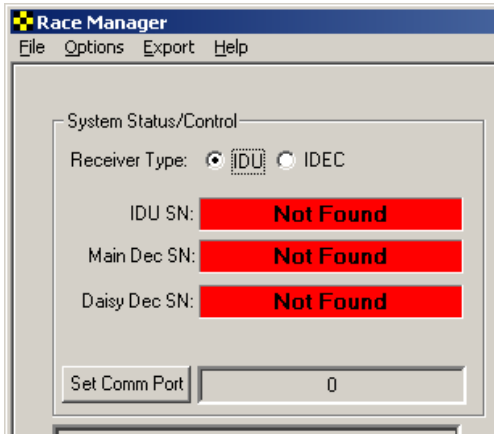
The program is segmented into several logical sections. These are indicated by tabs at the bottom of the program window. The three sections are **Setup, Assign and Timing.** The tabs are set up from left to right in an attempt to indicate the typical flow of operation by the user.

2.1 Setup Tab

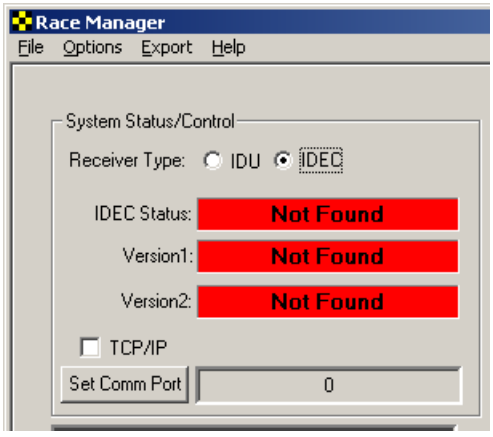
The setup page includes a number of parameters used to set up the software to communicate with the RMS and scoreboard.

2.1.1 System Status/Control

The System Status/Control box is located in the upper left corner. It allows you to select the type of system you are using and indicates the current status of the system. The Status box will initialize with the words 'Not Found' and the background will be in red color. If the RMS components are found the box will display the appropriate data and the background color will be green. Typically the first time the system is started the software will not discover the components. Some setup must first occur. Follow the procedure below to initialize the system.



OR



1. Select the Receiver (i.e. decoder) type – IDU or IDEC

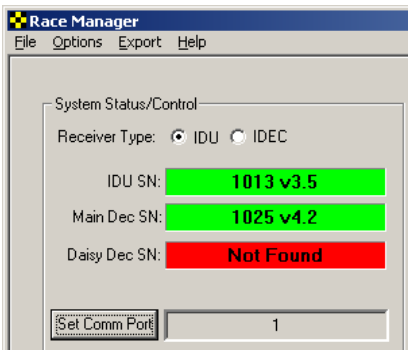
2. If you are using an IDEC select whether you want to use TCP/IP or not. If you are not using IDEC skip to step 3. Depending on whether the TCP/IP checkbox is checked you will see the button below change to either **Set Comm Port or Set TCP/IP.**

3. Click on **Set Comm Port** in the System Status/Control box. A list box will appear with the operational com ports. Or in TCP/IP mode click the **Set TCP/IP** button and a window will pop up allow the entry of the IP address and port number. The port number for the IDEC is 10001. You will have to use your hub or router to determine the IP address that is assigned to the IDEC unit. The default IDEC address is 192.168.1.49. The name of the device will start with a 'C' and the last 6 digits of the IDEC serial number (eg. CA6D2E1).

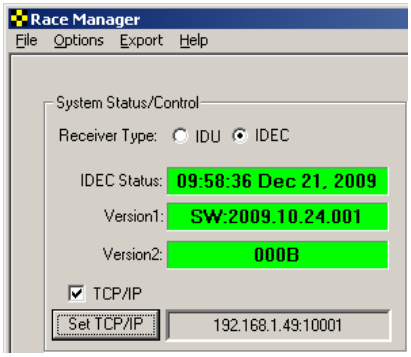
NOTE: If your router assigns addresses to your computer as 192.168.**0**.XXX you will not be able to connect to the IDEC. You must either change the router such that it assigns address in the same domain 192.168.**1**.XXX or you must change the IDEC address.

NOTE: It is also possible to connect your PC directly to the IDEC with a cross-over network cable. However, you will have to assign your PC an address in the same domain (e.g. 192.168.1.5) as the IDEC. Normally this will have to be done by giving your PC a static IP address.

4. Click the 'OK' button. Race Manager will attempt to discover and communicate to the RMS components. When it successfully locates the components the indicators will light green and display the appropriate data. For IDU systems the windows will display the IDU serial number as well as the decoder serial numbers. In IDEC mode the time and date stamp will appear and update. The other 2 boxes will show firmware version numbers.



IDU



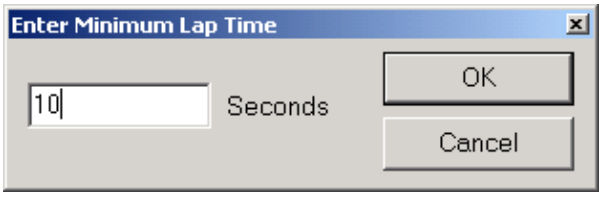
IDEC

2.1.2 Set Min Lap Time

This is used to set the minimum acceptable lap time. It is used to prevent unwanted detections such as when a car spins out over the antenna and crosses it multiple times or when a transponder is accidentally brought near the antenna or some other point where it can be detected by the Decoder.

To set the minimum lap time click on the **Set Min Lap Time** button and enter the number of seconds in the window that pops up. Click **OK** when finished or **Cancel** to abort the operation.

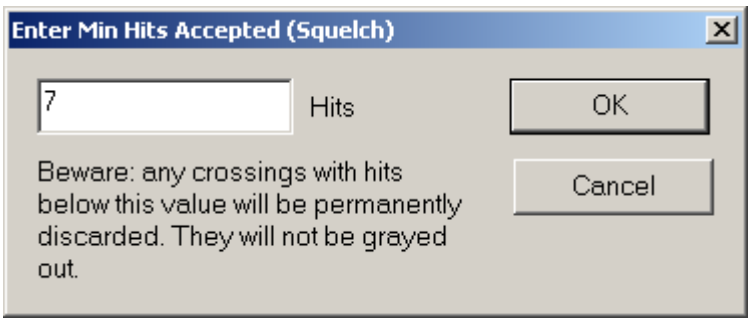
Note: The crossing on the crossing screen will be Gray in color.



2.1.3 Set Min Hits (Squelch)

This is used to set the minimum acceptable hits. It is used to prevent unwanted detections from stray transponders such as when someone walks near the antenna loop. A hit is a transmission from a transponder with the transponder's identification code. Each transponder transmits a certain number of times per second. When the transponder goes by the detection loop the timing system will receive transmissions. The faster the transponder goes by, the fewer the hits.

Typically when a transponder passes near the loop, but not directly over the loop, the number of hits received is very low. If the min hits setting is set to some minimum threshold, transponders detections that do not meet this minimum are discarded and not shown on the Timing screen. The default number is zero (0). In this case, the minimum hit threshold is ignored.



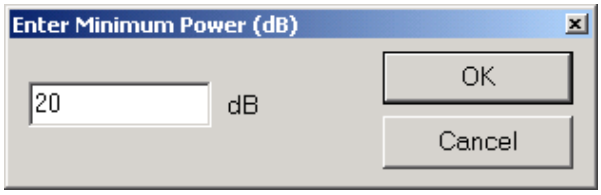
Note: The crossings which do not meet this minimum will be discarded and not show up on the screen. Be very careful when using this.

2.1.4 Set Min Power

This is used to set the minimum acceptable detection power level. It is used to prevent unwanted detections from stray transponders on the edge of the Decoder detection range.

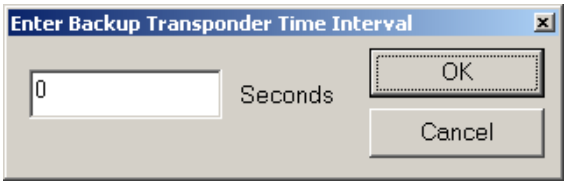
To set the minimum power click on the **Set Min Power** button and enter the number of dB in the window that pops up. Click **OK** when finished or **Cancel** to abort the operation. A typical threshold number is about 19-20 dB. Some experimentation may be necessary to pick an appropriate value.

Note: Can leave set at 0.



2.1.5 Set Backup Transponder Interval

This is only used if you are using two transponders per racer. To use this feature a backup transponder number must be assigned in the **Assign** page (Section 2.2). This setting is the interval in which both transponders must be detected to be considered a single crossing.



For instance, say transponder number 1001 is the primary and 1002 is the backup used for one racer. Say the interval is set to 1 second. If 1001 is detected first and 1002 is detected within 1 second of 1001, 1002 will be determined to be a backup transponder. This is also true if 1002 is detected first and 1001 is detected within 1 second. What will appear on the screen is the primary transponder number assigned. In this case 1001 will always appear whether or not 1002 was detected first.

2.1.6 Caution Handling

This group of controls is used to set parameters for how caution conditions will be handled.

2.1.6.1 Finish Lap on Caution (Only for Scored Caution)

This feature is used to handle split scoring situations. If the box is checked, the competitors will be scored only once when they cross the start/finish after the **Caution-Score** button on the timing screen is pressed. If not checked, all scored caution laps will be counted when computing the position of the competitors.

This is also used in situations when competitors race to the yellow.

Note: Read tutorial section for information on split scoring.

2.1.7 Auto Delete Partial Laps for Caution

If this box is checked partial laps will be marked as caution when press the non scoring **Caution** button on the timing screen. For instance, if there are 10 competitors on the track and two vehicles cross the start/finish line before the caution flag is thrown, the crossings by the first two vehicles will be automatically marked as caution.

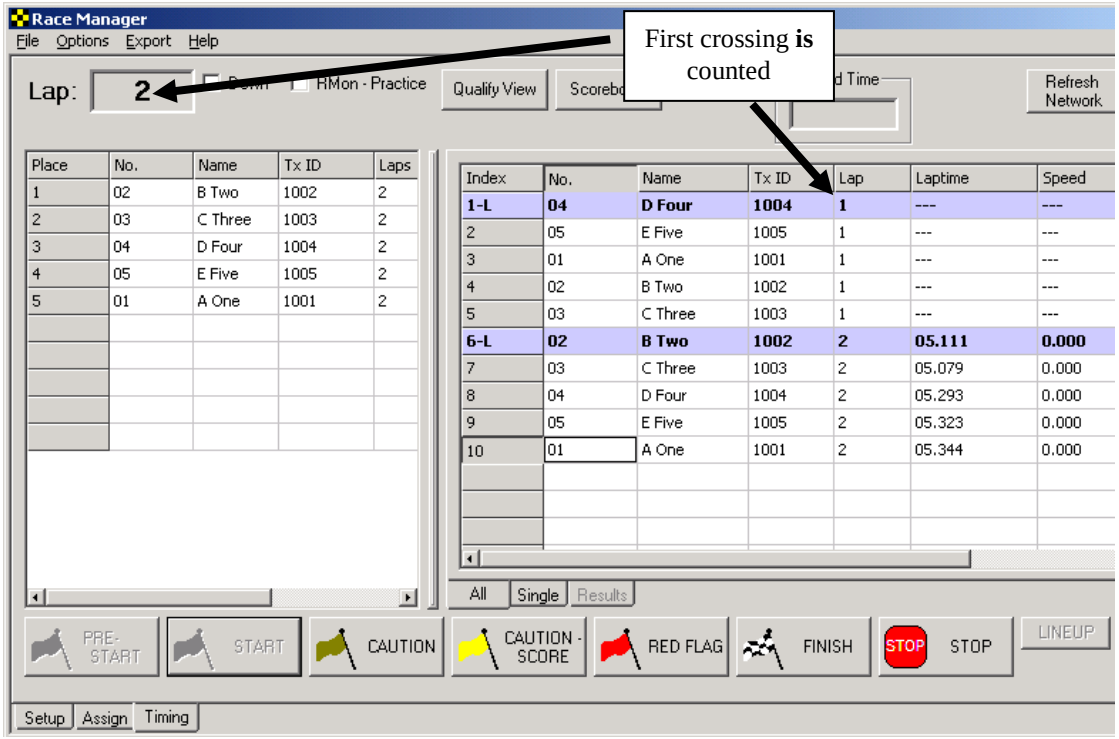
2.1.8 Use Race Results for Lineup

If this box is checked the caution lineup will arrange competitors based on their last race position. If the box is unchecked, the lineup is created based on the order the cars crossed the start/finish. Typically this box is left unchecked.

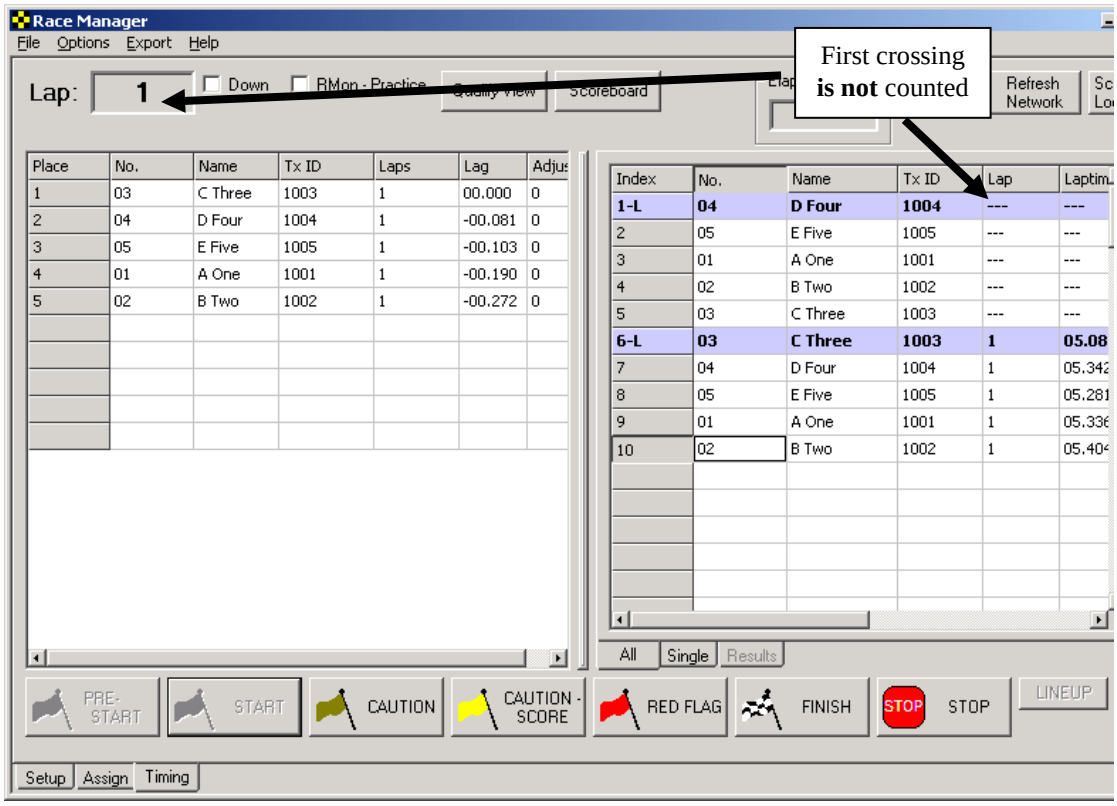
Note: Use this if you want to put lapped vehicles behind vehicles on the lead lap.

2.1.9 Count First Crossing at Start

If this box is checked the first crossing will be counted as a lap. This is often used when the start is different than the finish/scoring line such as in motocross racing. If the box is not checked the first crossing will not be counted, but the second crossing will be counted as the completion of the first lap.



Count First Crossing at Start is checked



Count First Crossing at Start is unchecked

2.1.10 Count First Crossing on Return to Green

If this box is checked the very first crossing after returning from either a caution or restart to green condition will be counted. In this case the start (green flag) button is pressed after all the vehicles have gone by the start/finish and the flag person has thrown the green flag.

If this box is not checked the very first crossing is not scored after returning to green condition. In this case the start (green flag) button is pressed as the flag person throws the green flag and before the vehicles have crossed the start/finish.

2.1.11 Score Red Flag Laps

If this box is checked when clicking red flag button the laps will count instead of not being scored in a typical red flag circumstance.

2.1.12 Auto Delete Partial Laps for Red Flag

If this box is checked when partial laps will be marked as red when pressing the **Red Flag** button on the timing screen. For instance, if there are 10 competitors on the track and two vehicles cross the start/finish line before the red flag is thrown, the crossings by the first two vehicles will be automatically marked as red.

2.1.13 Auto Finish

If this box is checked the software will automatically activate the **Finish Flag** button when the specified number of laps is reached. The number of laps for a race is specified per assignment on the **Assign Tab**. See section 2.2.5.

2.1.14 Demo Mode On

When this checkbox is checked the software is placed in a demonstration mode. This is useful for learning about the system without having all the hardware equipment connected. In this mode it is also possible to output scoreboard data and test the scoreboard feed.

In Demo mode the software will output transponder numbers from 1001 to 1010 in random order when the race view is active. The race information will continue until the **Finish** button is pressed. If the qualify view is active the numbers 1001-1005 will be shown with each of the transponders numbers making 4 crossings. Note that the lap times are not realistic numbers. They are simply used to demonstrate some of the software features and exercise the scoreboard output.

Note: System Status/Control com ports will turn yellow with DEMO MODE inside of them. It is recommended that the **Min Lap Time** is set to 0 sec, **Min Hits** is set to 0 hits and **Min Power** is set to 0 dB in demo mode.

2.1.15 Scoreboard Control

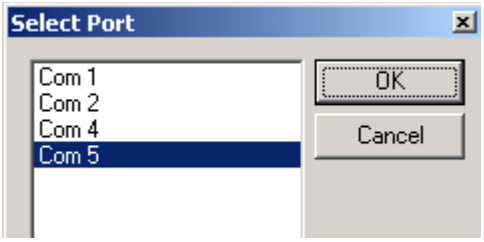
This section contains the controls to set up the scoreboard. In order to use the scoreboard to display data you must first properly connect the computer to the scoreboard controller. The PC must have a second available RS232 serial port or a USB to serial adapter in order to use the scoreboard. Be sure to have the PC and scoreboard controller connected before enabling the scoreboard output.

2.1.15.1 Set Comm Port

This is used to select the port that will output data to the scoreboard.

Click on the **Set Comm Port** button. A window with a list of ports will appear.

Select the appropriate port and click **OK.**



2.1.15.2 Total Positions

This control is used to set the number of positions on the scoreboard. Be sure to select the proper number for the scoreboard being used. This limits the amount of data sent from the software to the scoreboard. If the software is set for more positions than the scoreboard supports both the software and scoreboard have to process extra data. Some scoreboards may also exhibit unpredictable behavior. To set the number of positions use the up and down arrow buttons next to the control to increment or decrement the number.

2.1.15.3 Scoreboard Type

Use the scoreboard type list box to select the type of scoreboard that will be used.

Daktronics: This is for Daktronics scoreboards operating with the All Sport 5000 series controller. In order to use this option there are certain settings that must be made to the All Sport controller. First the console must be placed in proper configuration by using the code corresponding to transponder usage and the proper scoreboard. Second, place the console in race mode (not qualify) and press either 'Display Time' or 'Display Laps' button.

Generic: This is for scoreboards that are programmed to work with the generic scoreboard protocol provided by Race Manager. Both All American scoreboards from Everbrite as well as TSI Timers scoreboards can be configured for operation with Race Manager. Note that a separate hardware or software update may be necessary from the scoreboard manufacturer. Please contact the appropriate manufacturer for additional information.

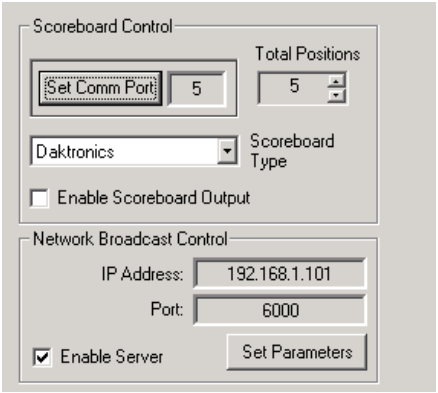
Race America and Westhold selections will work with those respective scoreboards.

2.1.15.4 Enable Scoreboard Output

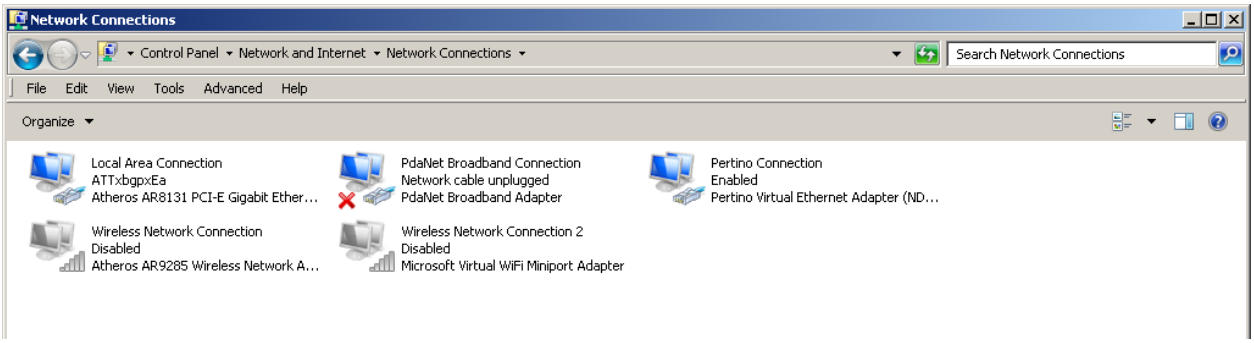
Before the Race Manager software will output data to the scoreboard, this checkbox must be checked.

2.1.16 Network Broadcast Control

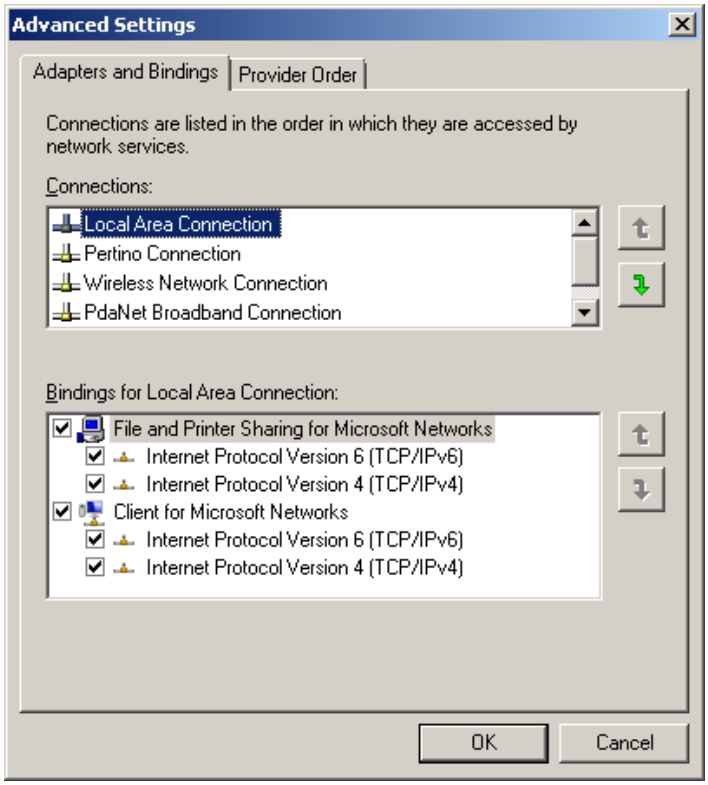
This section contains the controls to set up the software to act as an information broadcast server that can broadcast information to an IP address on a network (wired or wireless). This feature is used in conjunction with programs such as the **Westhold RMViewer**, a software application used by announcers and other personnel monitoring the race from a networked computer.



The IP Address shown in the window is the address of the computer the Race Manager software resides on. Note that if a computer has multiple network adapters (e.g. wired or wireless) that are enabled, Race Manager will select the first one on the list. The list order can be changed in Windows by going to the Change Adapter Settings screen, clicking the Alt key and then selecting the file menu Advanced->Advanced Settings



The following window will appear. Highlight the network adapter you would like to be the first adapter and use the arrow keys on the right to move the selection to the top. When Race Manager is restarted the adapter IP address will appear in the IP Address window.



2.1.16.1 Set Parameters

This is used to set the IP port that the information service will broadcast over. The default is 6000.

2.1.16.2 Enable Server

To enable the network information broadcast server this checkbox must be selected. If this is not enabled the RMViewer software or other software using this data feed will be unable to connect to the service and obtain race information.

2.1.17 RMonitor

This section contains the controls for outputting an RMonitor protocol stream. This is similar to the **Network Broadcast Control (Section 2.1.16)**. However, the output data stream is different and is used to support software and hardware devices that use this protocol.

NOTE: Some scoreboards will use the RMonitor feed. In this case it is not necessary to set up the **Scoreboard Control** section.

2.1.17.1 Set TCP/IP Port

This is used to set the IP port that the RMonitor information will be broadcast over.

2.1.17.2 Enable Network

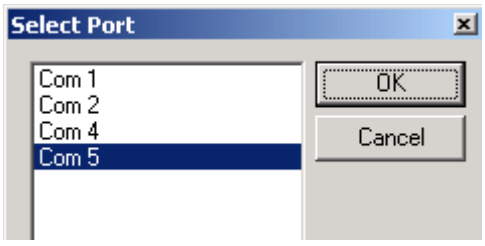
To enable the RMonitor information broadcast server this checkbox must be selected. If this is not enabled devices expecting a data stream will be unable to connect to the service and obtain race information.

2.1.18 Set Comm Port

This is used to select the serial port to output the RMonitor data on.

Click on the **Set Comm Port** button. A window with a list of ports will appear.

Select the appropriate port and click **OK.**



2.1.19 Enable Serial

To enable the serial port to transmit RMonitor data this checkbox must be selected. If this is not enabled devices expecting a data stream will be unable to obtain the data feed.

2.1.20 LapCeiver

This section contains controls used to enable the output used for the LapCeiver hand-held.

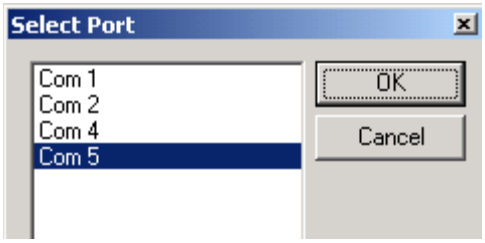
LapCeiver and LapCeiver Transponder

2.1.20.1 Set Comm Port

This is used to select the serial port to output the LapCeiver data to the LapCeiver transmitter.

Click on the **Set Comm Port** button. A window with a list of ports will appear.

Select the appropriate port and click **OK.**



2.1.20.2 Enable LapCeiver

To enable the serial port to transmit LapCeiver data this checkbox must be selected. If this is not enabled no data will be transmitted by the LapCeiver transmitter.

2.1.21 Sound On

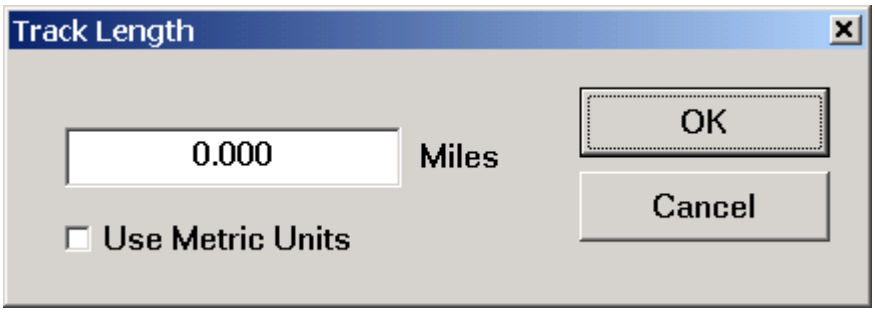
Check this box to enable the PC to output a beep each time a crossing is detected during a race. This is a useful feature to help determine if a transponder was detected.

2.1.22 Organization Name

Enter your organization name (e.g. Westhold Raceway) that will be placed on printouts, the RMonitor data output and exported data.

2.1.23 Default Track Length

Click on the **Default Track Length** button to bring up a window that allows the entry of the default track length. This is used to set the default track length when creating a new transponder assignment template.



Click on the **Use Metric Units** checkbox to change the type of units to use for the speed calculation.

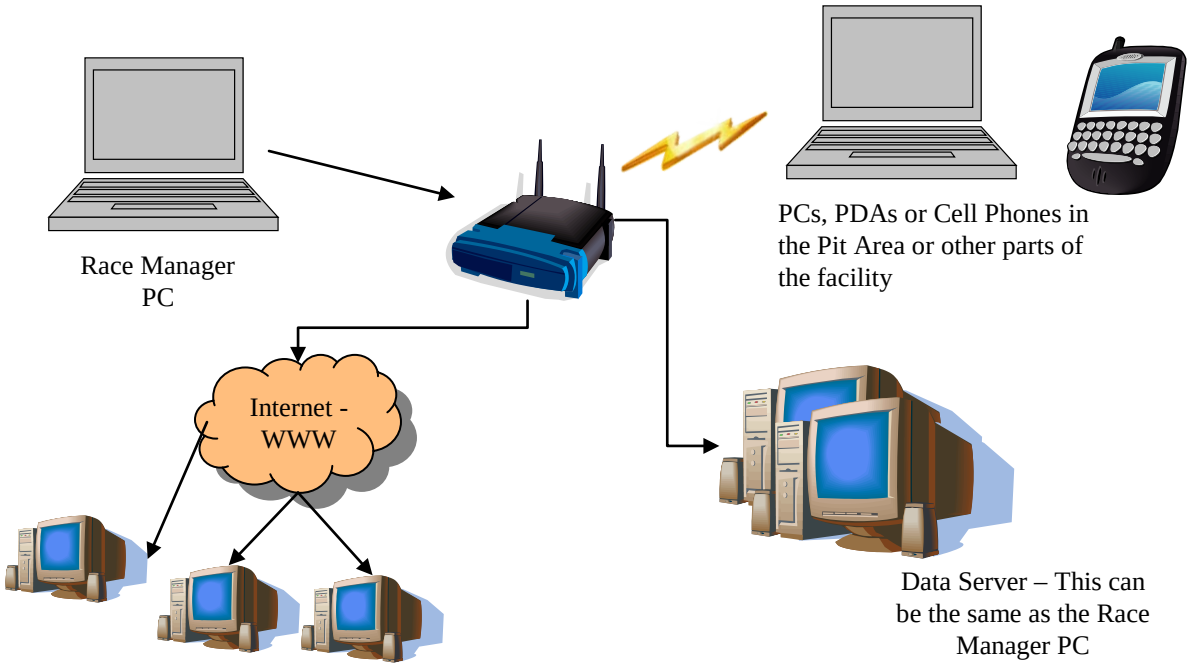
NOTE: You must set this to a non-zero number in order to see the average lap speed displayed on the timing screen.

2.1.24 Web Data

This section describes how it is possible to generate data for live internet feeds to the World Wide Web or for a local in-the-pits data feed that racers or fans may view. Many Microsoft based PCs have a web server built in. It is possible to configure a PC to feed race data information which can be broadcast over a wired or wireless network to racers or fans. Data can then be viewed with a PC, PDA or other devices with that can connect to the network and have a web browser.

The server PC can be the computer running Race Manager or it can be a different computer on the local network. It can even be a computer hooked up to the internet.

When Race Manager is timing a race and the web data section is enabled, Race Manager will output a file called 'racedata.xml' file every 1 second. This file contains information about the race including the race order and lap time information. This file can be used with the additional data files Race Manager generates as described below or can be parsed and used in a custom setting.



2.1.24.1 Set Data Path

Click on the folder icon to set the directory where you would like the race data file to be output. If Race Manager determines the folder does not contain the default web pages and associated files needed to display in-the-pits information it will ask if it should create those files. The files include HTML, PHP and Java Script files. You must have your web server configured properly to serve up this data.

It is not necessary to have these files if your IT person will not be using them. Instead your IT person can use the 'racedata.xml' file and create custom web pages and data feeds. For an example of usage visit the 'LiveTiming' section of the www.westholdtiming.com website.

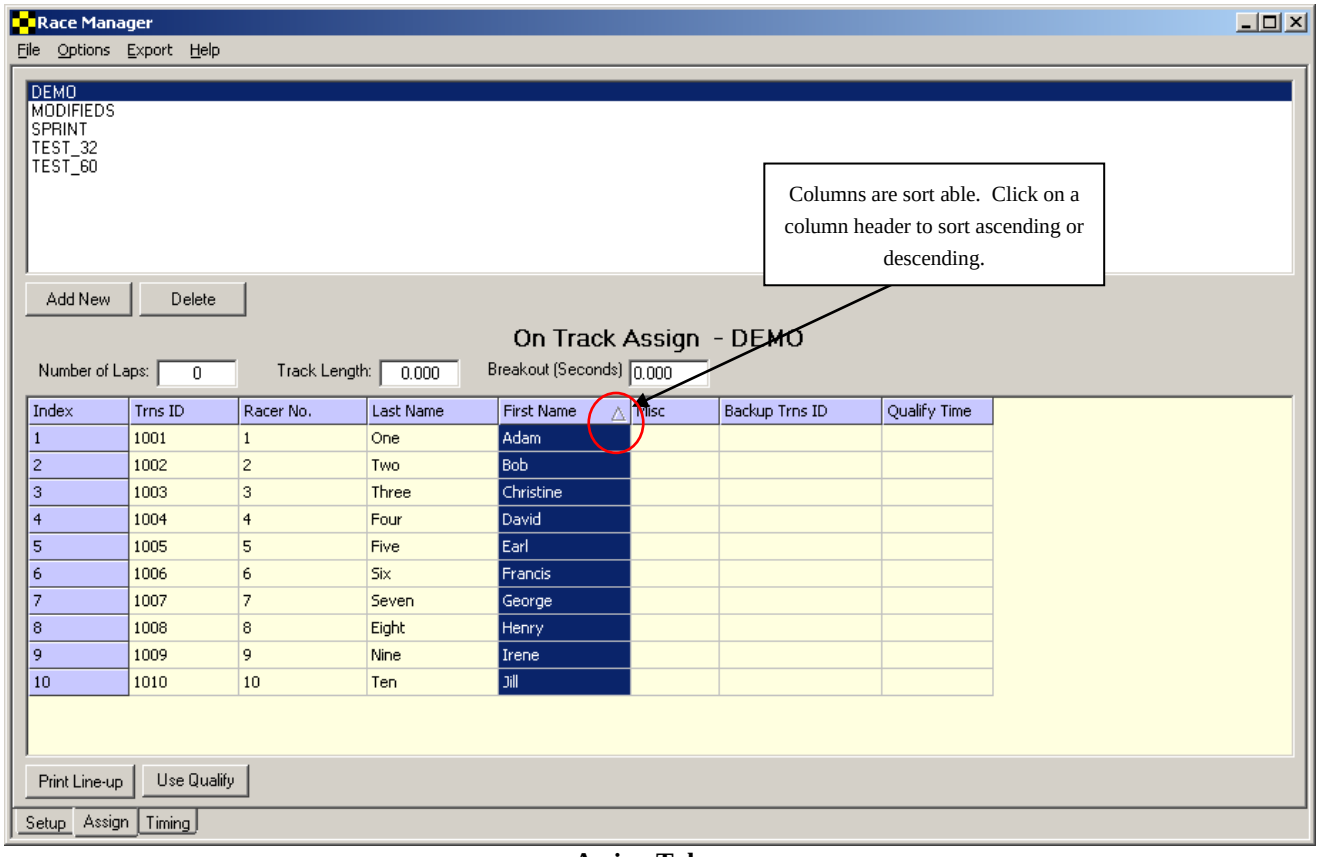
2.1.24.2 Enable Live Web Data

Check this box to enable the output of the 'racedata.xml' data file to the specified directory.

2.2 Assign Tab

The Assign page is used to create a mapping between transponder serial number identifications and vehicle numbers and participant names.

Transponders



Assign Tab

Enter the transponder serial number (**Trns ID**) and the racer number (**Race No.**) the transponder is assigned to. This is the minimum data needed to score a race. The **Misc** column can be any data desired. This can be useful for classifying different types of racers.

It is possible to assign two transponders per racer. The second transponder would be entered in the **Backup Trns ID** column. Backup transponders are rarely used, but in cases where the race data is critical such as for television broadcast it can be useful. See section 2.1.4 for additional information on backup transponder usage.

2.2.1 Assignment Template List

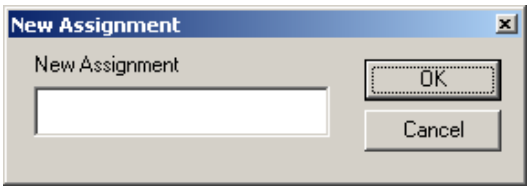
A list of available assignment templates is show in the box at the top of the screen. Each template has a set of mappings between transponder ID and car numbers. A template may be selected at any time, even during a race.

NOTE: Be careful when selecting a template during a race as this will change what is displayed on the Timing screen as well as on the scoreboard.

The assignment template can be viewed as a class or even a heat assignment. Usage will vary depending on the user and how they choose to organize the assignment templates.

2.2.2 Add New

This is used to create a new assignment template. Click on the **Add New** button and a window will pop up asking for an assignment name. Type in a name and click **OK** when done. Click **Cancel** to abort



2.2.3 Delete

This button is used to delete an assignment template. To delete a template, click on the template to from the list and click the **Delete** button. This will permanently delete the assignment template and all the assignment information.

2.2.4 On Track Assign

The **On Track Assign** window is used to create the mapping between the transponder ID and the vehicle number.

Select the assignment template from the list of assignment templates.

Now enter new data or modify existing data from the template. First enter the transponder serial number which is four numbers. This is found on the outside of the transponder. Then enter the vehicle number and other relevant information. It is not necessary to enter driver names, but it can be helpful when generating reports later on.

To create a new entry simply hit the **Enter** key on the PC keyboard and a new line will appear.

To delete an entry, simply highlight the data to delete and hit the **Delete** key on the PC keyboard.

2.2.5 Number of Laps

The total number of laps may be entered in the edit box. When the total number of laps is reached during a race, the race is automatically finished as if the "Finish" button on the timing page were pressed. This gives every competitor one more valid crossing.

Note that if this feature is being used the number entered should always be verified prior to a timing session since the number of laps for heat races are often different than that used for the feature race.

2.2.6 Track Length

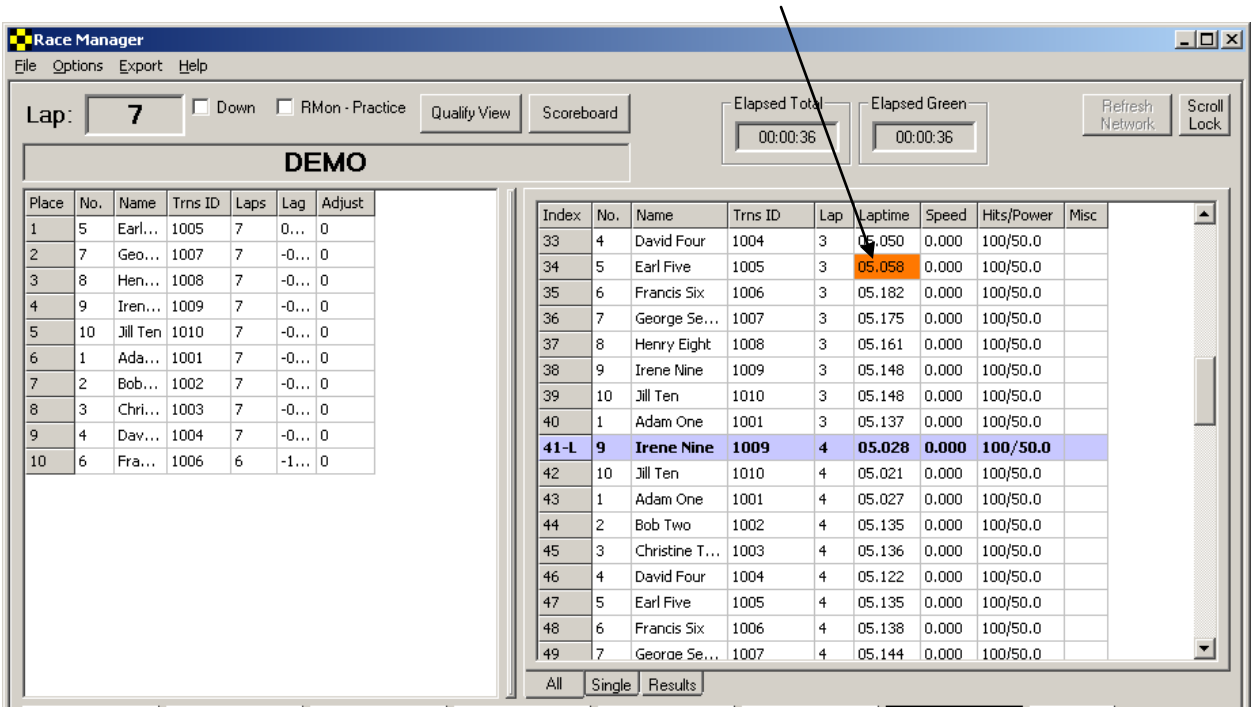
The track length is the length of the track in miles or kilometers depending on the default mile/km setting found on the **Setup** page. When a new assignment template is created, the default track length from the **Setup** page is entered for the new template.

Note: Make sure both track lengths match so that speeds will appear on Timing Screen.

2.2.7 Breakout (Seconds)

The breakout entry is used with the Qualify Time column in the assignment template. If a qualify time is entered Race Manager will indicate when the racer lap time is equivalent to or faster than the breakout time interval. For instance if the qualifying time for a racer is 16.250 second and the breakout is set to 0.250 seconds the breakout indicator will appear.

The breakout is indicated by an orange highlight on the Timing page.



2.2.8 Use Qualify

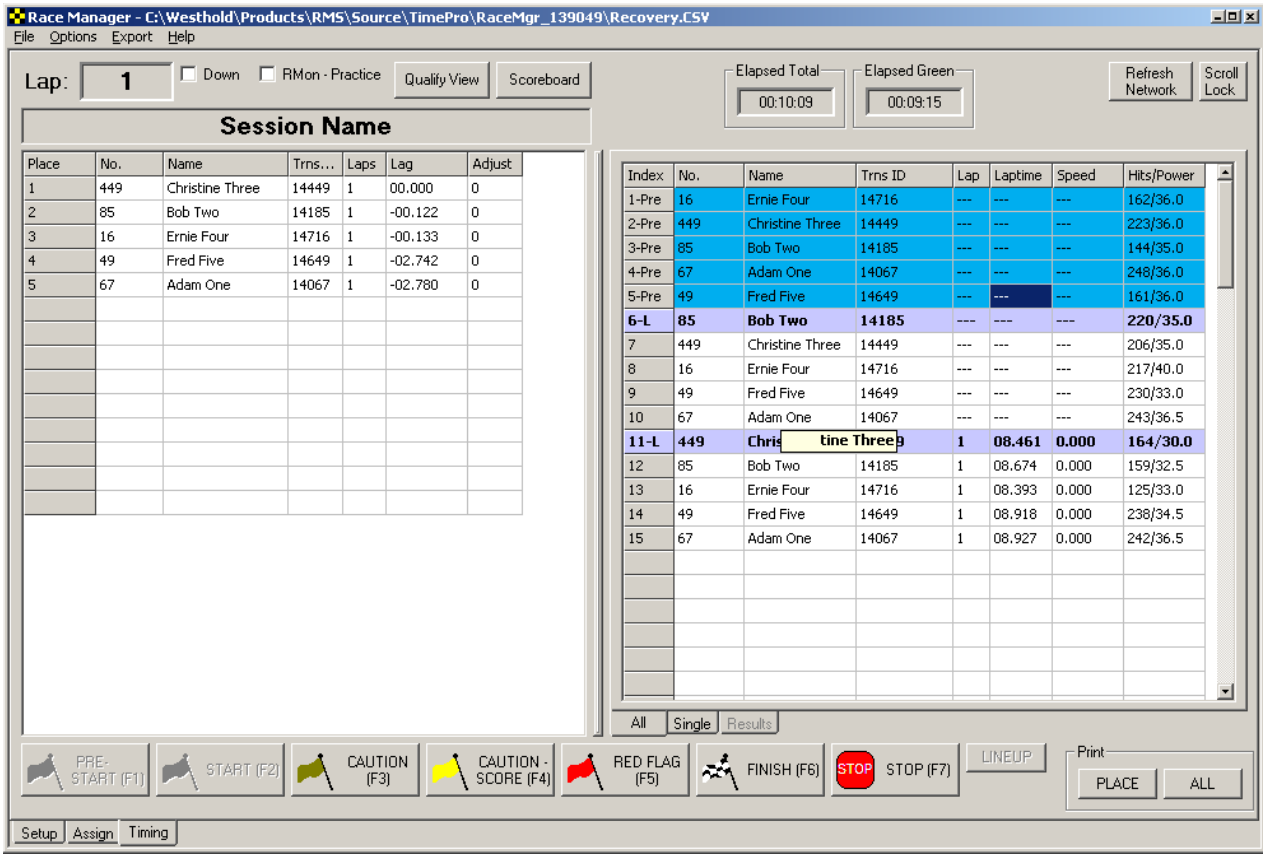
You may enter the qualify time used with the breakout feature one at a time by hand. Or you may open up results with qualifying time and press the **Use Qualify** button. This will automatically populate the Qualify Time field.

2.2.9 Print Line-Up

This prints the assignment template currently open. Click on the **Print Line-up** to print a copy of what is currently displayed on the **On-Track** assignment screen.

2.3 Timing Tab

This page is used during timing and scoring operations. The current running order or qualifying order is displayed on the left-hand side window and the crossings are displayed on the right-hand side.



2.3.1 Lap Display Box

This displays the current lap if the **Down** checkbox is unchecked. If the **Down** checkbox is checked the display shows the number of laps left in the race. If the scoreboard is enabled, the lap count will also be reflected in the scoreboard output.

Note: A number other than 0 must be entered for the session on the **Assign Tab** screen if you want to count downwards. Otherwise, the display will count upwards.

2.3.2 Down Checkbox

If this checkbox is checked and the number of laps entered on the **Assign Tab** screen is greater than 0 then the lap display will indicate the number of laps left in the race. If this checkbox is unchecked the lap indicator will indicate the current lap.

Once the countdown reaches 0, the counter will stop at 0 even if more laps are run.

2.3.3 RMon – Practice

This is used on conjunction with the RMonitor feed. If the checkbox is **NOT** checked, the transmitted session name will include the word 'Race' in it. Otherwise it will not. This is useful for software or devices which use this feed to indicate whether the session is a practice session or a race session.

2.3.4 Qualify/Place View Button

This button toggles the Place/Qualify window between a running order (or place) display and the qualify display. In the place display the current running order is show with the leader at the top. The Qualify view will display the current qualifying order sorted by fastest lap.

NOTE: This view may be changed during a race or qualifying session. However, the scoreboard display will also change so caution must be used when selecting the view.

Each column's contents are described by the header at the top of the column. The Tx ID column also displays additional information besides the transponder ID number. If the battery of the transponder is low (1 day or less battery life) the word "Batt" will appear next to the transponder ID.

2.3.5 Scoreboard Button

The scoreboard button opens up a scoreboard control dialog. The 'G' button informs the scoreboard to turn on its green light. The 'Y' button turns on the yellow light and the 'R' button the red light. The 'Clear' button will send a reset command to the scoreboard which will either blank the scoreboard or put all zeroes into the scoreboard positions. Note that not all scoreboards will respond to all the buttons.

2.3.6 Elapsed Total

The elapsed total display shows the total time that has elapsed since the **Start** button was pressed. The time is displayed in hours:minutes:seconds format. When the **Finish** button is pressed the time stops updating. This feature is useful for noting if a race is going beyond its allotted time frame. The information is saved along with the race information.

2.3.7 Elapsed Green

The elapsed green display shows the total time that has elapsed under Green flag conditions. The time is displayed in hours:minutes:seconds format. When the **Yellow, Red, or Finish** button is pressed the time stops updating. This feature is useful for noting the time it has taken to run the race under race conditions.

2.3.8 Refresh Network

Clicking this button causes Race Manager to send information via the Network broadcast and RMonitor data feeds. This is useful for forcing an update when something has changed.

2.3.9 Scroll Lock

This causes the crossing screen from scrolling when the RMS detects new crossings. Click on the **Scroll Lock** button to toggle this feature on and off.

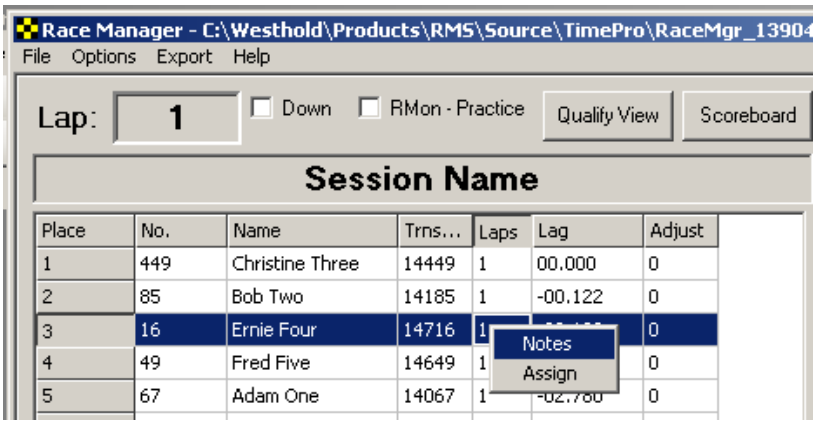
This is helpful when wanting to go back and check on a lap or vehicle that might have lost a lap and would like to find it.

2.3.10 Place/Qualify Window

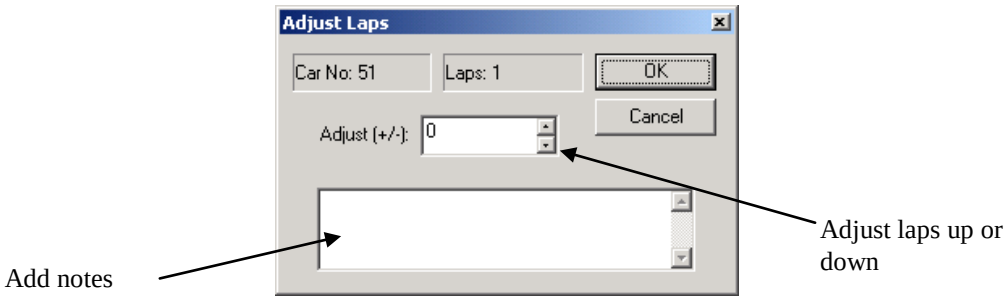
The **Place/Qualify Window** on the left side of the screen is used to display the current running or qualifying order.

2.3.10.1 Notes

When the window is displaying the place view the right mouse button may be clicked and a pop-up window will display and allow the software user to adjust laps up or down for a vehicle and make notes. To do this a vehicle must first be highlighted. Use the mouse cursor to click on the desired line in the window and select the vehicle. Then right mouse click and click on the **Notes** selection to bring up the lap adjustment window as show in the figure below.



Place/Qualify Window



Notes

Clicking the up and down arrows of the **Adjust (+/-)** entry will increase or decrease the number of laps for a car.

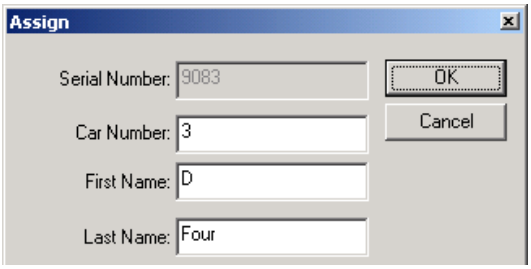
Note: This adjustment is only a rough adjustment. It cannot be used to place a vehicle in exactly the correct spot. Be very careful when using this feature.

When used it may cause a vehicle to appear in the incorrect spot. Upon the next crossing of the vehicle over the start/finish the vehicle will get an actual crossing time and be sorted in the correct order. To more accurately add a lap use the **Insert Manual Crossing** feature described in section 2.3.21.2.

The text box may be used to add notes that may be referenced later.

2.3.10.2 Assign

To make changes to the car number or assignments right mouse click on the line that will be changed. Select the **Assign** selection and a dialog box will pop up to allow you to make changes or assignments.



Assign

Make the changes and press the **OK** button. Pressing the **Cancel** button will cancel and changes made.

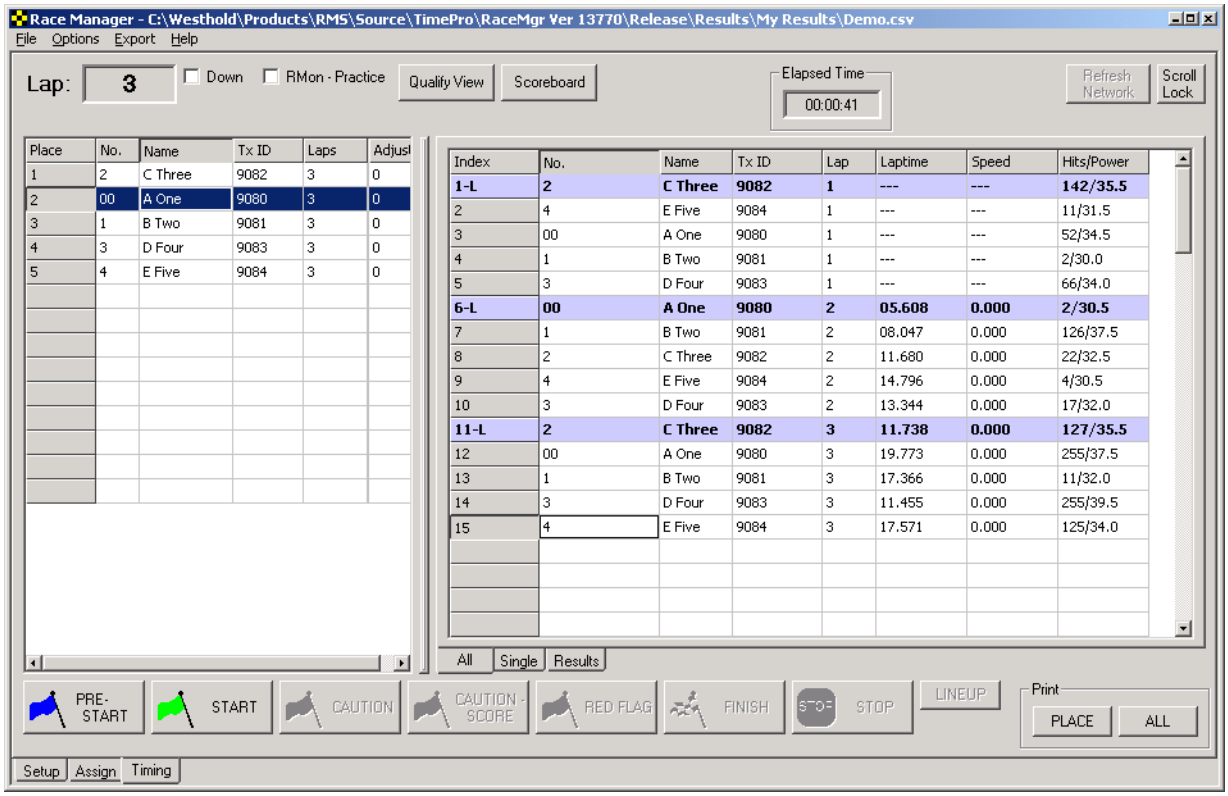
Note: Any changes made here will not be reflected on the assignment template.

2.3.10.3 Double Click

Double click on one of the racers in the **Place/Qualify** window will manually insert a crossing to the end of the crossing list. This is useful if a racer should be credited for a lap, but went through the in-field and missed the detection loop or went into the pits.

2.3.11 Crossing Window

The **Crossing Window** is used to display all crossings. There are three tab selections for this window-**ALL, Single** and **Results.** By selecting **ALL**, every crossing by every vehicle will be displayed. By selecting **Single** the crossings of a single vehicle selected on the **Place Window** will be displayed. To do this click and select the desired line from the **Place/Qualify Window**. See section 2.3.22 for information on the results tab



All Tab

There are several columns in the **Crossings** window. Most are self-evident. The last column, Hits/Power, has very useful data. This data can help trouble-shoot your setup. It can help determine if a transponder is mounted poorly or there is possible external interference to the system.

Each transponder transmits its serial number over and over again very rapidly on a periodic basis. The Hits number indicates how many times the system "saw" the serial number being transmitted as it passes by the start/finish line detection point. The faster the vehicle crosses the detection point, the lower the Hits number will be.

The Power number is a measure of the transponder's signal strength. Strength numbers below mid 30s indicate possible problems either with the transponder location or poor cable connections in the antenna loop or coax cable.

Hints

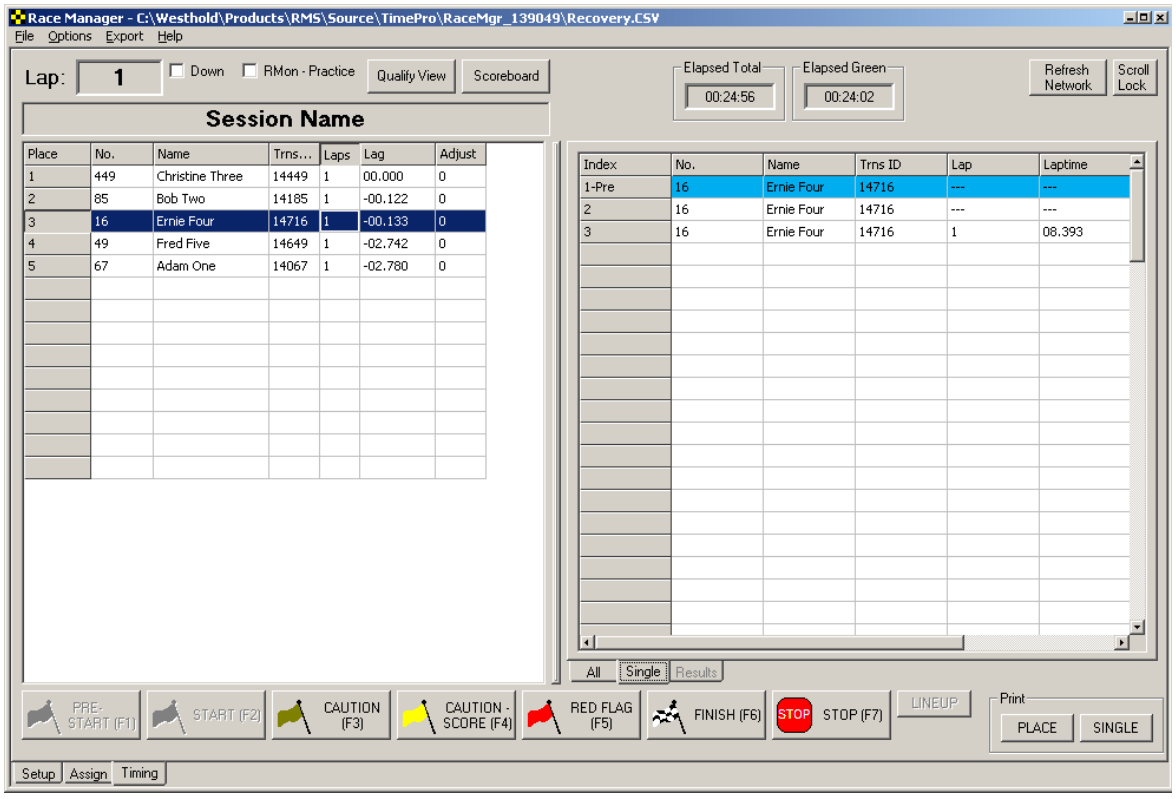
1. As each vehicle crosses the start/finish verify that the power numbers are consistent and above high 30's.

2. If a transponder has numbers on average lower than the rest by about 10 then that indicates the transponder is not mounted in the same way as the other cars. If the Power number is low then the transponder should be relocated to a better position.

3. If the Power number is in the good range (about 40 and above), but the Hits number is low compared to other cars, this indicates poor mounting position. This means that the transponder is not being "seen" very well. It could be that the transponder is in a recessed location surrounded by metal or facing the wrong direction (Label side of transponder should fact the antenna loop)

4. If the Power number is good, but the Hits number is erratic at a given speed this indicates either poor mounting or interference.

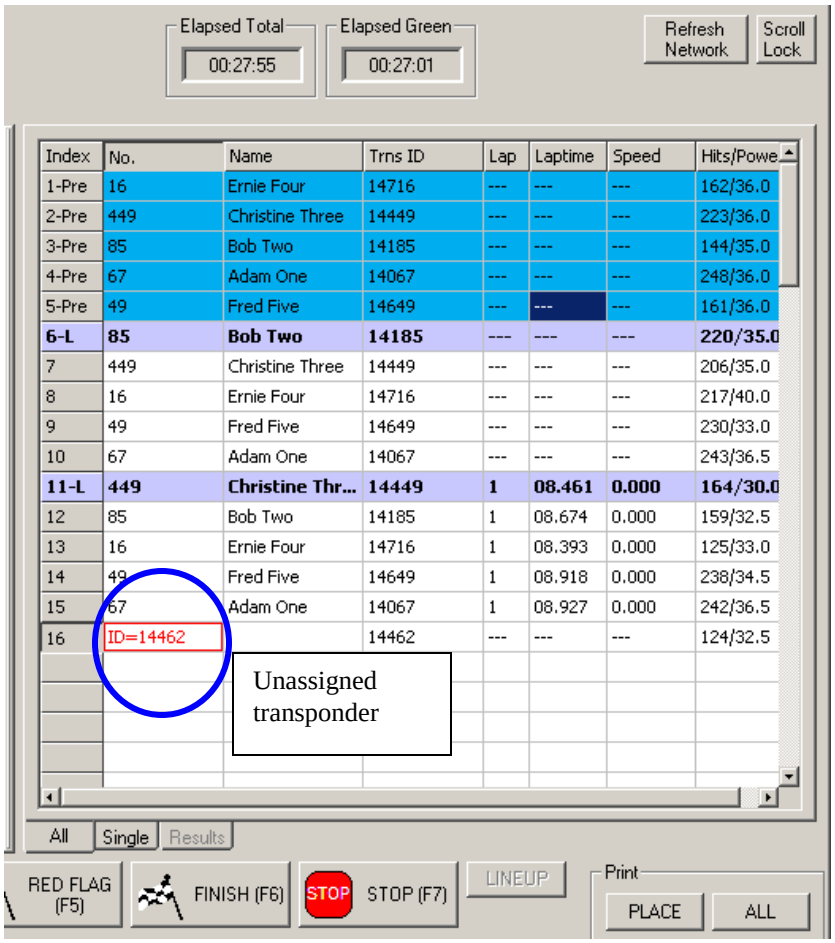
5. Low power number on all vehicles indicates poor connectivity in the wiring or poor mounting on all vehicles.



Single Tab

2.3.12 Unassigned Transponder

When transponders are not assigned to a competitor under the **Assign** tab the transponder number will show up in RED under the crossing screen. At any point during the race the transponder may be assigned to a competitor under the **Assign** tab or by right mouse clicking the transponder on the Place/Qualify window

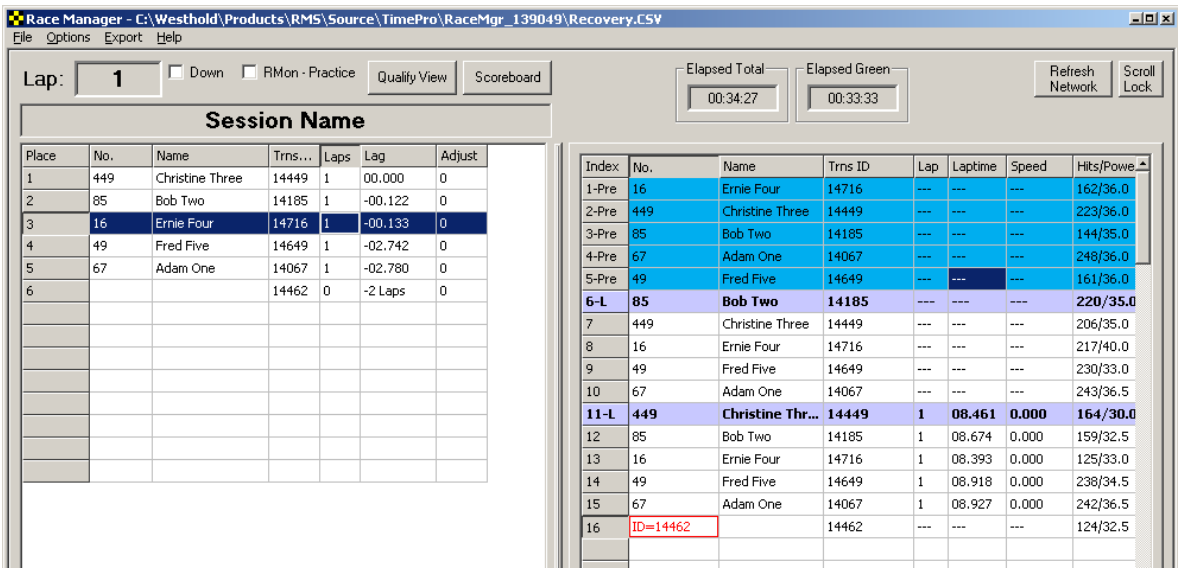


Note: DO NOT set any extra transponders within **20 Feet** from scoring loop (cable in ground of track, and cable running from tower to track), or any computer equipment (Computer and decoder). These can be picked up inadvertently.

2.3.13 Pre-Start Button

This button is used to pre-start a timing session. The crossings are recorded and shown on the crossing window, but not scored. This is useful for verifying that each vehicle has a transponder and that it is functional properly. Pre-start crossings are highlighted in blue. See fig 2.3.13-1 below.

Note: Highly recommended to use on pace laps before start of race.



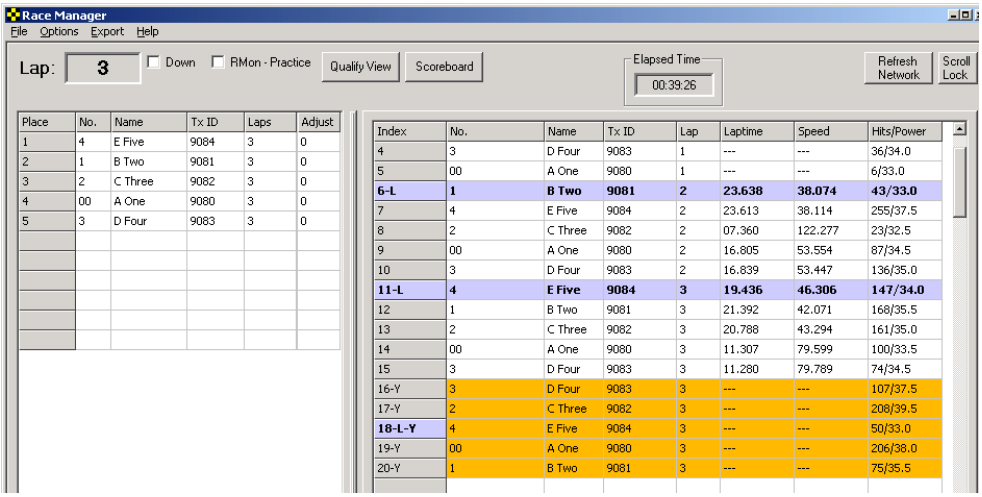
Pre-Start crossings in blue

2.3.14 Start Button

To begin a timing session, click on the **Start** button. It is not necessary to select an assignment template from the **Assign** page. If no assignment template is selected or a blank one is selected the display will only indicate the transponder ID numbers. Although it possible to change a template selection during a session, it is **NOT** recommended, as this will change the output to the Timing page and the scoreboard.

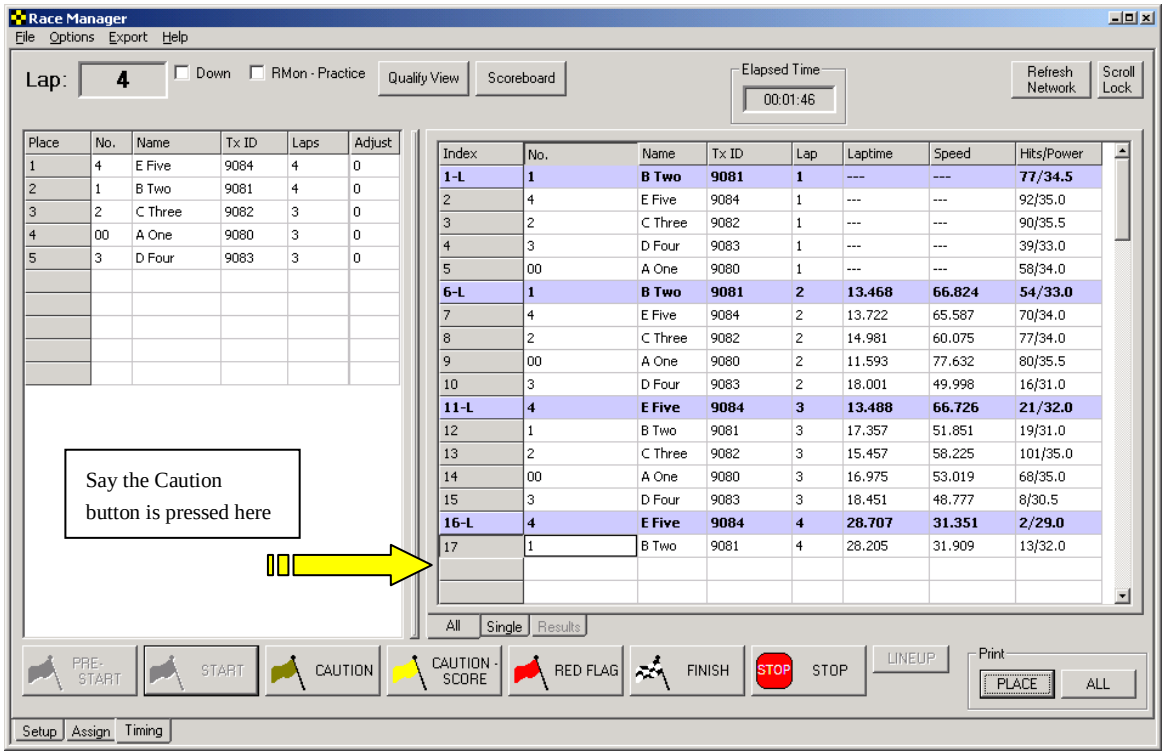
2.3.15 Caution Button (For non-scoring cautions)

If a caution occurs this button may be pressed and a caution condition will be enabled. This causes the crossings on the **Crossing Window** to display the affected crossings in bronze if it is in the **All** view. All crossings are highlighted and will not be scored.

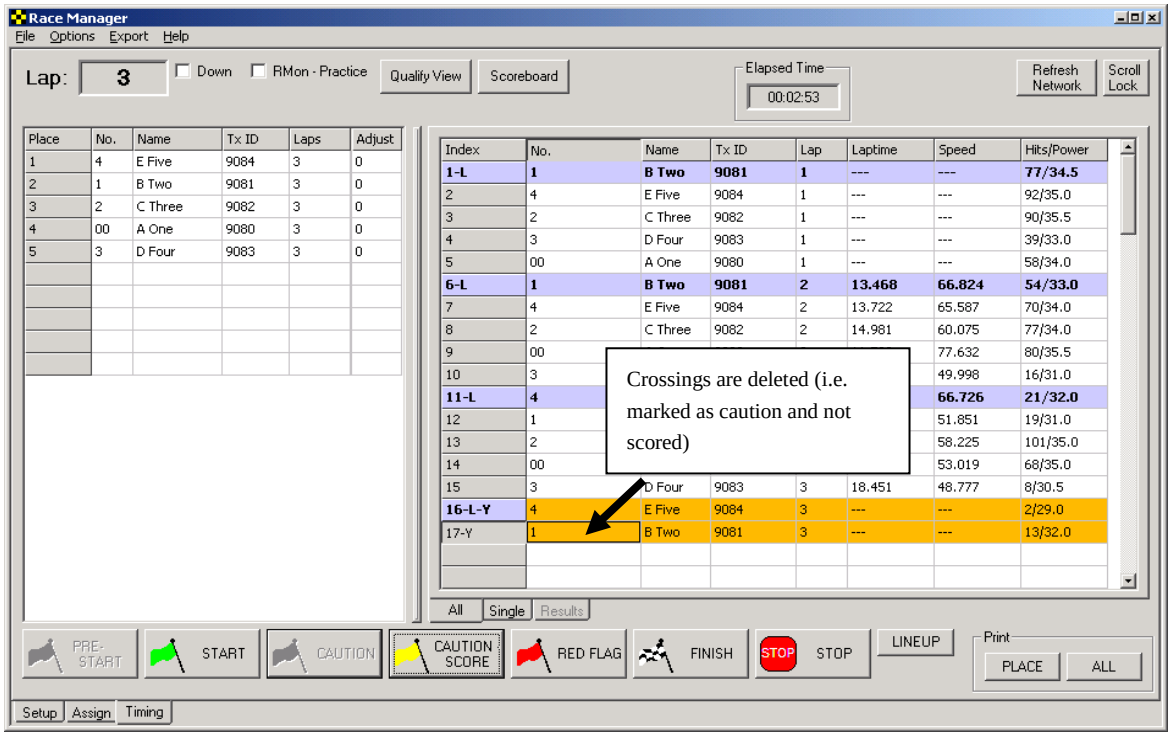


Caution

If the **Auto Delete Partial Laps for Caution** checkbox on the **Setup** page is checked a partial lap will be deleted and not scored.



Before Caution Button



Auto Delete Partial Lap

When the **Caution** button is clicked a screen with the current lineup will appear showing the order the cars crossed the start/finish line during the last complete lap. See section 2.3.18 for details.

After the caution period is over click on the **Start** button to go back to a green condition. If the item **Count First Crossing on Return to Green** is checked on the **Setup** page described in section 2.1.8 the very first crossing over the start/finish line will be scored. If this is the case, the computer operator should wait until all the vehicles have passed the start/finish when the green is thrown before clicking on the **Start** button.

If the option **Count First Crossing on Return to Green** is not checked the operator should click on the **Start** button just as the green is thrown, but before the vehicles cross the start/finish. The very first crossing will not be counted. The subsequent crossing will then be counted as the first completed lap.

2.3.16 Caution-Score Button

The **Caution-Score** button is used when the caution crossings will be scored. All crossings in this case will be scored unless the **Finish Lap on Caution (Only for Scored Cautions)** checkbox described in section 2.1.4.1. See the tutorial section 3.1 for a guide to split scoring

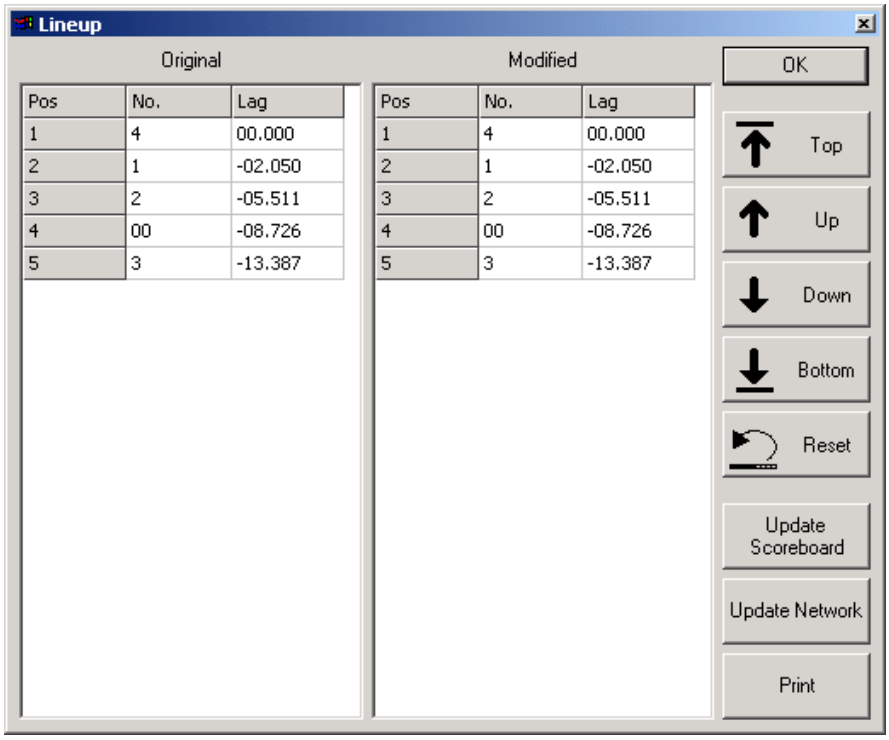
2.3.17 Red Flag Button

If a red flag condition occurs pressing this button will cause a red-flag to be enabled. All crossings affected will be highlighted in red. See section 2.3.18 for details on the lineup screen. When the red period is over click on the **Start** button to go back to a green condition.

Note: Leave red even if running under yellow until ready to go back green then press **Start** button unless scoring yellows then press **Start** button and press **Caution-Score**.

2.3.18 Lineup Screen

When the **Caution, Caution-Score or Red Flag** buttons are clicked a screen with the current lineup will appear showing the order the cars crossed the start/finish line during the last complete lap or it will show the last race position depending on whether or not the **Use Race Results for Lineup** checkbox on the **Setup** page is checked.



Lineup Window

The left hand side of the screen shows the lineup according to the scoring system. The right hand side is used to modify the scoreboard output. Adjustments can be made on the right hand side of the screen. To do this you click on one of the entries on the right so that it is highlighted. Then, click on one of the buttons on the right to either move the selected entry up or down.

The **Top** button moves the entry all the way to the first place position. The **Bottom** button moves the participant to very bottom of the list. The **Up** and **Down buttons** move the entry up and down one position respectively.

Once you are satisfied with the rearrangement the **Update Scoreboard** button may be clicked to send the modified arrangement to the scoreboard. The **Update Network** button may be used to send the modified update over the RMonitor feed. This is useful for updating devices with the lineup that use the RMonitor feed.

Note 1: Modifications on the Lineup screen do not change the actual positions of the cars. The modifications are for the benefit of the scoreboard display.

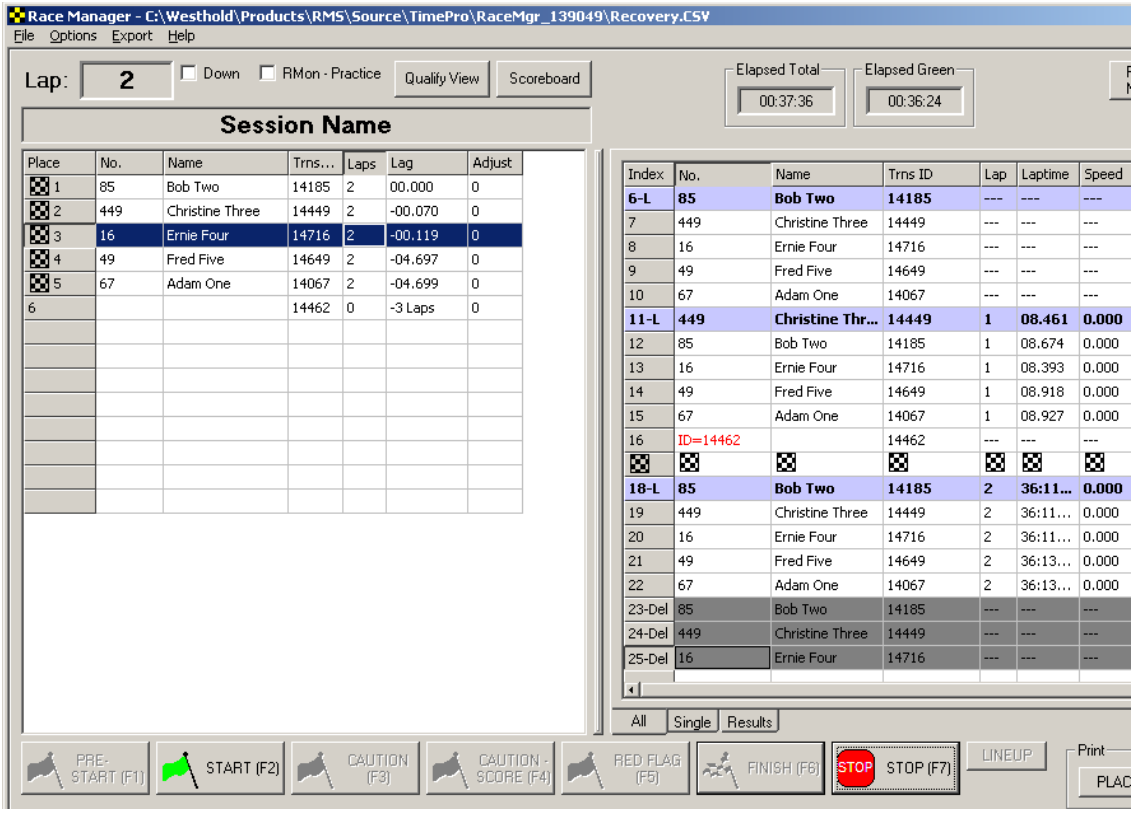
Note 2: While the Lineup screen is displayed the scoreboard will not update positional changes in non-scoring cautions conditions.

2.3.19 Finish Button

Click the **Finish** button right before the leader takes the checkered. This allows each competitor to be scored for only one more crossing. All subsequent crossings are recorded but not scored. This prevents the leaders from being accidentally scored if they do not get off the track right after crossing the start/finish line.

When the **Finish** button is pressed a line with checkered flags will appear on the crossing window. When a crossing occurs after this line a small checkered flag will appear next to the racer on the **Place/Qualify** window to indicate the racer has taken the checkered.

NOTE: This is a useful feature to determine if there are racers still left on a track.



NOTE: If you are unable to click the **Finish** button before leader crosses the start/finish then you can left-mouse click on the finish flag and drag the finish flag to the correct position. You may also hit the stop button before the leader returns to the start/finish line.

If the **Finish** button were accidentally pressed the race can be continued by clicking on the **Start** button. The finish flag line will disappear and the deleted crossings will be turned into green flag crossings.

2.3.20 Stop Button

Click the **Stop** button to stop all scoring. When this is done a window will pop-up and the user is given a chance to save the results of the timing session. The default file name is the name of the assignment template used. You can change this by typing the name of the file to save the data as and click **OK**. If **Cancel** is clicked, no data is saved. However, it is still possible to save the data by going to the menu item <FILE>\<SAVE RESULTS>.

NOTE: A very useful feature is the **auto save** feature. When the **Stop** button is pressed Race Manager automatically saves the race data in a folder called **'AutoSave'**. This folder is located in the directory that Race Manager is located in.

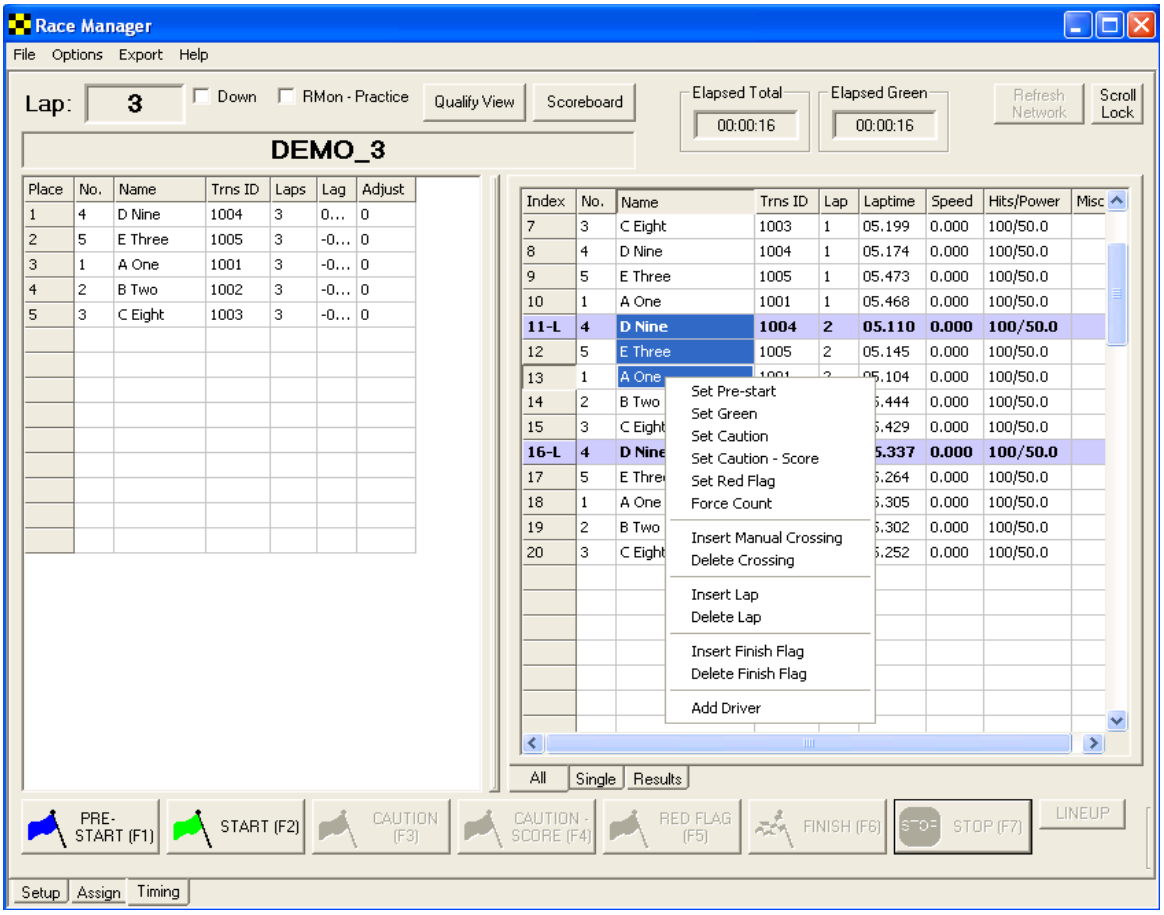
Attention: For Windows Vista machines and higher this may not be the case. If your PC is configured for multiple users (i.e. User Control ON - default for Vista PCs) and Race Manager is installed under C:\ProgramFiles (x86) your data will be stored in a virtual directory under your main C drive. This is usually the directory C:\Users\AppData\Local\VirtualStore\Program Files\RaceManager. The auto saved races are named with the assignment name first followed by a date/time stamp.

2.3.21 Crossing Window Pop-Up Menu (Used to modify crossing status)

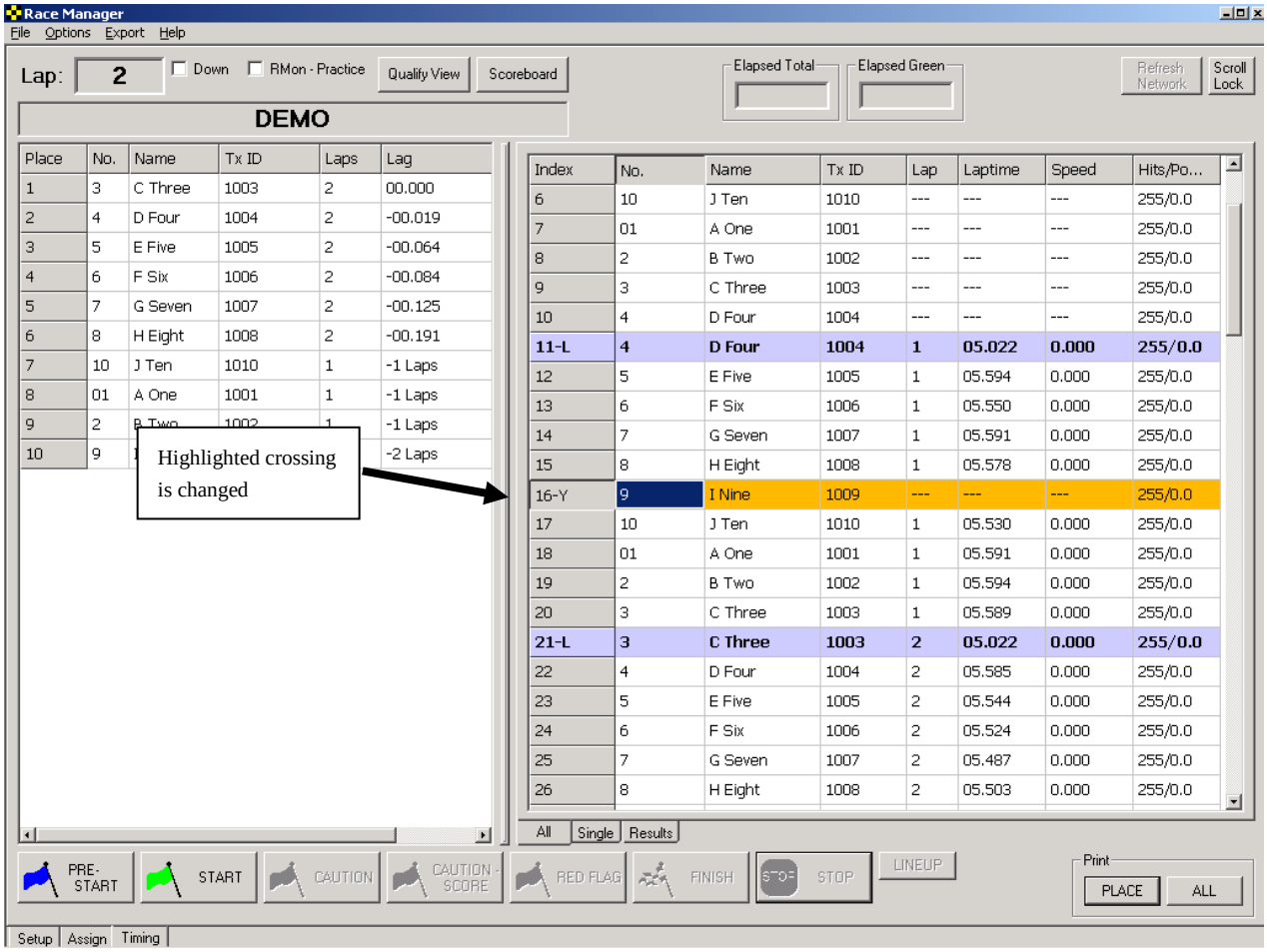
This menu can be used to change any crossing to a different flag condition. For instance it can be used to change a green flag crossing to a caution flag crossing or a red crossing. There are also several other options for inserting manual crossings. See the sections below for a more detailed description.

2.3.21.1 Changing Crossing Type

Individual or multiple crossings may be selected for and their crossing type changed by first highlighting the desired crossing and then right-clicking the mouse with the mouse cursor in the **Crossing** window. Select the desired choice such as **Set Caution** and the crossing type will change. This is a very useful feature used to correct mistakes such as accidentally pressing the **Caution** button at the wrong time.



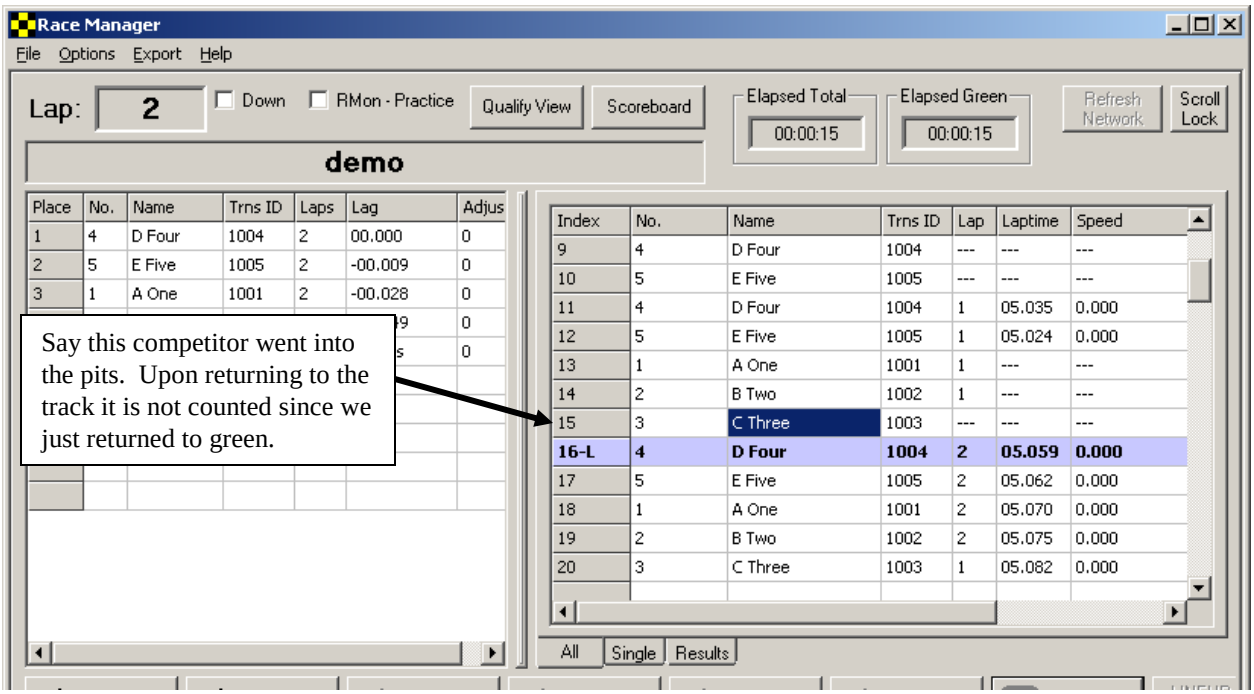
Crossing window right clicked



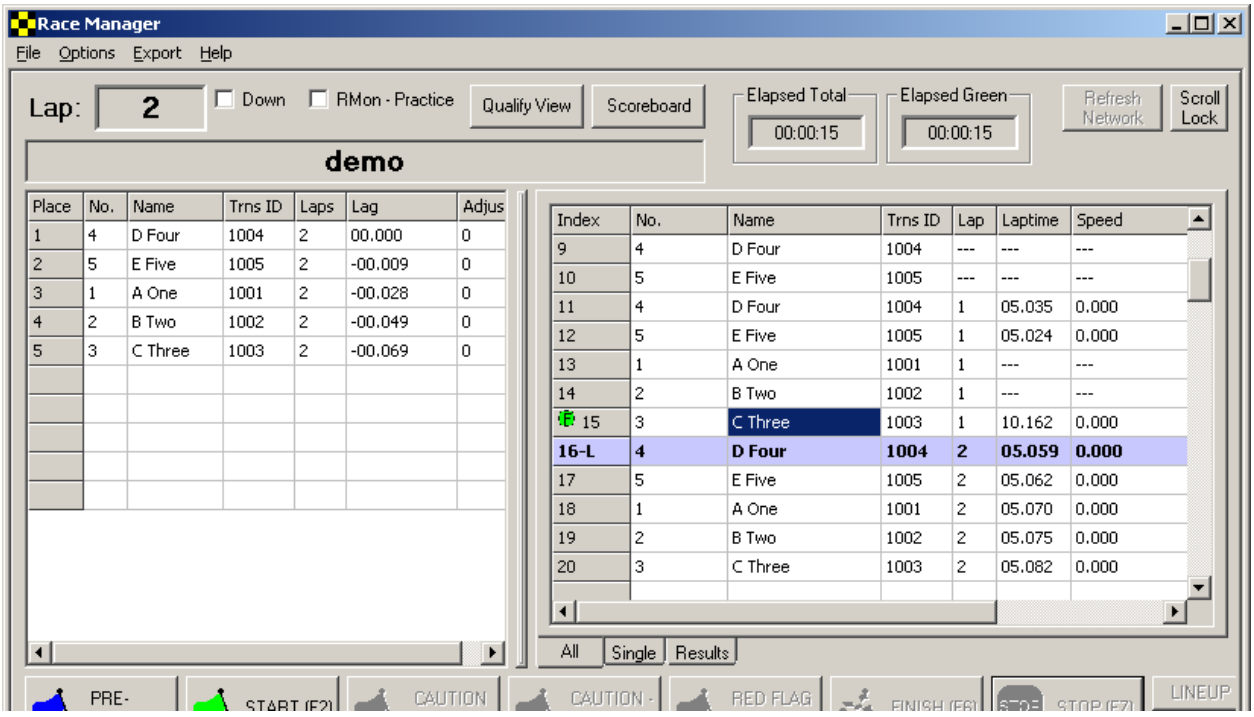
Highlighted Crossing Changed

Note: Be careful using this feature. It is a powerful feature, but can have unintended consequences.

There is a special crossing type called **Force Count.** Depending on the selections made in the **Setup** page sometimes a crossing may not be counted. For example after a returning to green from a caution the first crossing is not counted if the **Count First Crossing on Return to Green** checkbox is not checked. If the competitor has say gone to the pits and upon their return the crossing must be counted then select the **Force Count** selection. See the figure below.



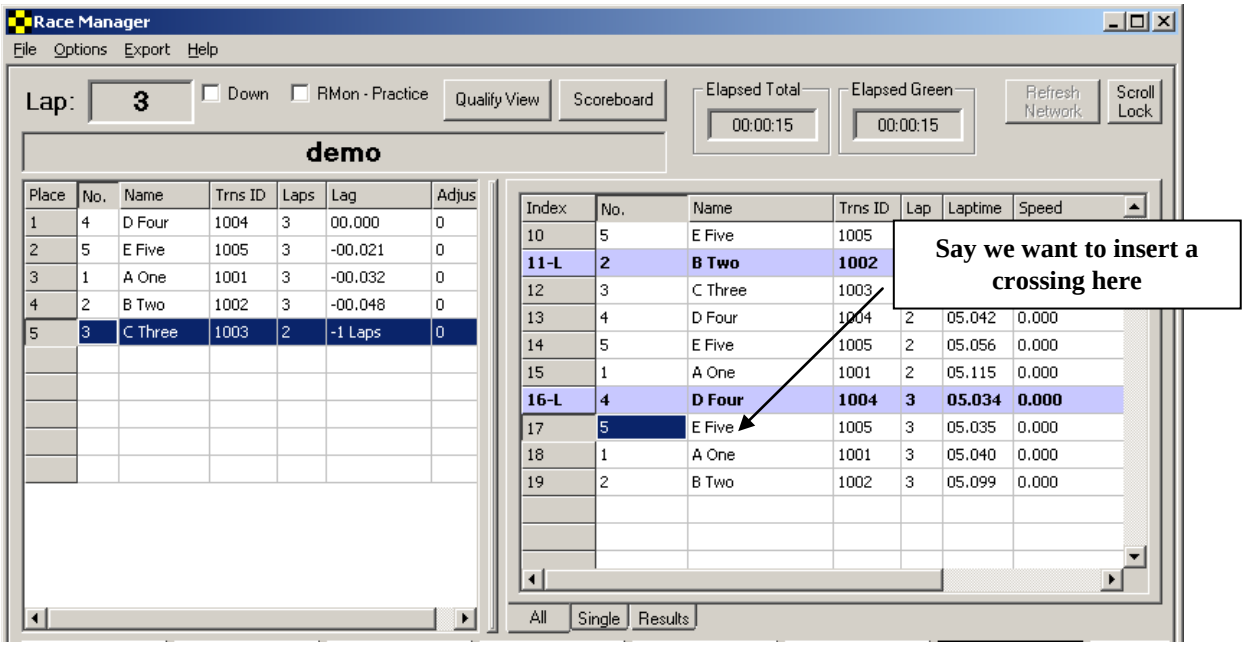
Use Force Count



Crossing is now counted

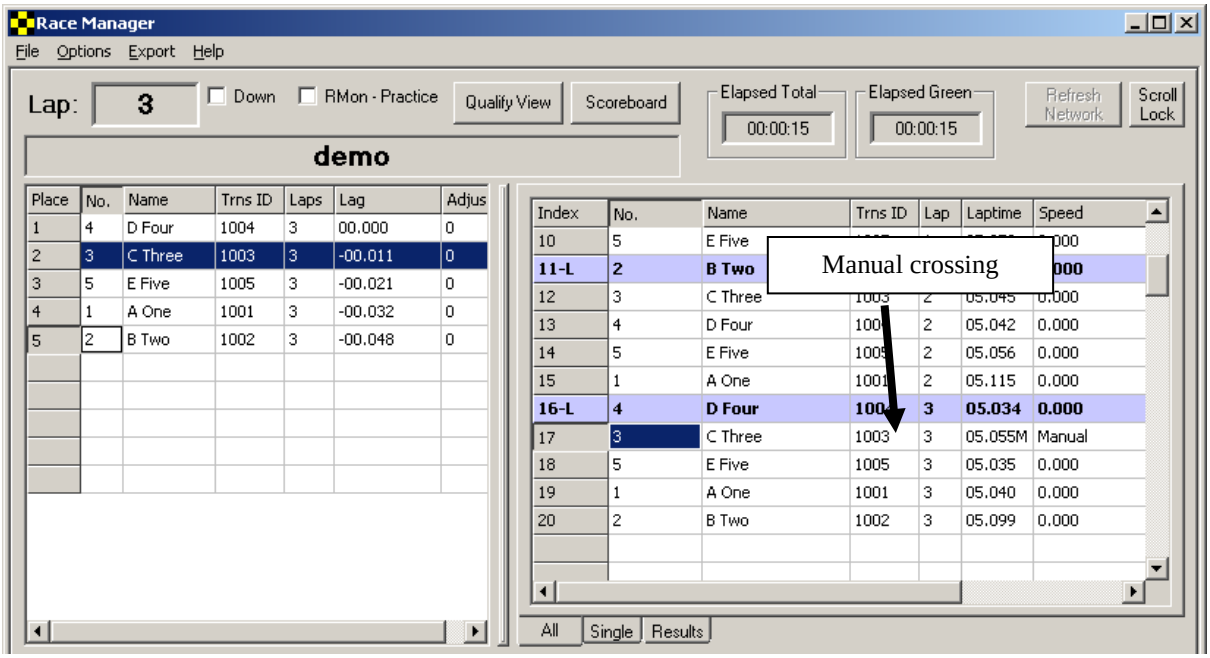
2.3.21.2 Insert Manual Crossing

There are two ways to add a manual crossing. The first way is done by selecting a car in the **Place/Qualify** window on the left and selecting which crossing the manual lap should be inserted before on the **Crossing** window.



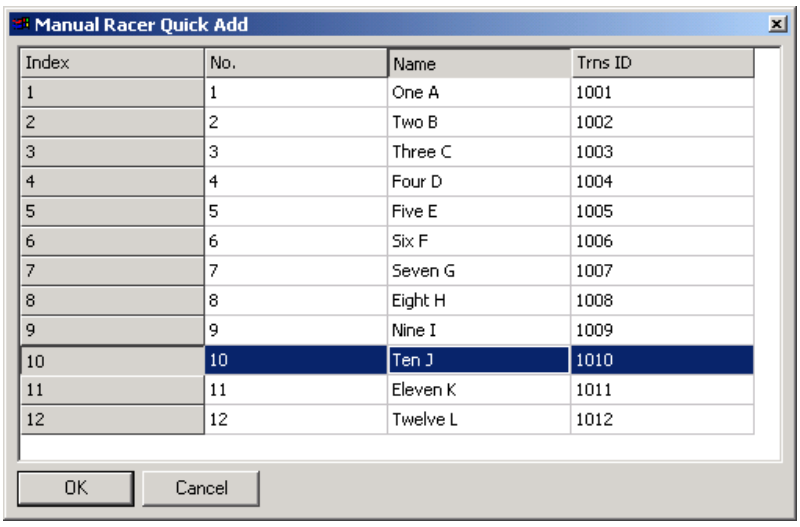
Highlight Driver

A car will get a manual lap inserted before first car crosses. Note that the manual lap is created such that it is exactly halfway in time between the crossing immediately before and immediately after the point it is inserted. Manual laps are useful if a car misses the antenna loop by perhaps driving through the infield area.



Inserted Manual Crossing

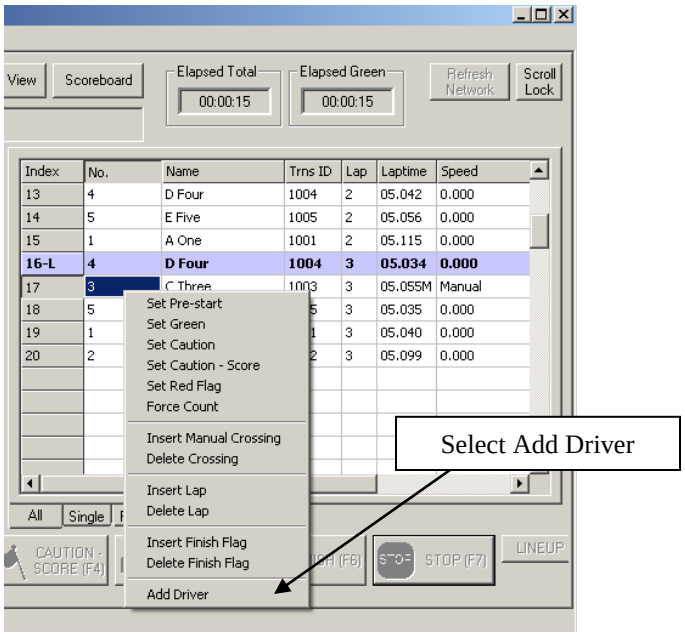
This first method requires that a transponder already have any entry on the left hand **Place** window. The second method does not require this. There are 2 ways to do this. For the first method left double click on the line on the **Crossing** window that the manual crossing will be entered at. The **Manual Racer Quick Add** window will pop up.



Manual Quick Add Window

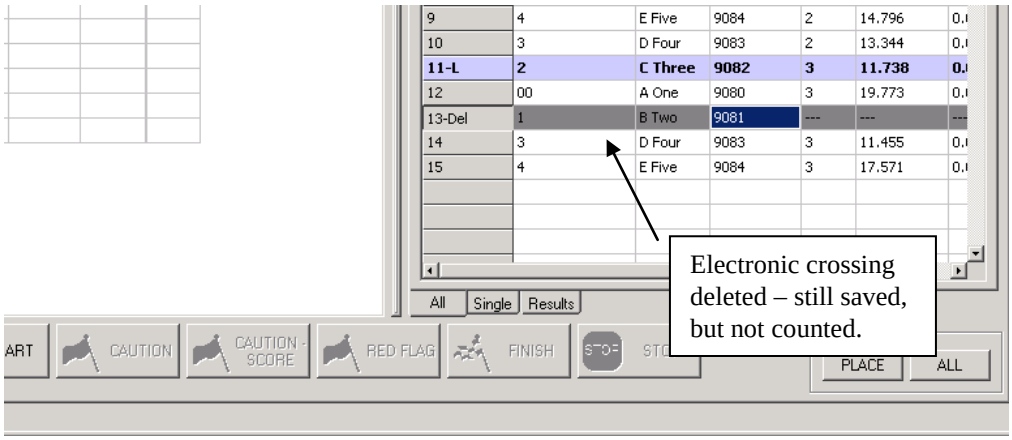
Now either select the racer to add a crossing for and click the **OK** button or double click on the racer. This will add a new manual crossing.

The second way to bring up this window is to click on the crossing on the crossing screen where you want the manual crossing to be entered. Then right mouse click to bring up the pop-up menu. Now select the **Add Driver** option. The **Manual Quick Add** window will appear.



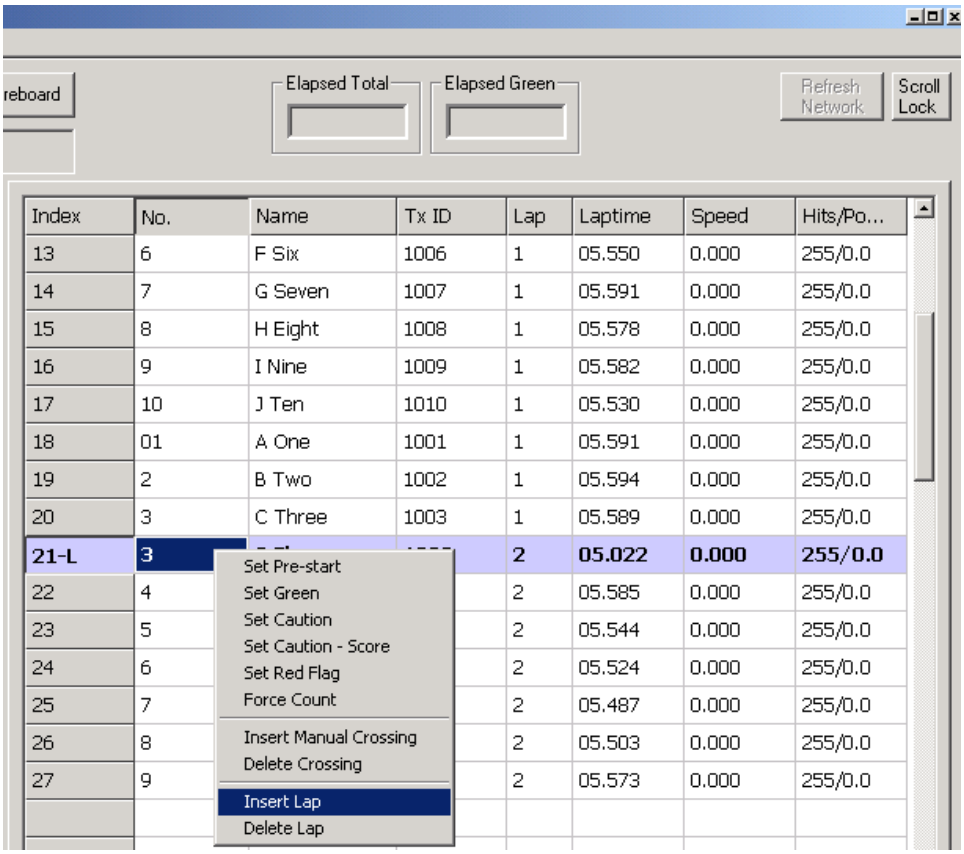
2.3.21.3 Delete Crossing

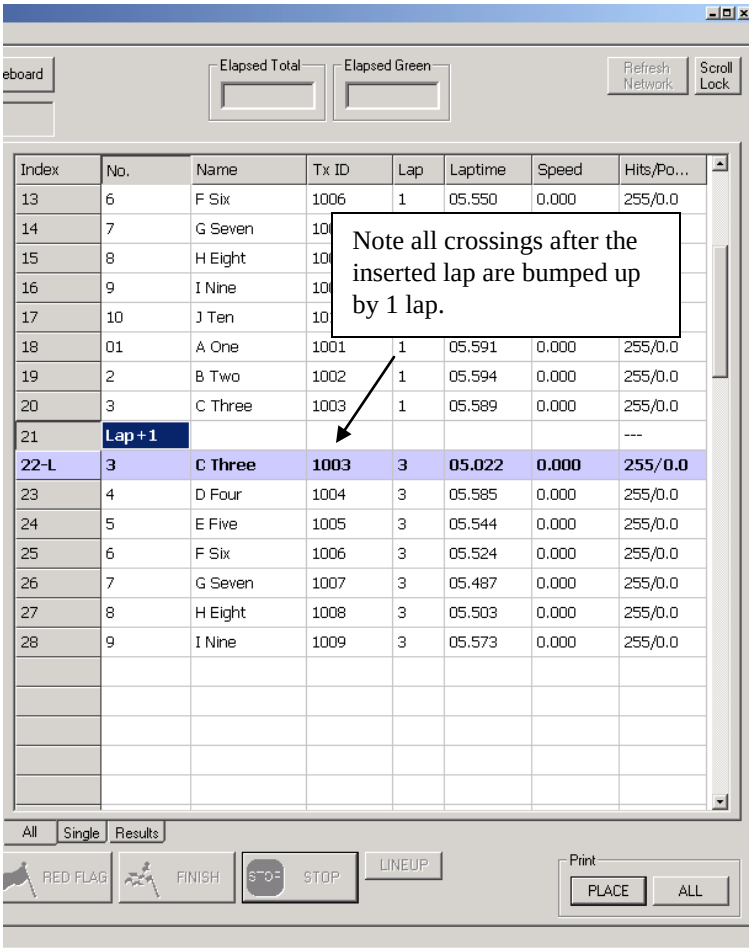
A crossing may be deleted by highlighting a crossing, right mouse click over the **Crossing** window and selecting **Delete Crossing** from the pop-up menu. Manual crossings will be permanently deleted. Electronic crossings will be grayed out and not counted towards scoring.



2.3.21.4 Insert Lap

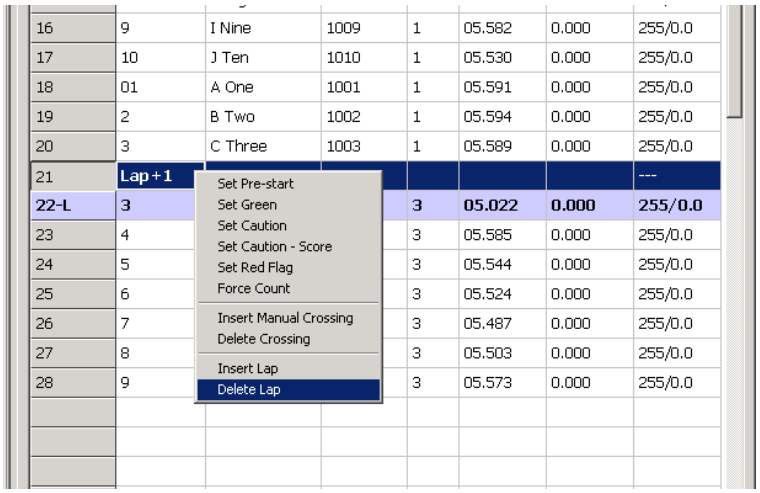
To add a lap to the entire field highlight the line where the lap should be inserted, right mouse click over the **Crossing** window and selecting **Insert Lap** from the pop-up menu.





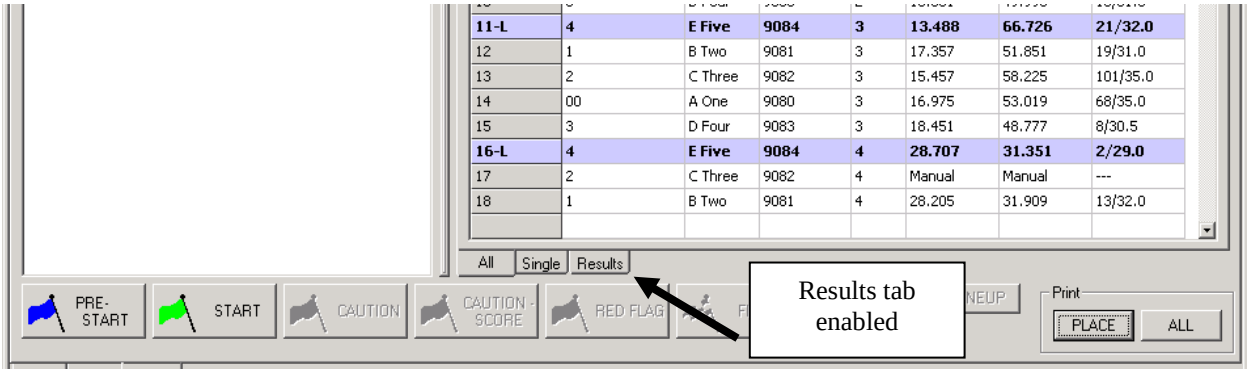
2.3.21.5 Delete Lap

A manually inserted lap may be deleted by highlighting the manual lap (ie **Lap+1)** and selecting **Delete Lap** from the pop-up menu.

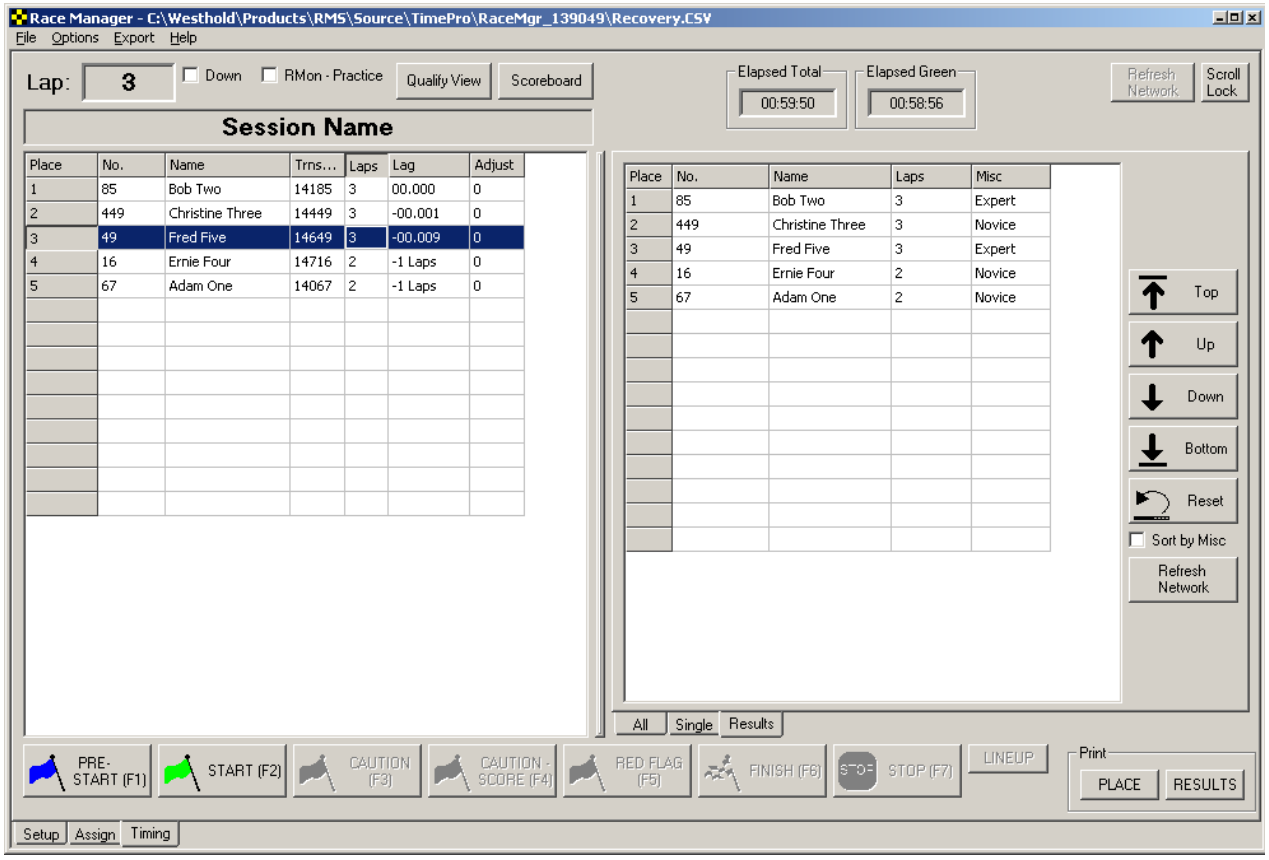


2.3.22 Results Tab

When the **Stop Button** is pressed and a timing session is concluded, the **Results** tab on the **Crossing** window becomes enabled. Clicking on the tab shows the final results view of the session.



Results Tab



Results Screen

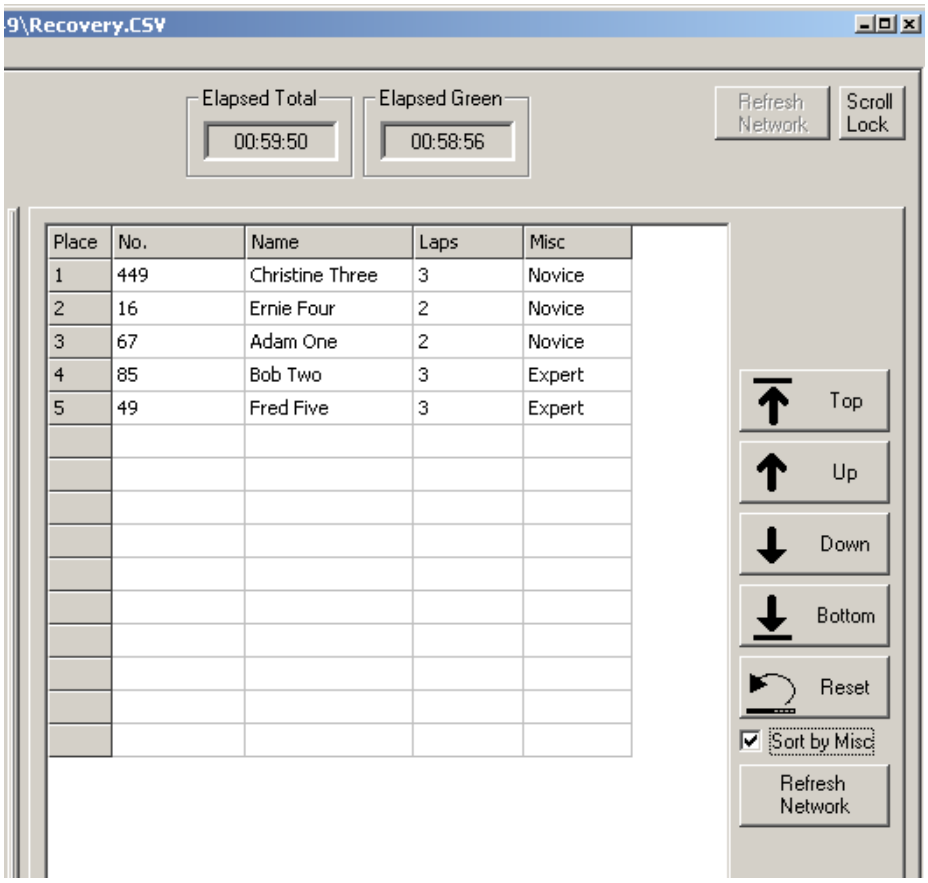
The results may be manipulated using the buttons on the right-hand side of the screen. Highlight the competitor to modify and click on one of the buttons on the right hand side to move the competitor.

The **Refresh Network** button is used to send the modified results to applications that use the network broadcast or

RMonitor feed.

Note: After manipulating the results the data must be saved. Do this by selecting the menu item <File>/<Save Results> or <File>/<Save Results As>.

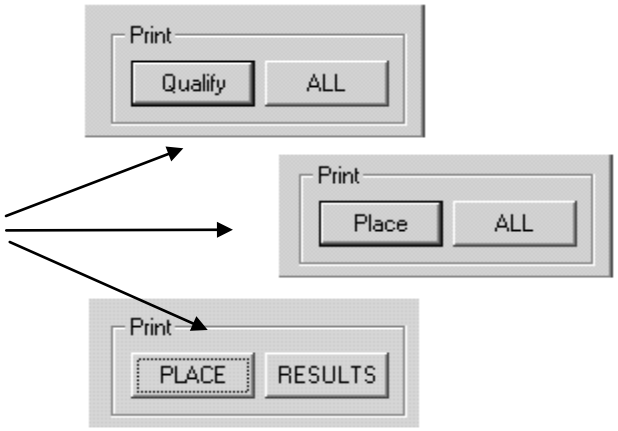
If the **Misc** column were used in the assignment template you can sort the finish according to the Misc column information. Note in the figure below that the finish order is sorted according to the Misc column as opposed to showing the overall order.



2.3.23 Print Buttons

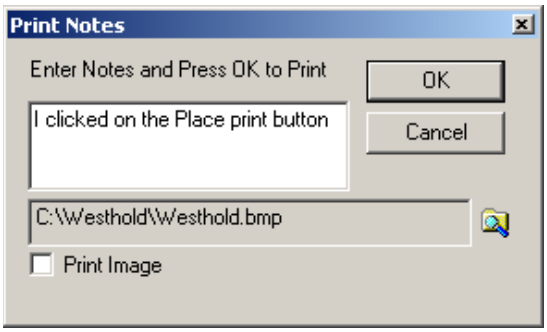
There are two print buttons. One button will print what is in the **Place/Qualify** window; the other button will print all crossings found in the **Crossing** window. The functionality of the left print button will print the appropriate information depending on whether the software is in qualifying or place mode as defined by the **Qualify/Place View** button. Note that the button will change text to indicate what will be printed.

Button changes text depending on view mode selected

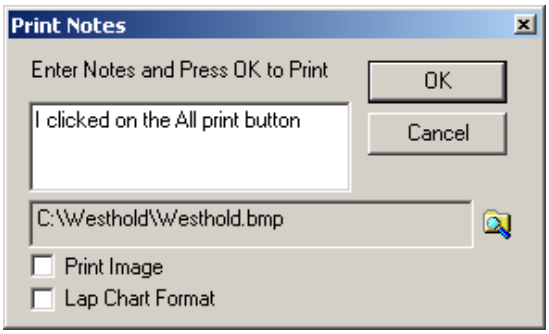


2.3.23.1 Print Dialog

When one of the print buttons is pressed a window will pop up. Depending on which print button is pressed the window may look slightly different.



OR



2.3.23.2 Print Image

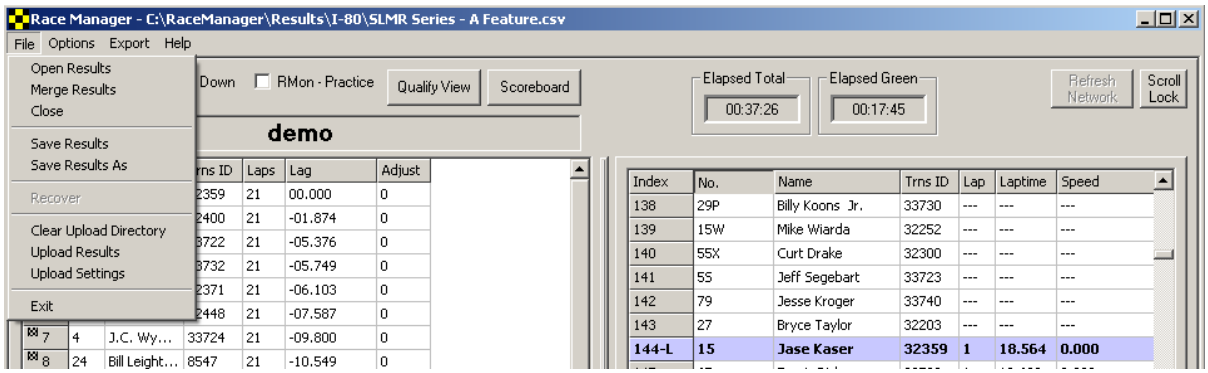
It is possible to include an image such as your organization's logo or sponsor's logo in your printout. Click on the folder icon and choose the image you want to print. The only format Race Manager currently supports is the bitmap format (.bmp files). If you have a JPEG (.jpg) or GIF (.gif) format image you can open this in a program such as Microsoft Paint and then 'save as' a bitmap file.

In order to print the logo the **Print Image** box must be checked.

2.3.23.3 Lap Chart Format

Pressing the **All** print button will bring up a print window with a **Lap Chart Format** checkbox. If this box is checked a lap chart will print out instead of the usual **All** printout.

2.3.24 Menu Items



2.3.24.1 File->Open Results Menu Item

Select the **File->Open Results** menu item to open previously saved results and display them on the screen. Open results may be adjusted using the **Adjust Laps** and the **Set Green/Set Caution, etc** features described above on the crossing screen only. The results may then be re-saved.

2.3.24.2 File->Merge Results Menu Item

Select the **File->Merge Results** menu item to combine another set of results to currently open results. This feature is useful when there are more than one qualifying session for a class.

2.3.24.3 File->Close Menu Item

This clears the data from the screen and from memory.

2.3.24.4 File->Save Results Menu Item

This will save the results on the screen.

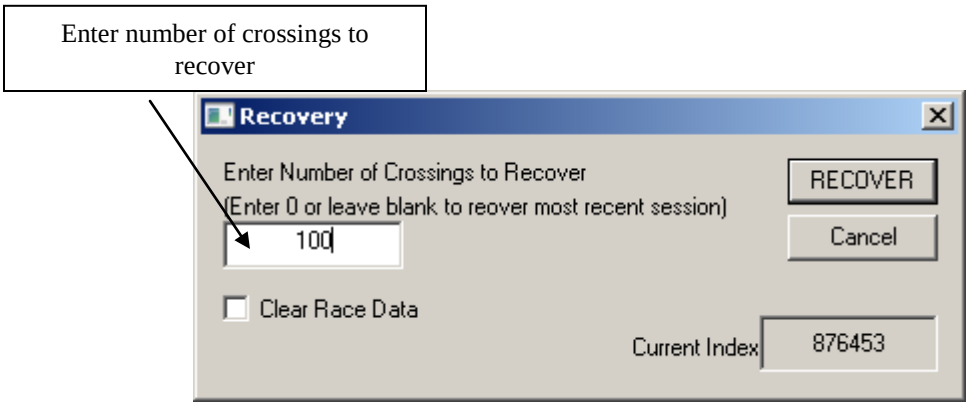
2.3.24.5 File->Save Results As Menu Item

This will save the currently open race results on the screen to a new file.

2.3.24.6 File->Recover

This item allows for the recover data from the system. If for instance your PC crashes or someone exits the Race Manager program before the **Stop** button was pressed you can recover the race data. Normally when Race Manager is restarted it will detect that the software was closed prematurely and will ask whether the user wants to recover the race.

In some circumstances the user may have accidentally pressed the **Stop** button before the race finished. By selecting the File->Recover menu item it is possible to recover the data.

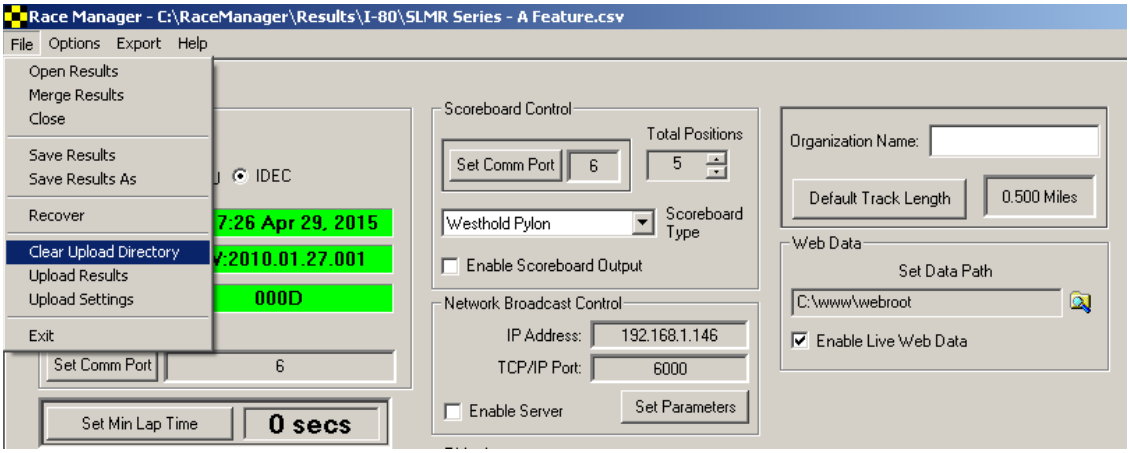


Check the **Clear Race Data** checkbox if you wish to clear what is currently on the timing page. Otherwise, the data will be added to what is already in Race Manager memory.

NOTE: This will not work for IDU systems. On IDU systems once the **Stop** button is pressed the data in the IDU will be deleted. However, some of the recovery data may still be on the PC hard drive and that data may be recovered.

2.3.24.7 Upload Menu Items

There are 3 menu items used for uploading data to the westholdtiming.com server. These are the **Clear Upload Directory**, **Upload Results** and **Upload Settings** described below. The data uploaded to the westholdtiming.com server may be incorporated into your own website using an iFrame.



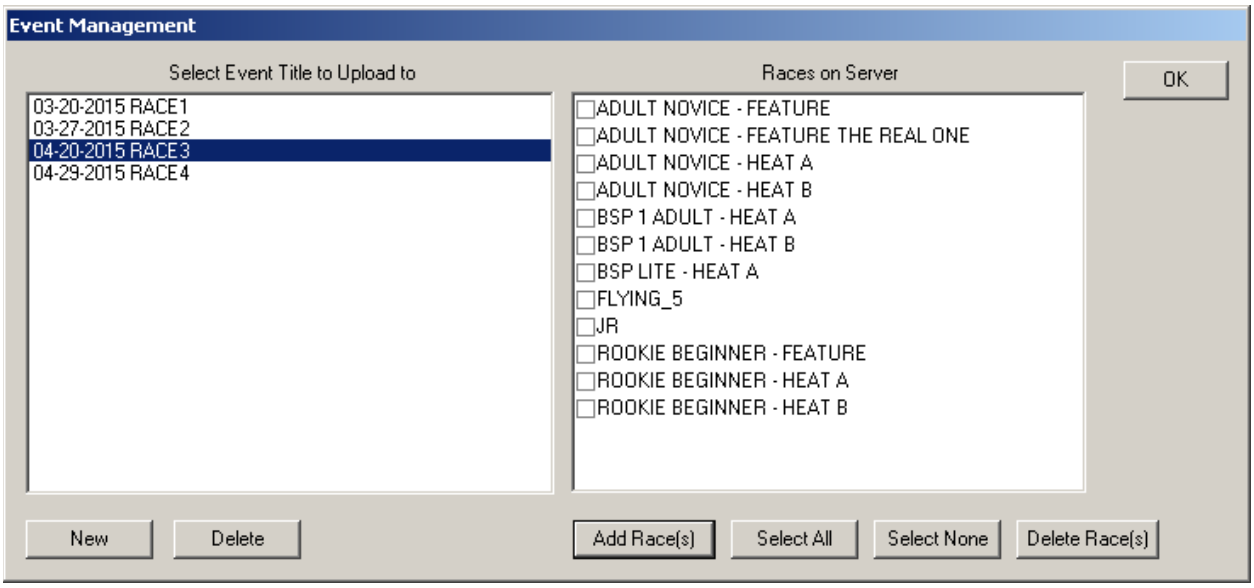
2.3.24.7.1 File->Clear Upload Directory

This deletes all files in a directory called UploadXML. This directory is created by Race Manager to hold data for uploading. The files in this directory are generated whenever you start, stop and save the race data. You should clear this directory before each event or there you will have many outdated files in the directory.

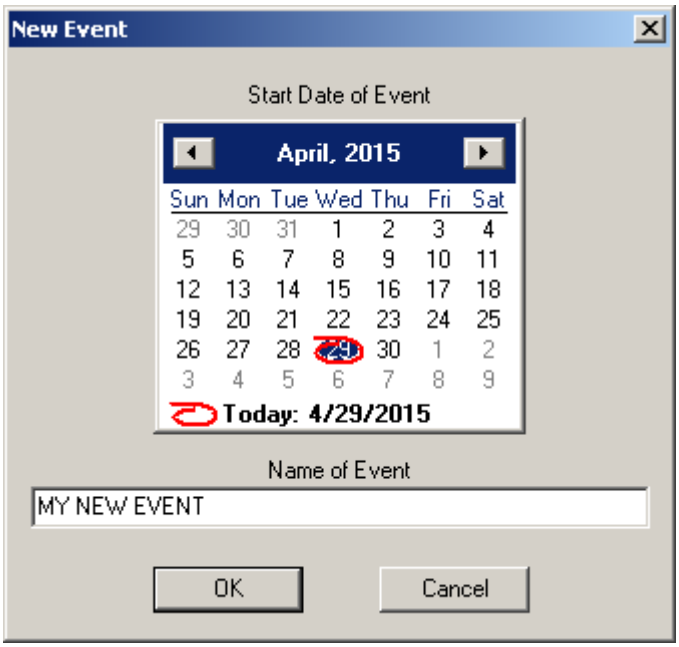
Note: If you do not save the timing session results a upload file will not be saved for that session.

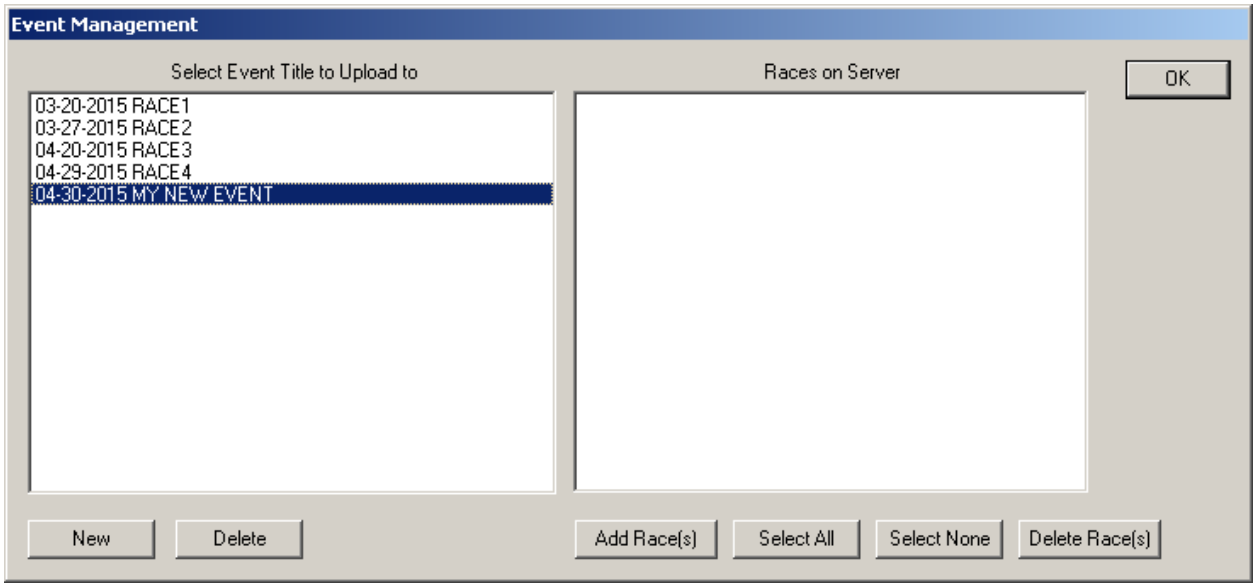
2.3.24.7.2 File->Upload Results

To upload results to the westholdtiming.com server select this menu item. The window shown below will appear. This window is used to manage the events and races on the server. The left side shows the events on the server. The right side shows the races under each event.

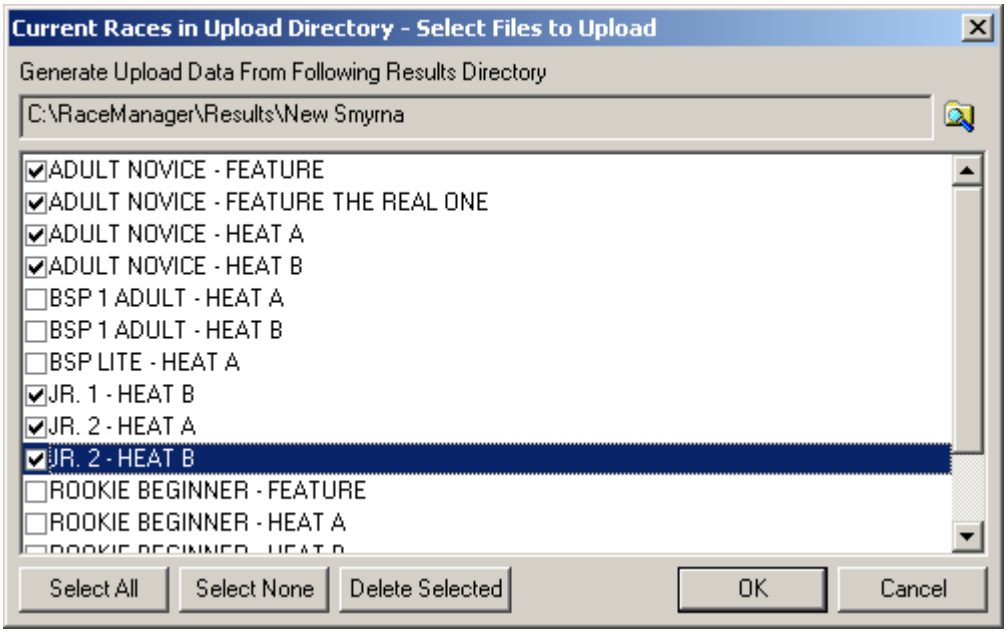


Click the **New** button to add a new event. Select the day of the event and type in a name. Then click the **OK** button when finished.



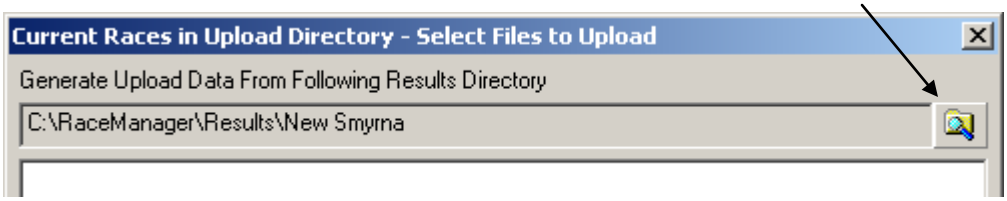


Select the event to add races to and click the **Add Race(s) button.** A window will appear to allow you to select races to add.

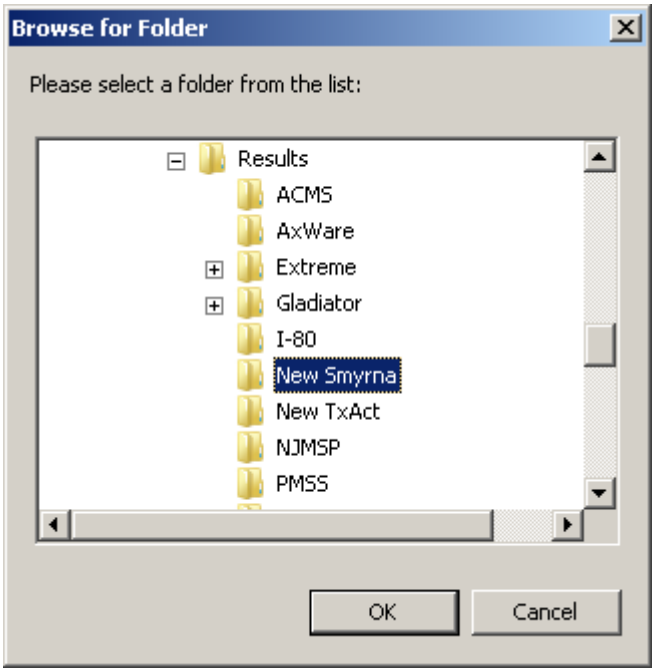


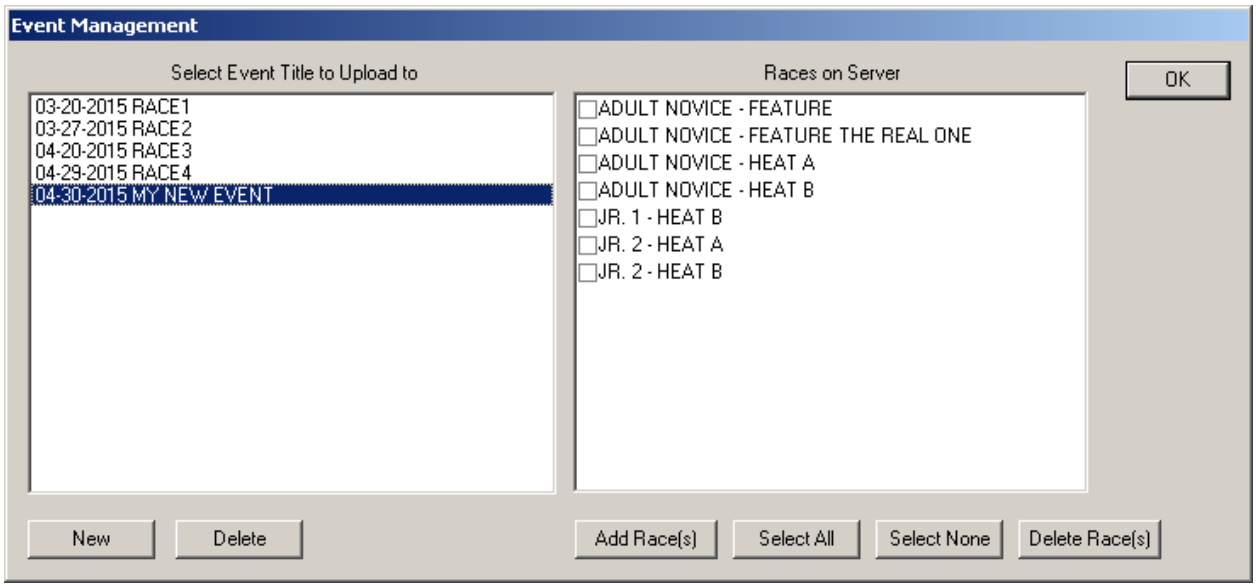
You can then select which races to upload by checking the box next to each race or use the **Select All** button to select all of the races. Click the **OK** button when finished.

If there are no races in the UploadXML directory you may generate these files by clicking the folder icon in the upper right.



A window will open as shown below. Use this to navigate to the location of your results files. Click the **OK** button and the upload files will be generated. Then you can select and upload the desired races to the server.



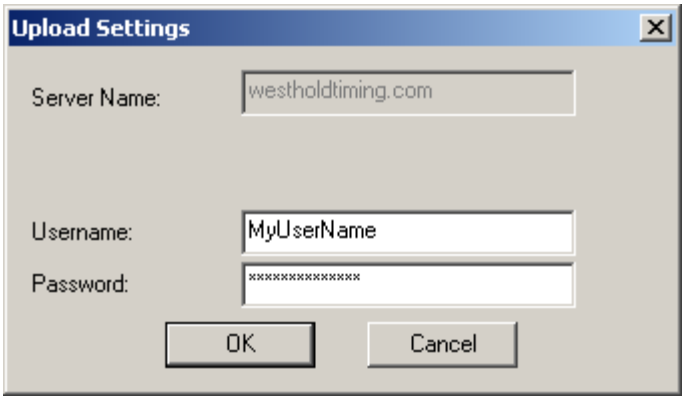


You may delete an event by selecting the event to delete and clicking the **Delete** button. To delete specific races check the checkbox next to each race to delete and then click the **Delete Race(s)** button.

2.3.24.7.3 File->Upload Settings

This is used to enter the password and username for your organization. You must obtain this from

Westhold. You may contact them via email (info@westhold.com) or phone (see Contact at www.westhold.com). You only have to enter this once before using the **File->Upload Results** selection. All subsequent uploads will not require you to reenter this information.



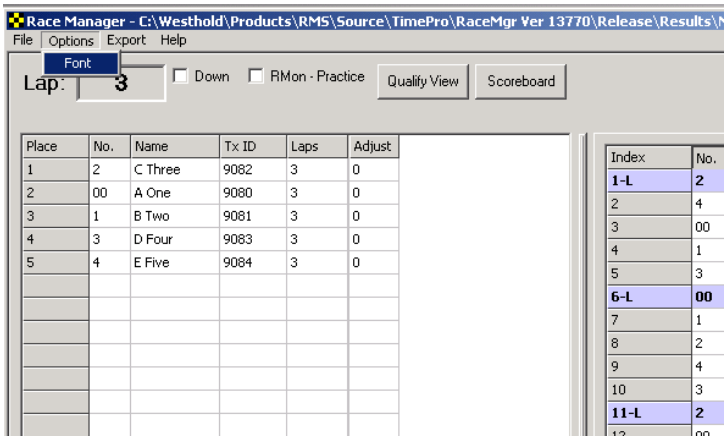
Note: If you experience problems connecting to the server you may need make sure the Windows firewall or your anti-virus program allows Race Manager access to the internet. You may also have to allow port 21 to be open.

2.3.24.8 File->Exit Menu Item

This will exit the Race Manager program

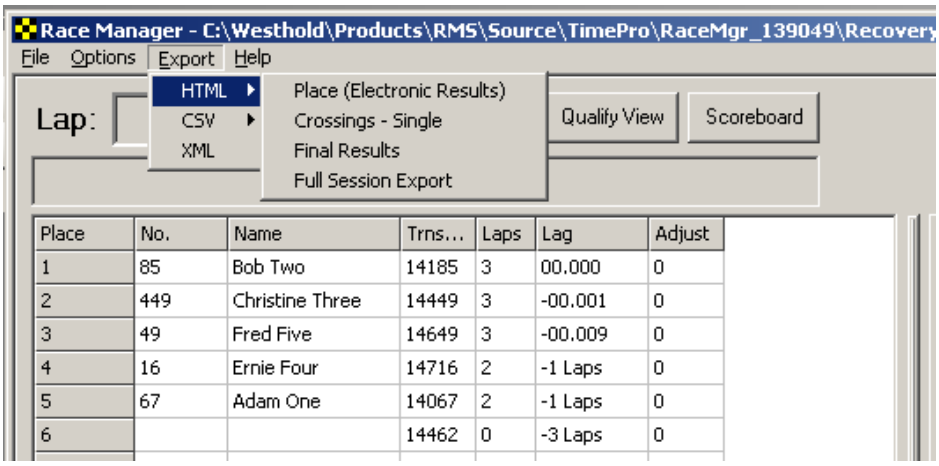
2.3.24.9 Options->Font Menu Item

This option is used to change the font size of the place and crossings grids' text. Note that the font is not saved when closing the program.



2.3.24.10 Export Menu Item

The export menu allows the race data to be exported to HTML files or comma separated ASCII text files for either uploading to a website or for further processing.



2.3.24.10.1 Export->HTML Menu Items

Export->HTML->Place (Electronic Results) – Exports only the electronic place results.

Export->HTML->Crossings – Single – Exports only the crossings data for a single selected competitor.

Export->HTML->Final Results – Exports the modified results from the **Results** tab page.

Export->HTML->Full Session Export – Creates a final results page with links to all the single crossings report for each competitor.

2.3.24.10.2 Export->CSV Menu Items

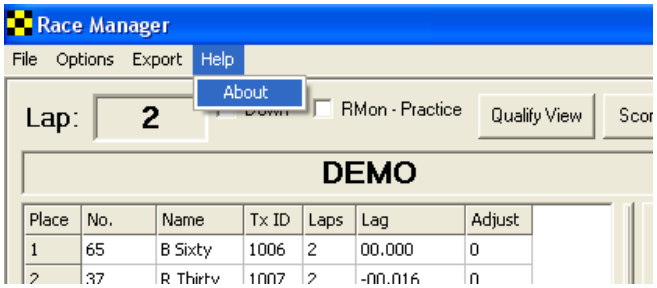
The CSV exports operate just like the HTML exports except comma separated CSV files are generated.

2.3.24.10.3 Export->XML Menu Item

The XML export operates like the HTML and CSV exports except there is only a single option. This can be used to individually generate upload files for uploading to the westholdtiming.com server.

2.3.24.11 Help Menu Item

This option is used to identify what version of software is being used and copyright information.



3. Tutorials

3.1 Split Score Guide

This section describes how split scoring works. In this tutorial we will count caution is the leader plus one or more competitors cross the start/finish before the caution is thrown.

1. Caution Handling Setup

Check the **Finish Lap on Caution** checkbox. This setting allows each driver to finish the current lap when the caution drops. This only works with the **Caution-Score** button.

Check the **Auto Delete Partial Laps for Caution** checkbox. When the non-scoring **Caution** button is pressed, partial laps are highlighted and deleted (crossings are still there, but not counted). If wanting to count the lap check **Count First Crossing on Return to Green** when green flag is waved before the leader crosses the start/finish line to count the lap. This is acting like the yellow was never deleted and it will count the first crossing which will put the lap count where it would have been if had taken the lap. If you choose not to take a partial lap and consider a lap not complete until the full field is pass the start/finish line then **DO NOT** check **Count First Crossing on Return to Green.**

Attn: If you press the **Caution** button before the leader goes by, the auto delete function will not know that the previous lap was a partial lap. It will end up auto deleting the previous lap even though it might be complete. Software cannot know that this is the case.

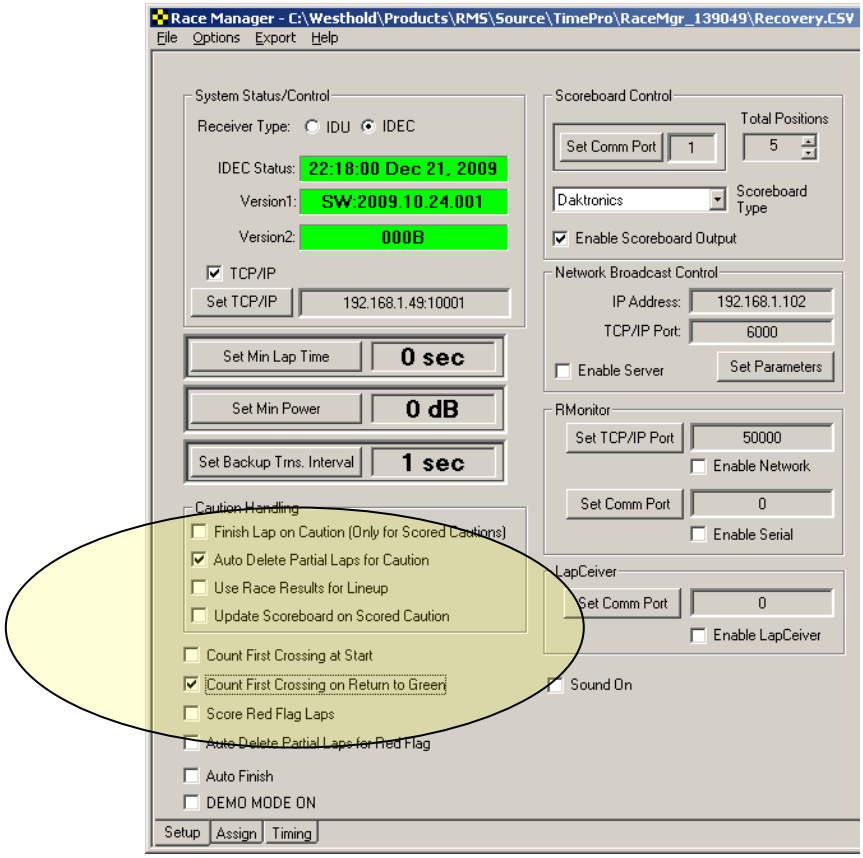


Fig 3.1-1

2. If the yellow flag is thrown after at least the leader has crossed press the **Caution-Score** button. See fig 3.1-2

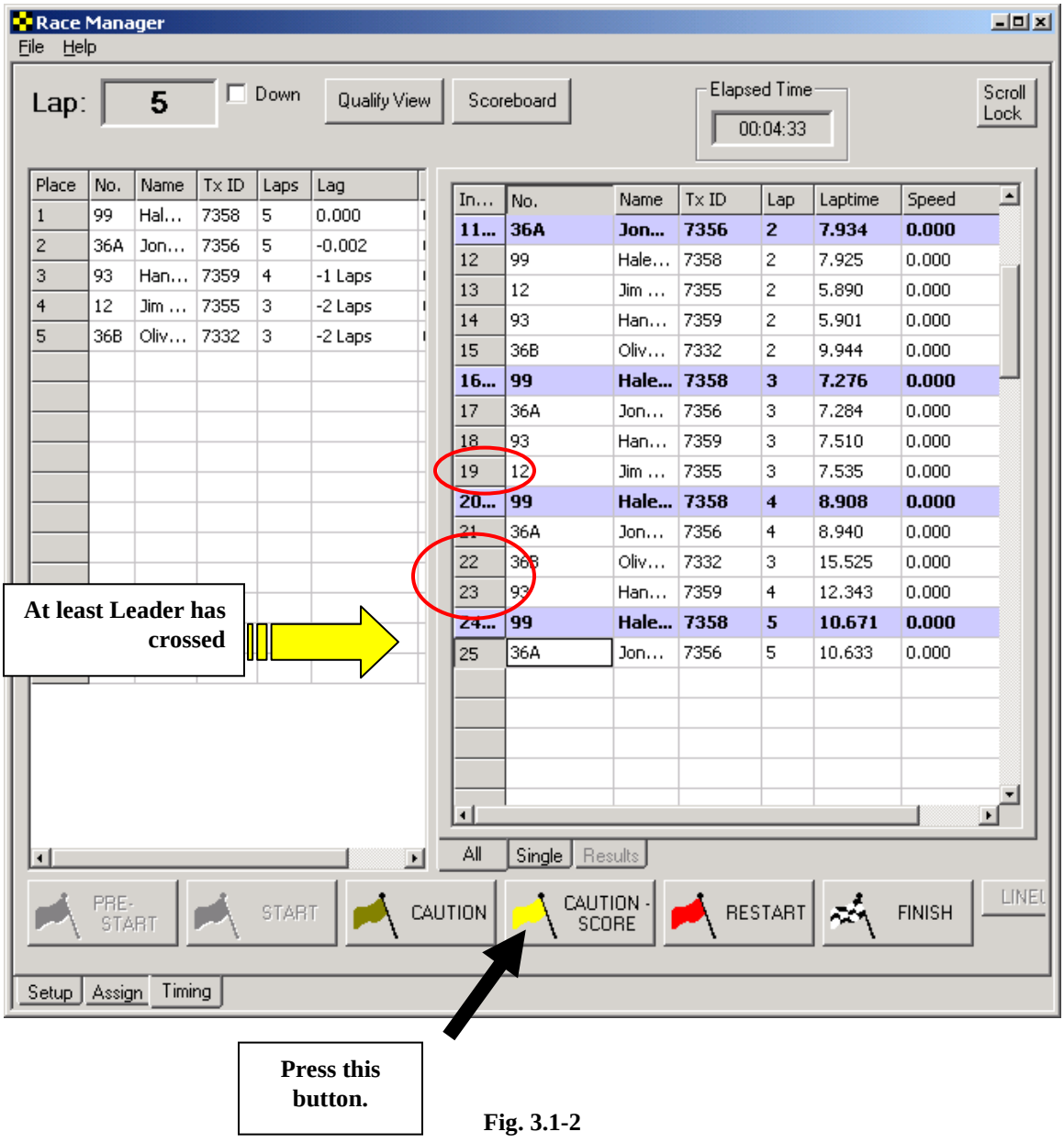


Fig. 3.1-2

The lineup screen will pop up showing the order. See fig 3.1-3 below. Note how cars 99 and 36A are first and second and in the order they crossed before the caution. Now cars 36B, 93 are drawn from the previous crossing. And car 12 comes in at the end.

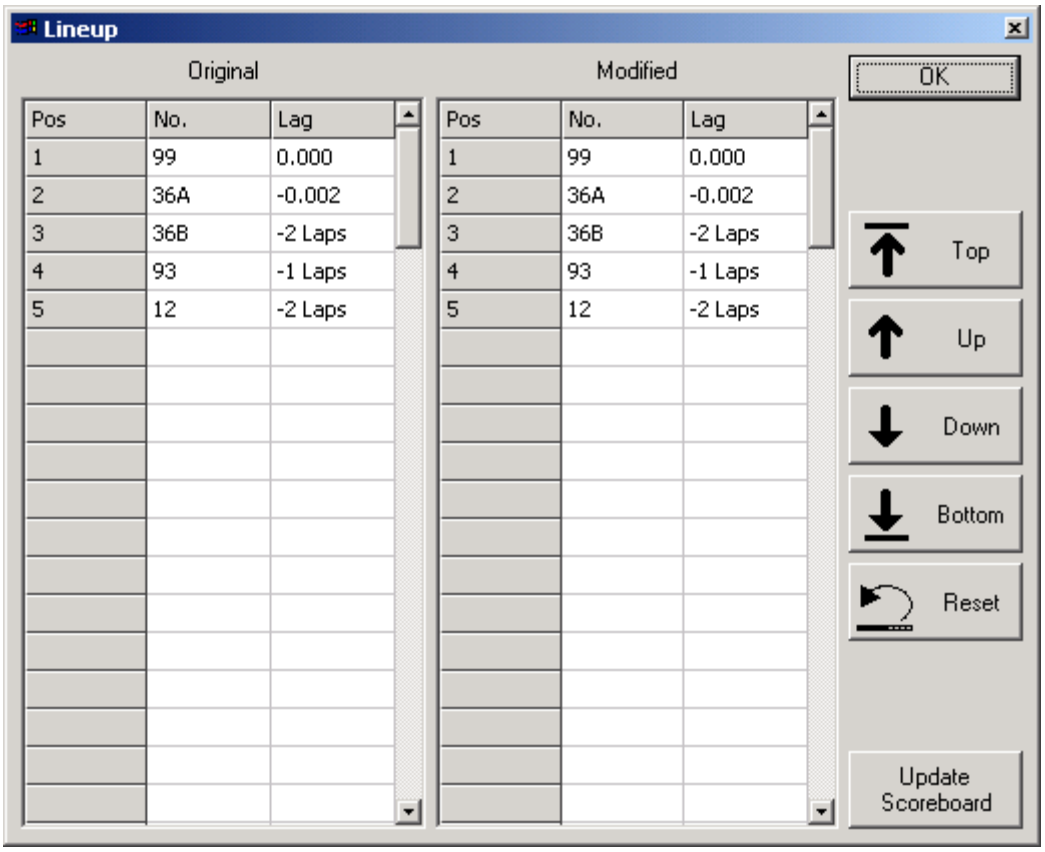
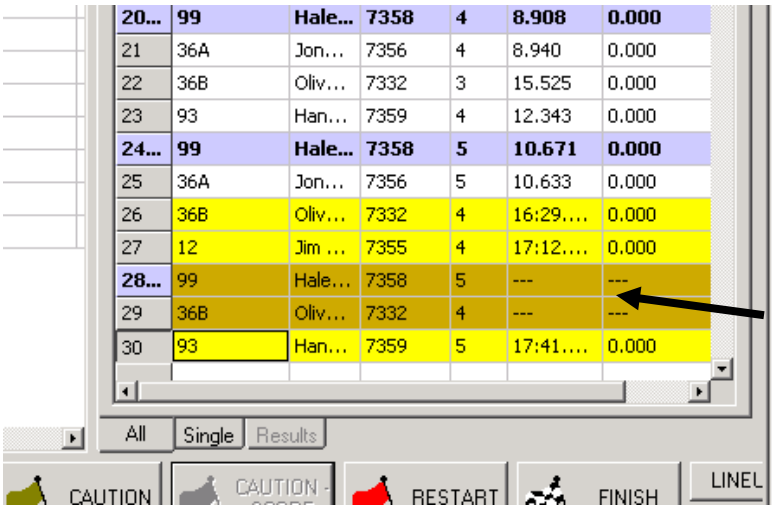


Fig 3.1-3

Now as the cars cross the start finish under caution…



Cars that already crossed are not counted again.

Fig 3.1-4

The lineup screen will still show what is in figure 3.1-3. To correct the lag values you can hit the "Reset" button on the lineup screen. See fig 3.1-5. **This is not necessary. The lineup will still be correct. The number of laps displayed on the scoreboard should be lap 5 since that is the leader's current lap.**

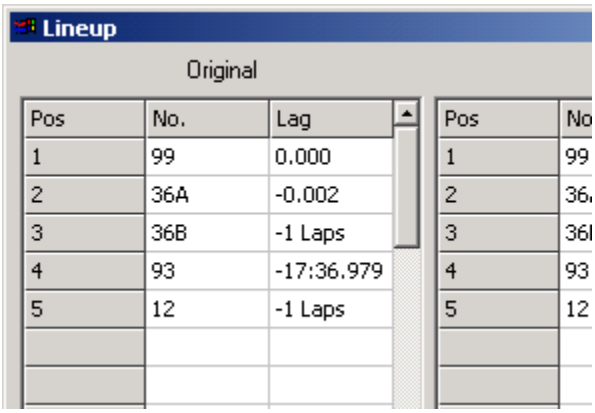


Fig 3.1-5

3. In the case where it is decided that the caution will not be scored and the leader has crossed before the caution is thrown, hit the non-scoring **Caution** button. Fig 3.1-6.

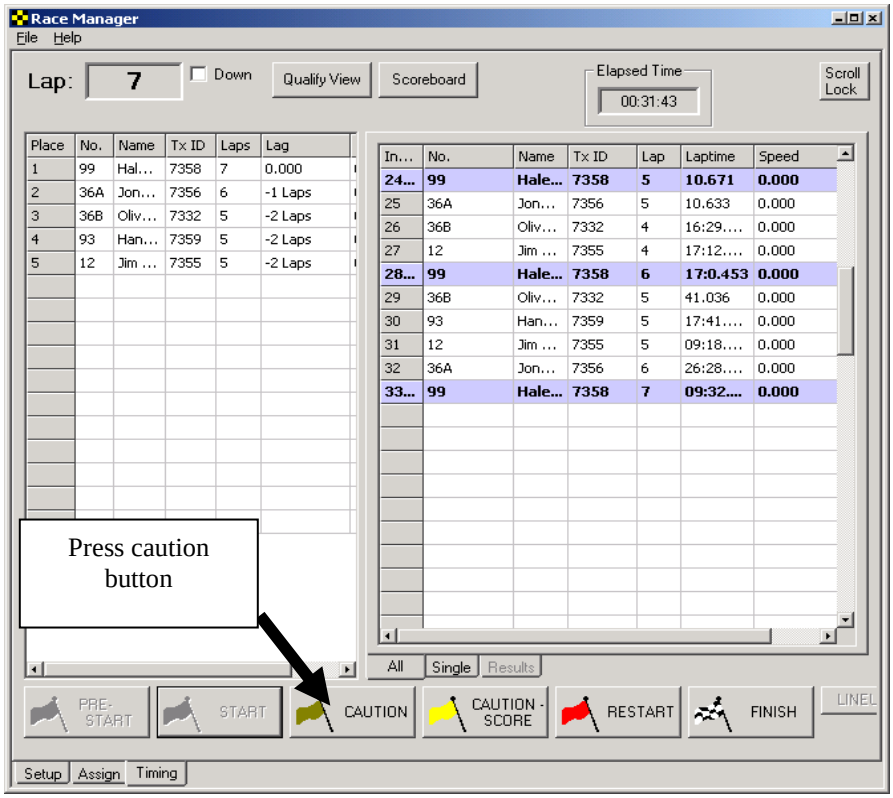


Fig 3.1-6 – Only leader has crossed

The partial lap will automatically be deleted. Fig 3.1-7.

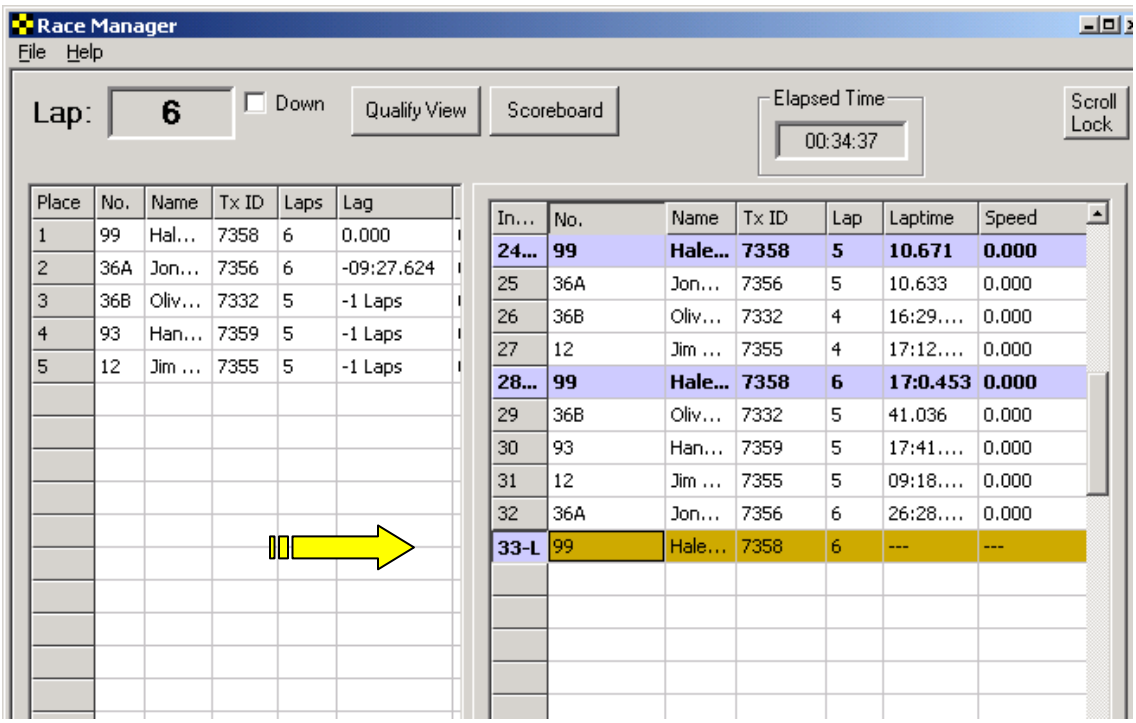


Fig 3.1-7

All subsequent crossings will also not be scored.

Note that if you accidentally press the “Caution” button too late and more than 1 car has gone by that is ok. The partial lap will still automatically be deleted. Fig 3.1-8

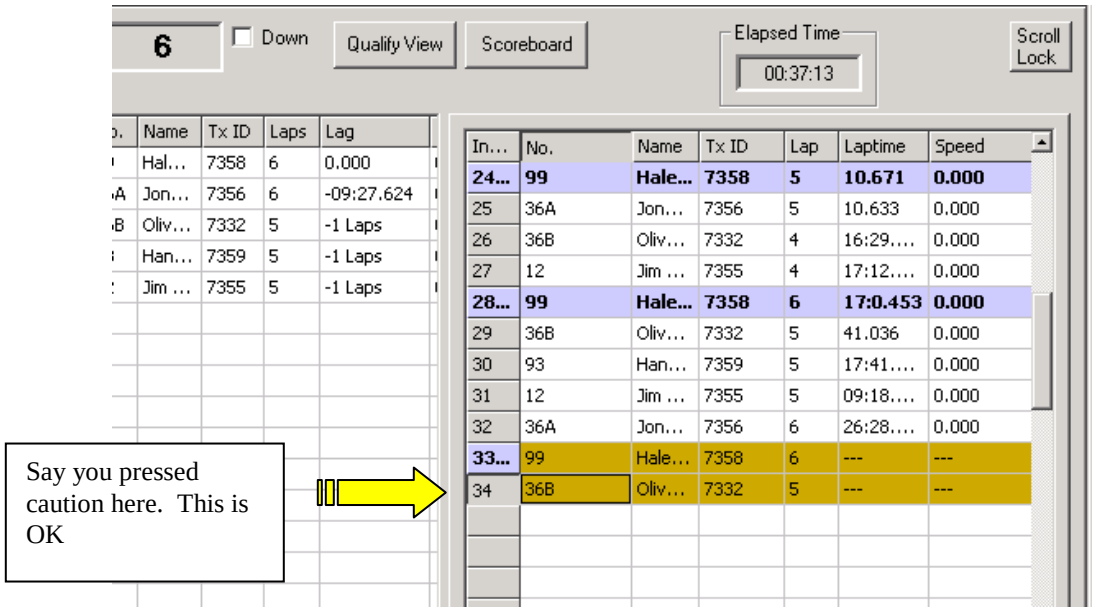


Fig 3.1-8

The lineup in this case is based on the previous lap completed (lap 6 – index 28). Fig 3.1-9 below.

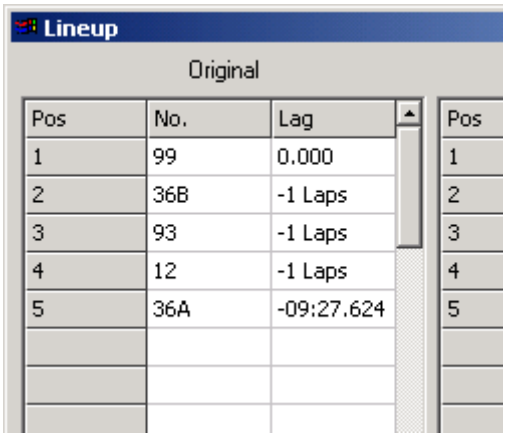


Fig 3.1-9

Note that anything can be changed by highlighting the crossings you want to change and right clicking the mouse button on the crossings screen. Just select how you want to change the highlighted crossings. You can correct mistakes you might have made. Fig 3.1-10.

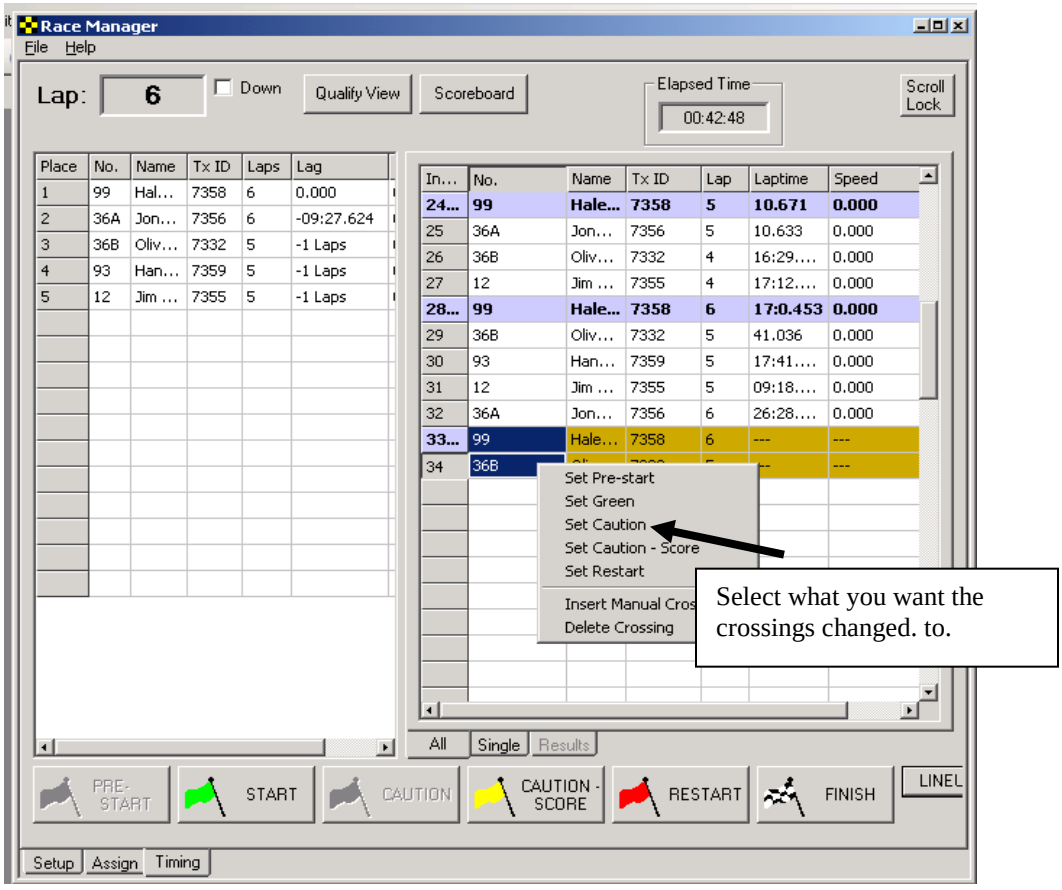


Fig 3.1-10