



INNOVATION. TECHNOLOGY. RELIABILITY.

XLscore PRO
Race Management Software
Owner's Manual

for use with
2700 XL Wireless
2900 XL Professional

Rev E.10.5

RaceAmerica Corporation
62 Bonaventura Drive
San Jose, CA 95134
(408) 988-6188
www.raceamerica.com
info@raceamerica.com

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Table of Contents

FIGURES & ILLUSTRATIONS	4
LIMITED WARRANTY.....	5
THEORY OF OPERATION AND OPERATIONAL CONSIDERATIONS	6
LOAD THE XLSCORE PC SOFTWARE(COMM PORTS AND DRIVERS)	7
SYSTEM SETTINGS (PC & PRINTER PORTS/TIMESLIPS/DATA TITLES/SETTINGS).....	8
NON-RACEAMERICA PRINTER CONFIGURATION	10
PRACTICE OFFLINE	11
UTILITIES	11
MOVE DRIVER TO NEW CLASS	11
EDIT PRACTICE & QUALIFY RUNS.....	12
EDIT ELIMS	13
MAIN MENU	14
ALIGNMENT MODE	14
RUNNING A RACE USING MANUAL CONTROL	
STEP 1 - GETTING READY FOR THE NEXT RUN	17
STEP 2 - STARTING AND SCORING A RUN	18
STEP 3 - TREE OPERATION POST RACE	19
STEP 4 - BEAM ALIGNMENT ERRORS	20
RACE RESULTS FILE DEFINITION FOR MANUAL CONTROL	21
RACE MANAGEMENT SOFTWARE	
OVERVIEW	22
DRIVER & CLASS REGISTRATION	24
PRACTICE ROUND	26
AUTOSTART	27
PRACTICE ROUND STANDINGS.....	27
ASSIGN CLASSES	28
ASSIGN CLASSES MIN/MAX ET RANGE.....	28
QUALIFYING ROUND.....	28
QUALIFYING ROUND STANDINGS	29
BUILDING ELIMINATION ROUNDS	30
RACE LADDER ELIMINATIONS	31
LADDER SUMMARY	32
NO LADDER ELIMINATIONS.....	32
NO LADDER UTILITY	33
NO LADDER SUMMARY	34
CHICAGO SHOOT-OUT.....	36
CHICAGO SUMMARY	37
EXTERNAL STAGING QUEUE	38
XLSTAGE PROGRAM.....	38

Table of Contents continued

SCOREBOARD CONTROL.....39

XLSCORE PRO USING NETWORKED COMPUTERS40

DRIVER REGISTRATION COMPUTER.....40

ANNOUNCER’S COMPUTER.....42

STAGING QUEUE COMPUTER42

REMOTE IPAD APPS43

DAT FILE COLUMN DEFINITIONS FOR SAVED RACE RESULTS44

COMPUTER SCREEN DEFINITIONS45

SAMPLE PRINTOUTS.....47

TIMESLIPS48

ADDENDUM 1 - OPTIONAL GUARD BEAM ALIGNMENT49

ADDENDUM 2 - HARDWARE AND SOFTWARE COMPATIBILITY CHART50

Figures

1 - EXISTING FILES ALERT	7
2 - SYSTEM SETTINGS SCREENS	9
3 - UTILITIES SCREENS.....	11
4 - MAIN MENU SCREENS	14
5 - XL PROFESSIONAL ALIGNMENT SCREENS.....	15
6 - MANUAL CONTROL SCREENS.....	17
7 - XL PROFESSIONAL DISABLED SENSOR SCREENS	20
8 - XL PROFESSIONAL ALIGNMENT ERROR SCREEN	20
9 - CLASS REGISTRATION SCREEN.....	24
10 - SELECTING A CLASS	24
11 - DRIVER REGISTRATION SCREEN	25
12 - STATUS REVIEW SCREEN.....	25
13 - DRIVER'S LIST POPUP.....	26
14 - VALIDATION OF RACE RESULTS	26
15 - STANDINGS SCREEN	26
16 - MIN/MAX ET RANGE SCREEN	27
17 - ELIMINATIONS BUILD SCREEN	28
18 - RACE LADDER PAIRING & RUN SCREENS.....	29
19 - ANNOUNCER SCREENS - RACE LADDERS.....	31
20 - NO LADDER UTILITY SCREEN	32
21 - ANNOUNCER SCREENS - NO LADDERS.....	33
22 - CHICAGO SHOOTOUT SCREEN	34
23 - ANNOUNCER SCREENS - CHICAGO SHOOT-OUT	34
24 - STAGING QUEUE EXISTS	36
25 - USING THE STAGING QUEUE.....	36
26 - CLASS SELECTION	36
27 - THE STAGING QUEUE.....	37
28 - TYPED NAME SELECTION	37
29 - SCOREBOARD CONTROL SCREEN	38
30 - NETWORKED COMPUTER EXAMPLE.....	39
31 - ANNOUNCER'S WEBPAGES INDEX.....	39
32 - ACTIVEX CONTROL WARNING & DISABLING	40
33 - SAMPLE FILES FROM HTML FOLDER	41

Illustrations

1 - SCREEN DEFINITIONS - MAIN MENU SCREEN DEFINITIONS	44
2 - SCREEN DEFINITIONS - WHEN DISPLAYING RACE RESULTS.....	45
3 - SCREEN DEFINITIONS - DURING A RACE, BOTH LANES HAVE STARTED	45



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PRODUCT INFORMATION LINKS

RaceAmerica Website	www.raceamerica.com
RaceAmerica Online Store	store.raceamerica.com
Raceamerica Online Forum	www.raceamerica.com/forum
Product Warranty	www.raceamerica.com/legal.html
Service & Repairs	www.raceamerica.com/service.html
Technical Assistance	www.raceamerica.com/techcall.html
Owner's Manuals	www.raceamerica.com/prodpdf.html
Mounting Diagrams	www.raceamerica.com/mountpdf.html
Product Catalog	www.raceamerica.com/catalog.html

THEORY OF OPERATION and OPERATIONAL CONSIDERATIONS

The XLSCORE PRO Software runs on any PC connected via a serial port or USB Wireless Unit communicating to the XL Electronics timing box. The powerful software allows the main PC to be connected to additional PC's for remote driver registration, race results viewing by an announcer and other locations like the pits.

When connected to a **XL Professional Drag Timing System**, the software enables the PC to control all functions of system setup of printers, sensor alignment, starting tree selection, and running of races. During normal operation, the PC sends and receives information from the timing system and is required for the XL Professional timing system to function. The XL Electronics Box manages all track activity, actual race timing, and sends this information back to the PC. The only control function shared outside of the PC is the start of a race. The Starter's Button at the starting line can initiate a race if the PC is displaying one of the race screens where a START RACE button is visible and a race can be started.

When the XLSCORE PRO software is used with a **XL Wireless Timing System**, system functions are shared with the XL Wireless system. Configuration of track parameters are shared between the software and the XL Wireless system while running races and data management are maintained by the software. Races can be run either as standalone races (using the Manual Control function) or as part of an entire race event managed by the Race Management functions of the XLSCORE PRO software.

It is important to understand how the driver, class, and race results interact when using the manage Race Management functions. Note:

- *All driver & race results are tied to a class name.*
- *Drivers are registered into a class forming a unique driver-name/class-name pair within the software.*

When using the Manual Control function to run races outside of the Race Management functions, the software does not tie a driver to a class since classes only exist within the Race

Management functions.

When running the XLPRO management software the choice of file deletion/saving is extremely important. The program provides several options on start up.

- CONTINUE - using existing files
- BACK UP -all files and use existing files
- DELETE - results and begin new event
- SAVE - all files and begin a new event
- LOAD -files previously saved

(options explained in detail later in this manual)

Therefore, when the XL software starts, you have flexibility to delete or save race data and or driver/class information. You may also continue with the current race and driver/class data for multiple day events.

DRIVER STATUS FOR A SINGLE EVENT

Since tracks often have the same drivers at multiple events, the program lets you DELETE/SAVE PREVIOUS race results, but keep THE CLASSES and DRIVER INFORMATION. Using STATUS REVIEW, you can make a driver inactive/active for a particular event by changing their status to Y or N. STATUS REVIEW can be found under the REGISTER DRIVERS option on the main menu.

Once drivers are registered into their race classes, and selected as participating in today's event, the racing action occurs in Rounds that progress from Practice to Qualifying to Eliminations. Each round of racing builds PC data files storing race results used for reporting, building the next round, and running the current round. Qualifying runs are used to determine who will be participating in the Elimination Rounds and driver/class information is stored with each run. It is important to remember, once the Elimination Round has started, new driver/class registrations and new qualifying runs cannot be added unless the 'ladders' used in the Elimination Rounds are rebuilt. However, this rebuilding erases all previously recorded Elimination Round results and restarts the Elimination Round for every class.

When starting a new race the program needs to clear the previous race results data. The save/back-up options allow you to save information at any time during the race or before you begin the next race for later recall. The software also continually saves all data entered during a race. Therefore, if there is a computer failure, power out etc..., most of your data will be recovered when you re-start the program.

LOAD THE XLSCORE PC SOFTWARE

To install the XL software download it from www.raceamerica.com or insert the XLscore PRO software disc and click the setup icon and follow the instructions. The program will be installed on your computer under the default locations C:\Program Files\RaceAmerica\XLscorePRO. The following files will be placed in the folder:

archive (folder)	xlscorp10.pdf
FDTI drivers (folder)	uninstall.exe
html (folder)	xlstage.exe
xl.ico	installvista.df
xlstage.ico	installxp.pdf
xlscorp.exe	installsystem7.pdf

The program will NOT start immediately after installation. The XLscore PRO icon will be placed on your desktop for starting the program.

COMMUNICATION PORT

In order for the XLscore PRO to operate it must detect a connection to a COM (communications) port. This connection is made by simply connecting the PC, through the USB or Serial port, to the timing system. For the 2900 XL Professional the PC should be connected to the Timing System box's RS422 port via the RS422 Communication POD. For the 2700 XL Wireless the 4520 Wireless Unit is connected to the PC via the a USB or Serial connection.

DEVICE DRIVERS

When the USB hardwire or wireless communications are first connected to your computer the computer will ask for the drivers for these devices. **THE DRIVERS are in the FTDI**

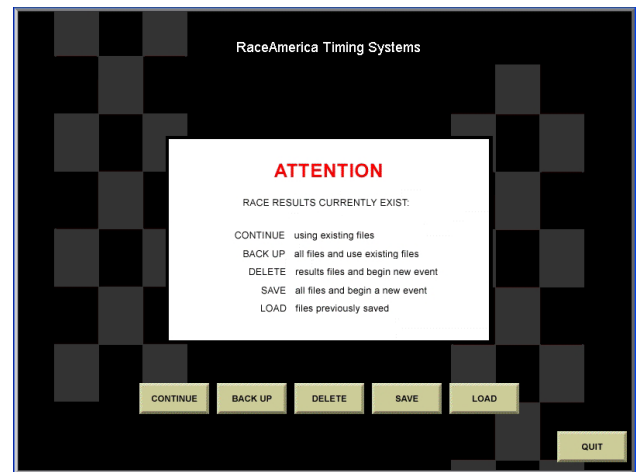


Figure 1a - Existing Files Alert

drivers folder located in the same folder as the XLSCORE PRO software and were added to your computer when the XL software program was installed. Use the install PDFs matching the Windows OS on your computer. Now you are ready to use the software.

RACE AND DRIVER CLASS FILES

Click on the XLscorePRO Icon to start the XLSCORE PRO software. The XLSCORE PRO software checks for files on the hard drive from previous race events and then prompts the

user with an alert screen shown in Figure 1a. (If the race files are empty, like at initial installation, the software will not show this alert)

Click:

CONTINUE to use the existing race results, driver, and class registration data.

BACKUP to store the current race results, driver, and class registration data to the hard drive of the computer and continue using the existing data.

DELETE to remove the current race data from the software without saving to the hard drive and begin a new event.

SAVE to save the current race data to the hard drive, then delete the data from the software and begin a new event.

LOAD to replace the existing race and Driver & Class registration data with a previous set of data saved or backed up to the hard drive.

Clicking LOAD, SAVE, or BACKUP will display the screen shown in Figure 1b to prompt for the specific archive filename. During SAVE

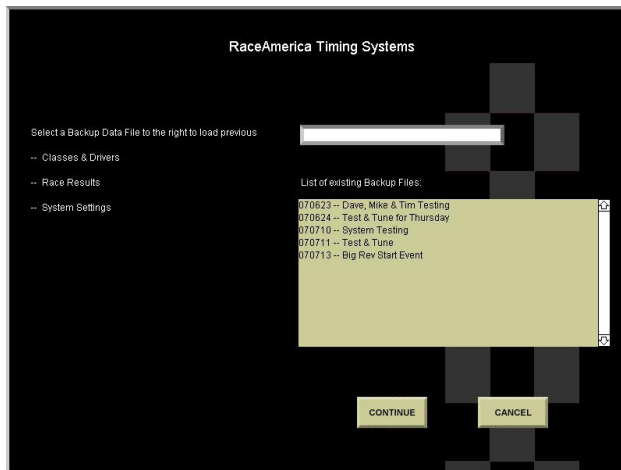


Figure 1b - Load, Save or Backup

and BACKUP, a title can be added to help identify file contents for a race event.

The XLSCORE PRO software will then check for existing DRIVERS/CLASSES and prompt you to either:

CONTINUE to use the existing driver and class registration data.

DELETE to remove the current driver/classes data from the software without saving and begin a new event.

BACK to go back to the race results files options screen.

Entering New Classes and Drivers

Select EDIT CLASSES to create your new classes by entering a class name and selecting class attributes in the edit classes screen. When you exit the screen you will be prompted to save changes and then returned to the Main Menu. To Register drivers click the REGISTER DRIVERS button, select the class for that driver and enter in their information. Note the custom driver registration fields need to be configured on the system settings screen.

WARNING: To protect race results once runs are made in Practice, Qualifying and Eliminations, those results are saved to files with the then current information and cannot be modified. Also, if you modify a class or driver name after elimination runs, the build eliminations function will not recognize that driver. Therefore, make sure the class and driver information is entered correctly

before you start any racing.

(See the DRIVER & CLASS REGISTRATION section of this manual for Registration details)

SYSTEM SETTINGS

Timing Systems PC Port

The XLSCORE PRO software automatically detects the Serial or USB port connected to the XL Timing System. When complete, the Systems Setting screen in Figure 2a is displayed. (If you experience a detection problem please make sure the PC is connected to the Timing System and the Timing System is powered on. With the 2900, the bottom two yellow lights on the starting tree will be illuminated indicating that the timer is waiting for a PC connection.)

The System Settings Screen shown in Figure 2a, is used to configure the XL software and PC ports. Figure 2b illustrates the pull-down menus available on the Settings Screen. Figure 2c illustrates the Settings Screen when a XL Wireless timing system is detected.

The COM Port of the PC connected to the timing system is automatically detected by the XLSCORE PRO software and the port name placed next to XL TIMING SYSTEM PC PORT. If '- none -' is displayed, the timing system was not detected. Click the LOCATE XL BOX button to make another attempt at locating the PC Port connected to the timing system and establishing communications.

Logo Image File

Selected Announcer Screen html pages can include a custom logo. Click to select the image file. Image will be resized proportionally to fit into 200px x 200px.

Printer (or Wireless) PC Port

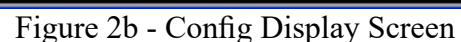
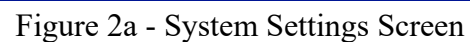
A printer can be connected to the XL timing box as well as directly to the PC. (If using a wireless connection, multiple printers can be utilized) To connect the printer to the PC insert the printer cable to the PC USB or Serial port. Then select that port from the yellow drop down list to the right of **Printer (or Wireless) PC Port**. The pull-down menu detects and lists the possible selections. The printer connected directly to the

Note that various screens in the software like the driver registration, standings, print pairings, etc... will include a print button. These “reports” can be printed to the system timeslip printer connected to the PC. Additionally, **ANNOUNCER WEBPAGES**, including the Race Ladders Eliminations, No-ladder Eliminations and Chicago Shootout can be printed to a standard printer connected to your PC through the normal windows environment. Simply click the print button. See the ANNOUNCER SCREENS section in this manual.

The traditional 1/4 mile race track may contain 1000ft, 660ft, 330ft and 60ft ETs. Using the Config Display feature, the screen and timeslips can be customized to match the track design when it does not contain all the traditional ETs or the distances are not for a 1/4 mile track. Figure 2c demonstrates the screen used to modify the text at each ET and to disable and enable each ET location. Placing an X in a box enables the ET location and enables editing of the text at that location. When highlighted in white, click on the text box and edit the text to appear onscreen and printed on timeslips. When done, click SAVE SETTINGS and all onscreen scoring screens will reflect the choices. Timeslips will automatically expand and shrink to match the selections.

When using one of the XLscore PRO compatible iPad Apps, enable the internal server by entering a port number (or use the default 34000) and enable the server by clicking in the box. The IP address and port numbers are entered into the iPad Apps to link the app to the XLscore Server for remote functions like driver registration, staging queue and remote announcer screen viewing.

Generally, after printing the last line of the timeslip, printers require a 'form feed' command to eject the timeslip, however, some printers require line feeds to eject the timeslip. For those printers the number of line feeds can be entered in LINE FEEDS box. Zero line feeds defaults to sending the 'form feed' command to the printers. Some experimentation may be required to match the number of line feeds required to eject the timeslip out of the printer connected to the timing system or to the PC.



When a race has completed, XLSCORE PRO can automatically print up to nine timeslips by entering the desired quantity in AUTO PRINT. Entering a zero disables this feature.

To enable a wider compatibility with various timeslip printers using both hardwire and wireless, a PRINTER SYNC parameter is defined. If the value is too low, lines will be omitted from the printout. If the value is too high, the printer will hesitate while printing. This value should be adjusted if issues occur when printing reports.

Driver Registration Custom Data Titles

Seven user defined fields on the driver registration screen allow the you to customize input for driver registration. (Up to 12 characters for each line are available) Simply type over the fields to enter the information you would like to collect at registration. First and last name, class and dial-in are already permanent fields in the REGISTER DRIVER section - use the custom fields to collect additional information.

End-of-Track Location

The 2700 XL Wireless also includes a feature to allow you to select the finish length. This feature allows you to select 1/8 mile or 1000' finish for races like Jr. Drags, being run on a track set up to run 1/4 mile or 1000' foot. This can be changed on the fly to accommodate different distance races without moving track sensors by clicking on the pulldown and selecting the desired temporary location for the end of track.

Disable Two Redlights

In the event of a double red light some tracks prefer to have the system only recognize the first red light. Checking the Disable Two Redlights box will allow you to recognize just the first redlight.

Tree Selection

The XLscore PRO software has optimized communications with the drag tree taking advantage of the features set unique to each type of tree. Select the tree to match the one installed on the track.

Reaction Time Settings

A Perfect Reaction Time can be measured in the standard method where a reaction time of 0.500 seconds for FULL tree or 0.400 seconds for PRO tree is a perfect light. To change check the PERFECT RT=0.000 box. This will change the RT measurement method to a perfect light as a reaction time of 0.000 seconds. RT's are measured starting from the bottom yellow light counting backwards until 0.000 at the green light, then counting up until the driver leaves the start line.

Speed Selection

The XLscore PRO software can use either speedmet and switch between them for mixed race events. Select the speed measurement unit as Mile per Hour (MPH) or Kilometers per Hour (Km/H) and the race results screens will display the change..

Trap Selection

Speed Trap lengths are set to 66FTor20M for longer race tracks (1/4mile, 1/8mile, 402meter, 201meter), or 10FTor3M for shorter tracks (300FT, 100meter, etc). The speed track selected must match the physical speed track on the track to insure accurate speed measurement.

After all selections have been made, click on the SAVE SETTINGS button to save the system settings information and continue or click on the QUIT button to end the software program without saving the configuration data displayed on the screen.

NON-RACEAMERICA PRINTER CONFIGURATION

If your are not using a RaceAmerica timeslip printer make sure the settings for your timeslip printer are correct. A serial printer connected directly to the XL Electronics Box (or XL Wireless console) connector marked RS232 PRINTER or the PC COM port, must be configured to 9600 baud, 8 bit data, no parity, and 1 stop bit.

PRACTICE OFFLINE

Clicking on PRACTICE OFFLINE will enable the user to become familiar with the software offline without the connection to the XL BOX. The software will configure a PC COM Port and continue. NOTE: the software requires at least one PC COM port be configured in the Windows OS and available in order for the practice offline mode to function.

Most of the software functions are enabled. In Practice Mode, simulated race results can be received as if from the timing system. To simulate race results, press START TREE on the Manual, Practice, Qualifying or Eliminations screens to generate simulated race results. Clicking START TREE will cause the software to fill in race results for an imaginary run so full software functionality can be learned before going live on race day.

UTILITIES

Click on the UTILITIES button to access the utilities feature of XLscore PRO as shown in Figure 3a.

To reprint a timeslip for a previous Practice, Qualify, or Eliminations race, click on REPRINT TIMESLIP. Select a class, then select a driver to retrieve all validated runs for the class/driver pair. Click on NEXT/PREVIOUS to move through each race. Once the timeslip is located, click PRINT TIMESLIP to print the timeslip on the printer connected to the computer. Clicking on the class name is a convenient way to RETURN to the previous page to select a different class then driver to print.

Clicking on LOAD FILES will jump back to the ALERT screen shown in Figure 1a to allow archiving the race data or load a previous event's race data.

Click on EXPORT RESULTS to update the Announcer's Web-pages with current information.

Click on ANNOUNCER SCREENS to view the web browser based Announcer Screens enabled on the SYSTEMS SETTINGS page. Clicking OK will open the local web browser and load the index of available screens.

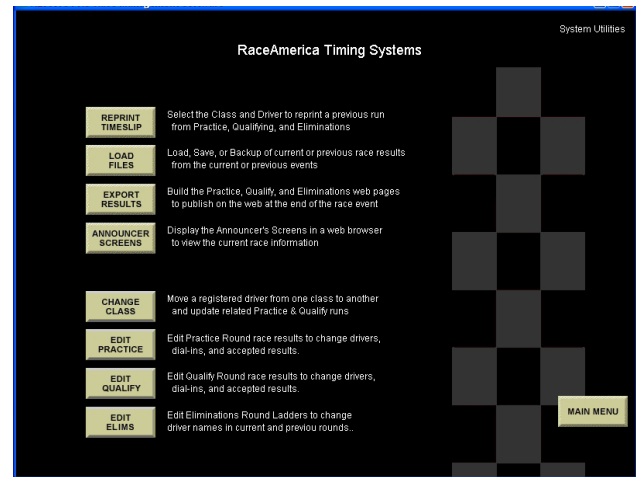


Figure 3a - Utilities Screen

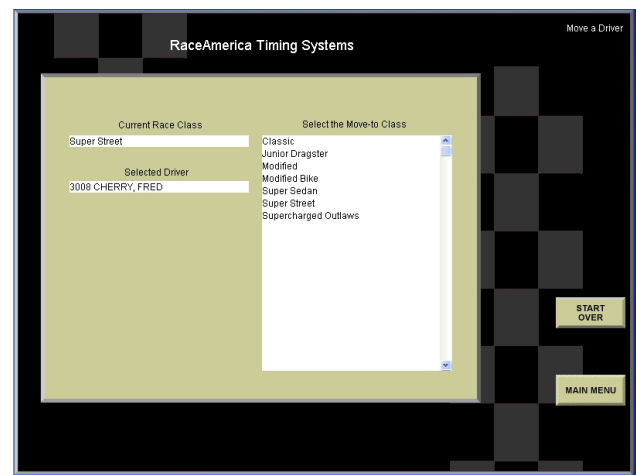


Figure 3b - Change Class Screen

NOTE: Race results saved during Driver Registration, Practice Rounds and Qualifying Rounds can be modified to correct for input errors. Before proceeding, it is strongly suggested to use the BACKUP function to save a copy of the race results and driver registration prior to editing live race results. BACKUP can be used multiple times to save several edit 'steps' and allow backing up in the edit process and reload good data in the event an edit was in error.

MOVE DRIVER TO NEW CLASS

Drivers can be reassigned to a different class before, during or after Practice and Qualifying have completed. Click on CHANGE CLASS and select the class containing the driver. Select the driver to be moved. The screen in Figure 3b will show your current selections and prompt to

select the new class. Once a class is selected, click **MAKE CHANGE** to move the driver. Click on **START OVER** to abort the change and reselect the current class and driver. More than one driver can be moved by clicking the **ANOTHER CHANGE** button. To exit the edit mode or save the changes, click the **SAVE CHANGES** button.

EDIT PRACTICE/QUALIFY RUNS

Selections made and saved during Practice Rounds and Qualifying Rounds can be edited to correct for clicking on the wrong item. Click **EDIT PRACTICE** or **EDIT QUALIFY**, select the class, then select the driver to edit. All of the saved runs for that class/driver will be displayed as shown in Figure 3c. Use **NEXT** and **PREVIOUS** to locate the specific run to edit.

Click the **WIN LANE VIOLATION** to give the other lane the win.

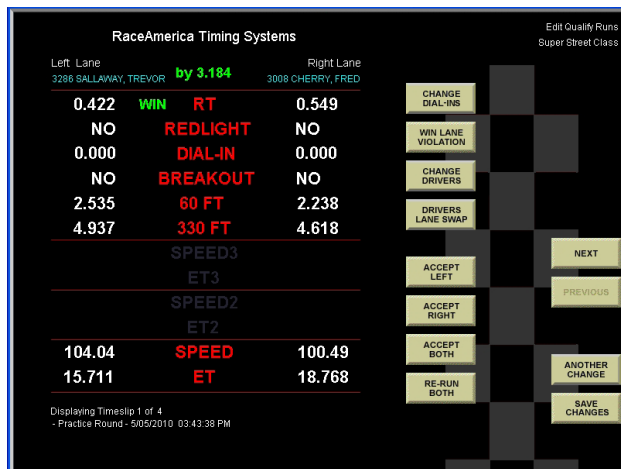


Figure 3c - Edit Practice/Qualify Screen

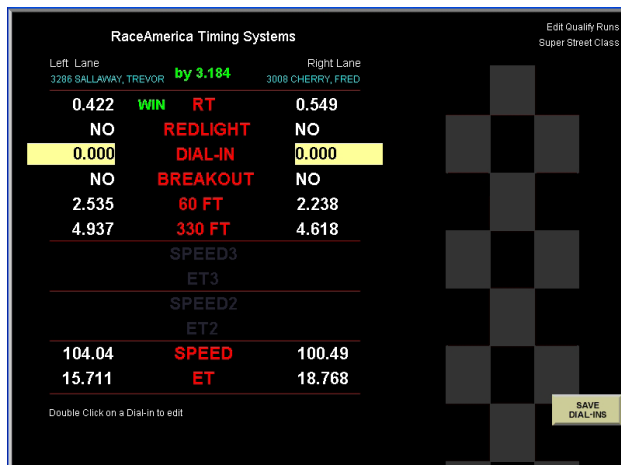


Figure 3d - Change Dial-ins Screen

Click **DRIVERS LANE SWAP** to swap drivers names between lanes. This is convenient when the race results were accepted but the correct drivers were in the opposite lanes compared to the timeslip.

Click **ACCEPT LEFT**, **ACCEPT RIGHT**, **ACCEPT BOTH**, or **RE-RUN BOTH** to correct for errors accepting or rejecting race results for both lanes. The win will be assigned to the correct lane based on the accept/re-run selection.

Click **CHANGE DIAL-INS** to change the dial-ins used in each lane for the race displayed. The dial-ins will be highlighted for editing as shown in Figure 3d. Use the **TAB** key to move between dialins. Click **SAVE DIAL-INS** to return to the main edit screen.

Click **CHANGE DRIVERS** to correct for the wrong driver in each lane. The drivers' names will be highlighted for edit. Click on a driver name and a pulldown will appear as shown in Figure 3e. Click on the desired name to assign the driver to the displayed race results for that lane. To exit the edit mode, click anywhere on the screen outside the drivers names and drivers list. Click **SAVE DRIVERS** to return to the main edit screen.

Once all edits are completed for this class/driver pair, click **SAVE CHANGES** to either exit without saving the changes or save the changes and reload the edited data files.

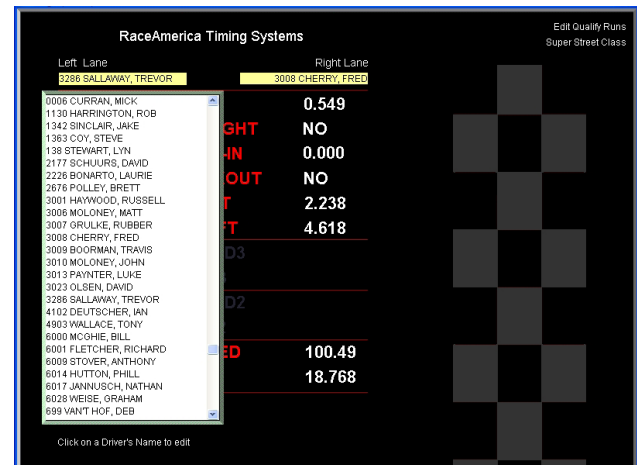


Figure 3e - Change Drivers Screen

EDIT ELIMS

If a data entry error occurs during Ladder Eliminations where the wrong driver advanced in a round or a driver name must be overridden or changed due to local rules, Edit Elims allows these edits during the current round for pairings just completed or not yet run in the round.

Click EDIT ELIMS and then select the desired class to edit. Pairings for the current round are displaced as shown in Figure 3f. Click on a pair then click on RERUN PAIR to rerun the selected pair and remove the results from their previous run from the ladder. Click on EDIT PAIR to edit a driver name or winner if the run has completed as shown in Figure 3g. If changing the driver name, click on the driver name and a list of drivers in that class is displayed as shown in Figure 3h.

Click on the driver name then click SAVE DRIVERS then SAVE CHANGES . The XLscorePRO program will restart and include the edits updating the pairings and ladders.

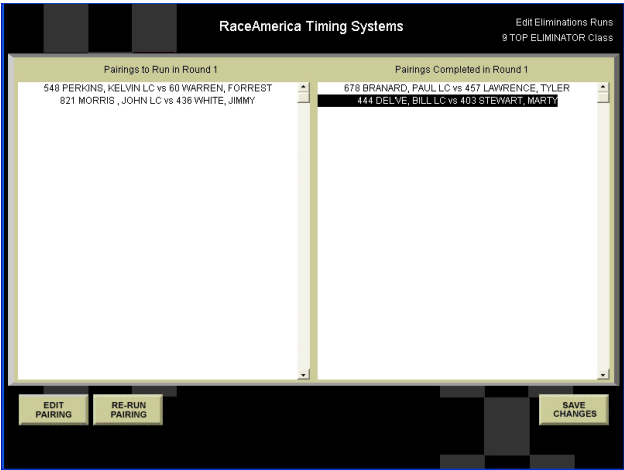


Figure 3f - Select Elims pair to edit

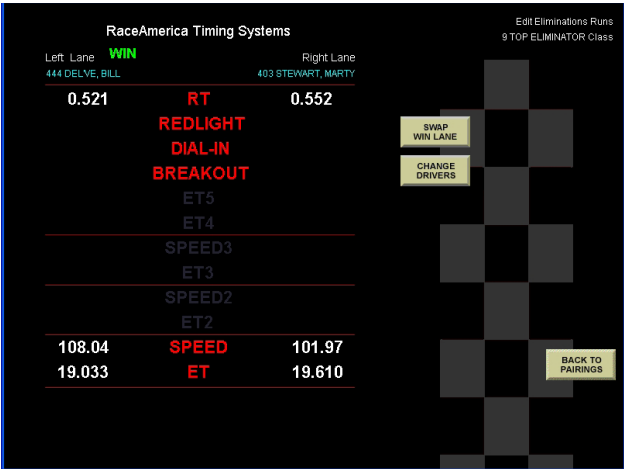


Figure 3g - Edit selection

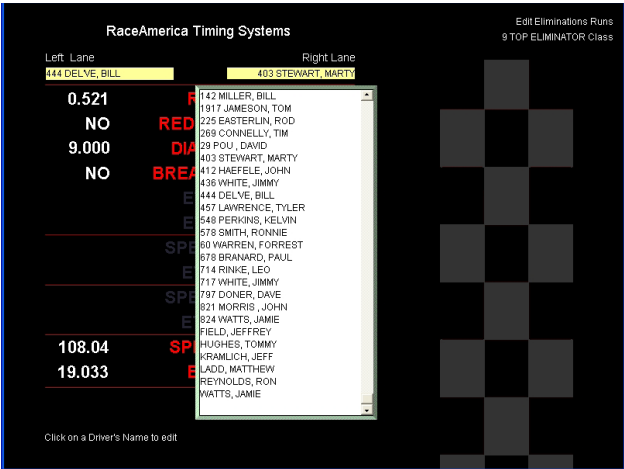


Figure 3h - Select new driver name

MAIN MENU

The Main Screen shown in Figure 4a/b is used to create race classes, register drivers, build racing ladders, display standings, and run races. For a quick reference explanation of the information displayed by the XLSCORE PRO software screen used to perform these functions, review the SCREEN DEFINITION pages in back of this manual.

If the PC communication port connected to the XL Timing System was not detected, the Main Menu screen will disable several functions which require communications to the timing system. Figure 4c illustrates the changes to the Main Menu and the disabled functions. To enable these functions, select the SYSTEM SETTINGS button and configure the PC port connected to the timing system.

On the lower left corner of the Main Menu screen is the revision level of the software and the

firmware in the XL BOX.

The software also auto detects whether the reporting format will be in FEET or METERS. Systems reporting speed in MPH will display FEET for 330FT/660FT/1000FT and Km/H will display METERS for 101M/201M/305M Intermediate ETs. 60 foot is always designated as 60 FT and displayed in FEET.

ALIGNMENT MODE

Sensor Alignment 2700 XL Wireless

The **2700 XL Wireless Console** is used to verify Track Sensor Alignment, Battery Levels and RF Integrity of the wireless system. The XL systems provide a feature that incorporates the drag tree as a visual aid to help with alignment. When aligning sensors you can look to the tree to confirm alignment.

When a light on the tree is illuminated, the corresponding sensor is out of alignment. If the Rear Facing Lights option is installed, the tree can be helpful when aligning sensors down track without rotating the tree. If no Rear Facing Lights option is installed, rotate the tree to face down the track. As alignment is corrected, the corresponding light goes out (if the tree was rotated to face down track, remember the corresponding lights will also be reversed from left lane to right lane).

The 2700 console has two alignment modes to check the full set of track sensors. (Note: Although the “stage” is included in the alignment mode, “stage and pre-stage” can be aligned in live mode)

To enter alignment mode section within the Diagnostics menu on the console press the [*5#] keys in succession to verify correct alignment of STAGE, 60ft, SPEED and FINISH (T-LinkIDs C&D). Press the [*55#] keys to verify correct alignment of 300ft (T-Link IDs G&H, 660ft SPEED and ET (T-Link IDs E&F) and 1000ft SPEED and ET (T-Link IDs J&L). Lights on the tree correspond to sensors as follows:

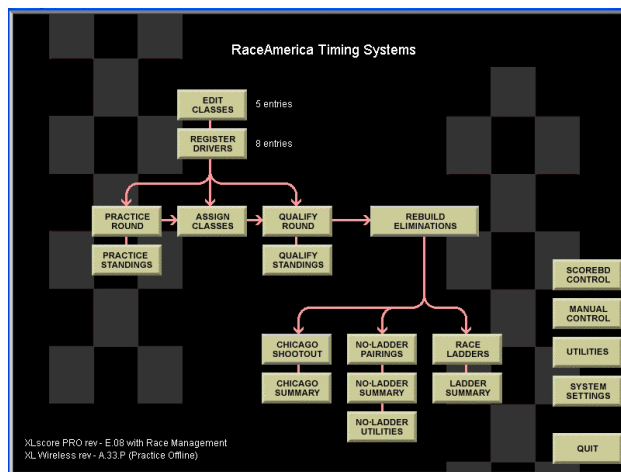


Figure 4a - Main Menu for XL Wireless

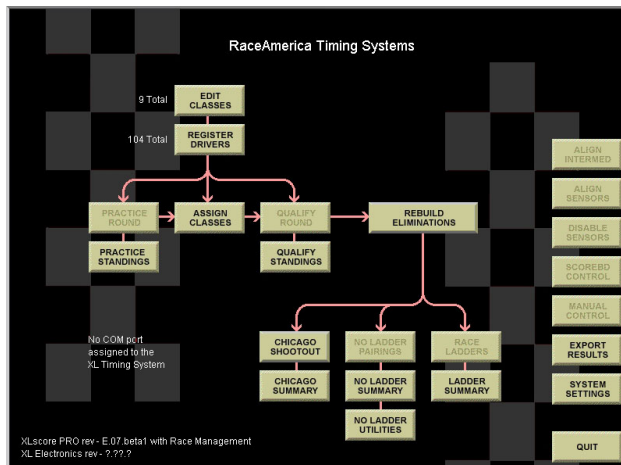


Figure 4b - Main Menu Disabled Functions

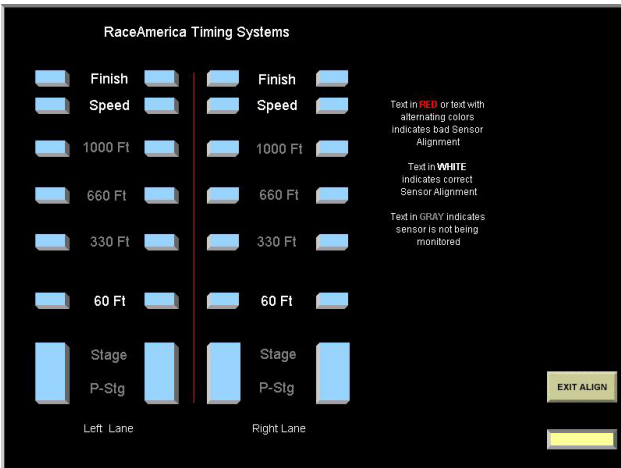


Figure 5a - Alignment Screen
1/4 Mile (402 Meter) Track

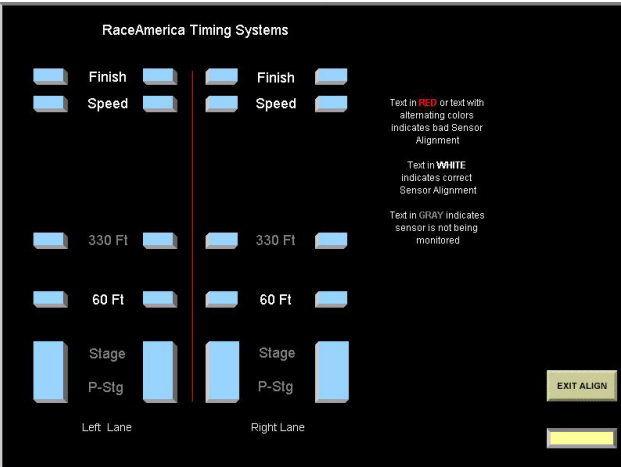


Figure 5b - Alignment Screen
1/8 Mile (201 Meter) Track

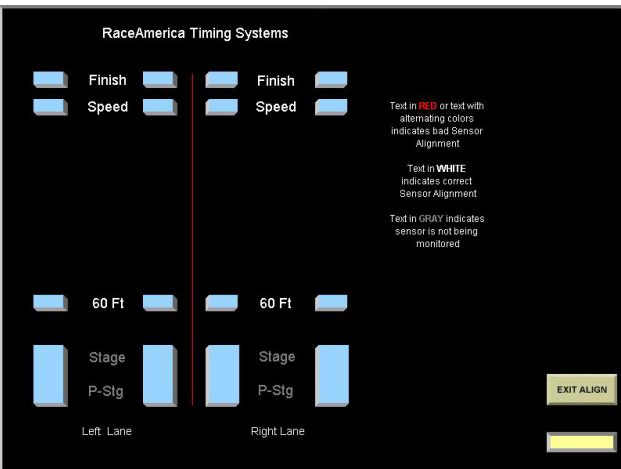


Figure 5c - Alignment Screen
Other Track

Tree Light	[*5#]	Sensor
-----		-----
Left Stage		Left Stage
Left Middle YEL		Left 60ft
Left GRN		Left Finish Speed
Left RED		Left Finish
Right Stage		Right Stage
Right Middle YEL		Right 60ft
Right GRN		Right Finish Speed
Right RED		Right Finish

Tree Light	[*55#]	Sensor
-----		-----
Left Upper YEL		Left 330ft ET
Left Middle YEL		Left 660 ft speed
Left Bottom YEL		Left 660 ft ET
Left GRN		Left 1000ft Speed
Left RED		Left 1000ft ET
Right Upper YEL		Right 330ft
Right Middle YEL		Right 660ft speed
Right Bottom YEL		Right 660ft ET
Right GRN		Right 1000ft Speed
Right RED		Right 1000ft ET

Sensor Alignment 2900 XL Professional

For the XL Professional, the following procedure is used to verify alignment of track electronics.

To verify the alignment of the Sensor/Emitter pairs, click on the ALIGN SENSORS button for 60ft/Speed/Finish or the ALIGN INTERMED button for 330ft/660ft/1000ft and the Alignment Screen shown in Figure 5 is displayed. If the track is measured in Kilometers, the Alignment Screen will display 101m/201m/305m. If the track length selected is 1/4 Mile (402M), a screen such as Figure 5a will display with all available intermediate times; if the track length selected is 1/8th Mile, a screen such as Figure 5b will display showing the available intermediate times and a screen such as Figure 5c will show for the Other track length selection.

In alignment mode, the timing system is placed into a continuous monitor mode checking the alignment of all sensors and displaying the results on the PC screen updated approximately

every second. When an IR Beam Emitter and IR Track Sensor are detected to be out of alignment, the position name (i.e. 60ft, Speed, etc.) will turn RED in the display. The corresponding light on the tree will also illuminate. If the sensor is intermittently out of alignment, the position name will alternate in color between RED and WHITE. If the sensor is way out of alignment, the position title will remain RED until alignment is established. If alignment has failed and requires attention to continue racing or the XL Timing System will not start the tree.

Left/right lights on the tree correspond to left/right sensors as follows for the XL Professional:

Tree Light	Sensor
-----	-----
Left Pre-stage	Left Pre-stage
Left Stage	Left Stage
Left Upper YEL	Left Finish
Left Middle YEL	Left Speed
Left Bottom YEL	Left 60ft
Left RED	Left Stage
Right Pre-stage	Right Pre-stage
Right Stage	Right Stage
Right Upper YEL	Right Finish
Right Middle YEL	Right Speed
Right Bottom YEL	Right 60ft
Right RED	Right Stage

The PRE-STAGE/STAGE/START Tri-Beam Emitter/Sensor pairs at the starting line are aligned in a similar fashion. Placing the emitter and sensor parallel to each other will establish an initial setting. Rotate the Tri-Beam Emitter Unit left and right noting when the pre-stage, stage, and red lights illuminate on the tree and indicating the extreme of the alignment. Rotate the Emitter Unit until the pre-stage, stage, and red lights go out and the position names on the PC change to WHITE. Repeat the same process for the Sensor Unit until the center of alignment is established.

To view the alignment of the intermediate ET's of a XL Professional system (if present), click on the ALIGN INTERMED button. This button will be grayed out if your system does not support intermediate ET's. Alignment of the intermediate

ET's does not affect system operation. Improper alignment of the intermediate ET track electronics will generate incorrect and inaccurate intermediate ET's.

To exit the alignment screen, click on the EXIT ALIGN button. The program will return to the main menu ready to time and score the first race.

Physical Sensor Alignment

To maximize the alignment of the emitter/sensor pairs, it is suggested to rotate the Beam Emitter slowly left and right until out of alignment, to detect the left/right limits of alignment. Using the PC screen(2850) or tree lights to establish these limits will help establish these limits. This technique will determine the maximum lateral detection angle. Rotating the Beam Emitter up and down until out of alignment determines the maximum vertical detection angle. Once these extremes are established, position the Beam Emitter in the center of the left/right detection angle and up/down detection angle. Repeat this same process with all other Beam Emitters and all Track Sensors. This will maximize the alignment accuracy.

RUNNING A RACE USING MANUAL CONTROL

The XLSCORE PRO software program offers a race screen for optional manual entry of driver's names and their dial-ins. The software also offers automated race screens for managing large events. The following discussion runs races using the Manual Control mode of the XLSCORE software and the PC screens in Figure 6a, 6b, and 6c. The appropriate screen will display based on the track length selected on the Configuration Screen earlier.

STEP 1 - GETTING READY FOR THE NEXT RUN

The XLSCORE PRO software can capture and print the driver's names or vehicle numbers. Bracket/index/dial-ins can be entered for bracket, index, and handicap racing. The system also allows a single lane to be used for BYE runs without the need to manually break the beams in the unused lane.

If desired, enter the Driver's Names into the field at the bottom of the PC screen using the TAB key to move from one field to another. Up to 15 characters can be entered for the Driver's Names. When using Vehicle Numbers, place the vehicle number in the name field as the first characters of the field (i.e. 011Wilson). Note the preceding zero

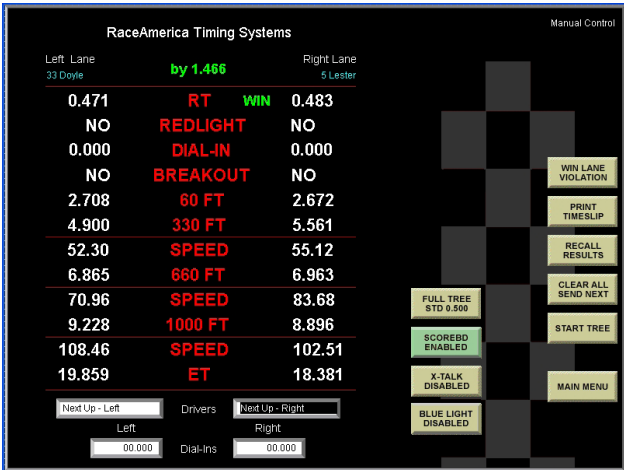


Figure 6a - Manual Control Screen
1/4 Mile (402Meter)

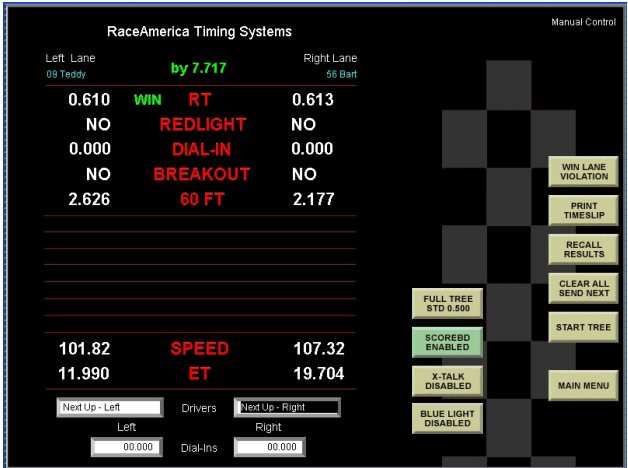


Figure 6c - Manual Control Screen
Other Display

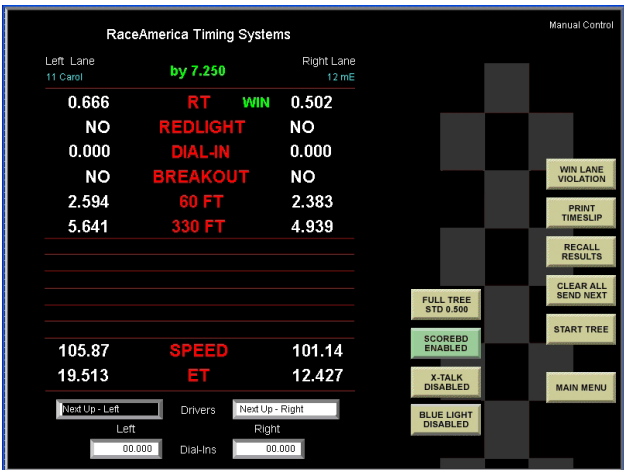


Figure 6b - Manual Control Screen
1/8th Mile (201 Meter)



Figure 6d - Manual Control Screen
(DTSS selected - Blue Light)

in the vehicle number causes the program to sort vehicles in numeric order from 001 to 999.

If the next race will use brackets, indexes or dial-ins, enter the desired times in the fields at the bottom of the PC screen using the TAB key to move from field to field. A maximum of 90.000 seconds can be timed by the XL timing system.

Click on the “tree type” button to toggle the starting tree type between PRO (where all 3 yellows illuminate at the same time then the green illuminates), and FULL (where each yellow illuminates in sequence, then the green). Four starting tree sequences are included in the XLSCORE PRO software. The standard PRO at 0.400 seconds between lights and FULL at 0.500 seconds between lights are available as well as the optional PRO at 0.500 seconds and FULL at 0.400 seconds. Click on the tree type to toggle through the four starting trees.

These settings are not used until the START TREE button is pressed.

The BLUE LIGHT (no deep staging allowed) option can be enabled or disabled by clicking on the BLUE LIGHT ENABLED/DISABLED button. When the BLUE LIGHT option is enabled, the button indicates ENABLED on the screen and the top yellow lights will illuminate on the tree until a car breaks the Pre-stage beam in either lane. Once Pre-staged and Staged, if a vehicle rolls forward out of the Pre-stage beam, the driver is disqualified and the red light will illuminate in their lane.

The X-TALK option is similar to the NHRA Crosstalk function and is enabled for bracket racing under a FULL starting tree. When the slower vehicle’s top yellow light illuminates on the tree, the top yellow in the other lane will also illuminate. The slower lane’s yellows will illuminate in sequence as usual while the other lane’s top yellow will remain illuminated until that lane’s bracket advances to the next yellow. Clicking the X-TALK button will toggle it from ENABLED to DISABLED. When disabled, the tree starting sequence is not altered.

ET and Speed will be displayed on the scoreboards after every run. To disable the scoreboards and not display the final ET and

Speed, click the SCOREBD ENABLE/DISABLE button. This is a convenient way to not display results for selected drivers who prefer not to show their competitors what they run. If you forget to turn the scoreboards back on, enable the scoreboards and click RECALL RESULTS.

For **XL Professional systems**, if the 60FT or Speed Detection options are not connected to the system, the sensors for these options must be disabled to tell the timing system to skip testing for correct beam alignment at the start of each race.

Click on the DISABLE SENSORS button and the Disable Sensor Screen shown in Figure 7 is displayed. If the 60FT option is not connected, click on each of the 60FT position names to disable these sensors. In Figure 7, the right 60FT has been disabled as indicated by the position name changing in color from WHITE (enabled) to BLUE (disabled). If the Speed Detection option is not connected, click on both Speed position names, changing them to BLUE and disabling the sensors. Disabling the timing options not connected is necessary or the timing system will indicate a beam alignment error when attempting to start the tree and will not allow the race to begin.

The Start and Finish sensors can not be disabled and are required to measure the elapsed time of each vehicle. When using the optional Tri-Beam starting line track electronics, by default, the Stage & Guard (start line) beams operate together to determine when a vehicle has moved forward at the start of a race. Once the front tire clears the Stage beam, the timing system detects the vehicle has moved. In the event the body of the vehicle continues to block the Stage beam after the tire has cleared, the optional Guard beam is used as a secondary trigger for vehicle movement.

Click on SAVE SETTINGS to save and exit the Disabled Sensor screen.

NOTE: It is not necessary for Pre-Stage or Stage to be illuminated to start a race and are not tested by the system for alignment at the start of each race. If a vehicle is not properly staged when starting the tree and using the Guard/Stage function, the timing system reverts back to the Start only function for that lane and that race.

STEP 2 - STARTING AND SCORING A RACE

Click on the CLEAR ALL SEND NEXT button to clear the tree and send the Driver's Names and Dial-ins to the scoreboards. Clicking on the START TREE button or pressing the STARTER'S BUTTON will cause the timing system to reset all previous race data and utilize the settings entered in STEP 1. This step is irreversible and previous race results will be erased when starting the tree for the next race.

The timing system repeatedly checks all sensor alignments to best insure the equipment has not failed or been bumped out of alignment.

As the race begins, reaction times are measured by the timing system starting when the bottom yellow light is illuminated in each lane. When both lanes have started and their reaction times measured, the PC screen updates with the reaction times and redlight information for both lanes as well as the differential time between the two lanes reaction times shown in GREEN next to the quicker lane's RT without a redlight occurring. Note when using a bracket, index, or dial-in, or when a redlight occurs, the differential time is not displayed. See the PC SCREEN DEFINITIONS pages in this manual for a screen layout.

As the race progresses, the 60FT times are measured, then the vehicle's speed, and the elapsed time for each lane if these options are present. When all lanes which broke the start beam cross the finish line, the PC updates with all measured statistics. The Winning lane is indicated in GREEN next to the winning lane's ET.

NOTE: If a vehicle in either lane 'breaks' the starting beam but is unable to cross the finish line and 'break' the finish beam, click on the END RACE button to tell the timing system the race is over. It is not necessary to manually block the start or finish beams in the lane not starting or not finishing. All measured statistics will be updated on the PC based on how far the vehicles were able to progress down the track. (i.e. 60ft times will be reported if the vehicle 'breaks' the 60ft beam). Speeds cannot be reported unless both the Speed

and Finish beams are broken by the vehicle.

At the top of the race results displayed on the screen is displayed in green the time difference between the lane's runs as 'by X.XXX'. This is the actual time difference between finish line crossings. If a redlight or bracket/index/dial-in breakout occurs, the differential time will be replaced with REDLIGHT or BREAKOUT or SUPER DQ whichever is the factor used to determine the winning lane.

In the event a center lane crossing occurred or other racing violation which effects the outcome of the race, the race director can override the timing system's winner determination by clicking on the WIN LANE VIOLATION button to change the winning lane to the other lane. This feature allows the local race track to over-ride the timing system's win determination and print timeslips reflecting the violation. When the WIN LANE VIOLATION button is used, the differential time at the top of the screen displayed in green will be replaced with VIOLATION indicating over-ride of the timing system's win determination.

Clicking on the PRINT TIMESLIP button prints a timeslip on all printers connected to the timing system and PC. Click on the PRINT TIMESLIP button for each additional timeslip to be printed. If a number was entered in the Configuration Screen to automatically print timeslips at the end of each race, timeslips are printed at this point and the number of copies are displayed during the printing process.

STEP 3 - TREE OPERATION POST RACE

When the race is over, the **XL Professional tree** is updated with a green light illuminated in the winning lane, red lights in each lane for any foul starts, and the middle yellow light is illuminated for any bracket/index/dial-in breakouts. The **XL Wireless** can be configured for one of six light patterns including the one described above.

While the tree is displaying race results, the Pre-Stage and Stage lights and beams remain active to allow staging of the next set of vehicles. Clicking on the CLEAR ALL SEND NEXT

button clears the tree lights and enables the timing system for the next race. Clicking on the RECALL RESULTS button recalls the last race results to the tree and the PC.

NOTE: It is advised to click the CLEAR ALL SEND NEXT button each time prior to staging the next race to insure the vehicles stage properly, especially when SUPER START is enabled.. Some race results can fool the PC operator. An example of this would be when race results are displayed on the tree where the winning lane is not indicated after a race (i.e. BYE run unable to cross the finish line). The tree will be updated displaying the race results which illuminate no lights on the tree (no win, no redlight, no breakout).

STEP 4 - BEAM ALIGNMENT ERRORS

If an out of alignment condition is detected after the START TREE button or STARTER'S BUTTON is pressed, the timing system aborts the starting of the tree and the PC displays the Alignment Error Screen shown in Figure 8 (as adjusted for track length intermediate times available). Figure 8 illustrates the 60FT sensor/emitter pair on the right lane failed at least one of the tests for alignment prior to running a race.

In many race situations with vehicles at the line, timely resolution is critical. If the alignment problem can not be resolved quickly, the XLSCORE software can disable the failing sensor from the pre-start alignment test by clicking on the DISABLE SENSORS button.

Clicking on the position name of the failing sensor will change the color from WHITE to BLUE as shown in Figure 7 to indicate the sensor/emitter pair will not be tested when starting races. In our failure example, clicking on the right Speed will change it to BLUE. When done selecting sensors to be disabled during the pre-start alignment test, click on the SAVE SETTINGS button to save and return to the main menu. Once back on the main menu, click on MANUAL CONTROL, then click on the START TREE button to start the pending race. If no other alignment errors are detected, the

tree will start as normal.

NOTE: Generally, only the 60FT and Speed sensors can be disabled to reflect the presence of track electronics at these positions on the track. The intermediate ET's can be disabled as a group and do not affect the operation of the timing system. The intermediate ET track electronics alignment is not checked by the timing system at the start of a race but the 60FT and Speed are tested for proper alignment.

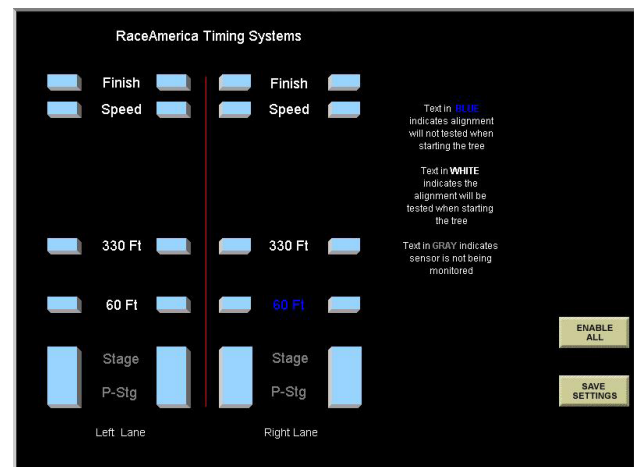


Figure 7 - Disable Sensor Screen

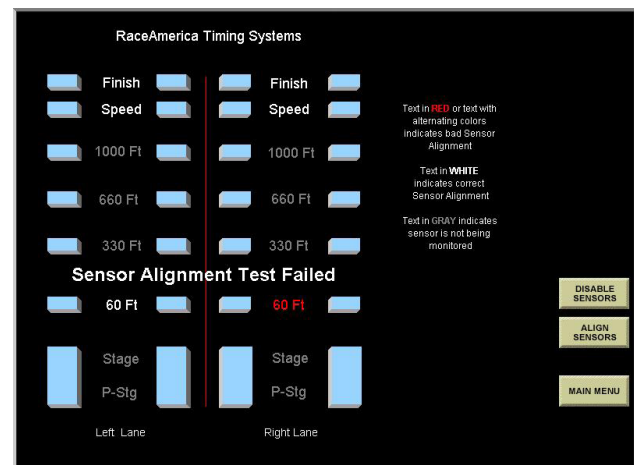


Figure 8 - Alignment Error Screen

RACE RESULTS FILE DEFINITION FOR MANUAL CONTROL

Selecting SAVE ALL RACES or WHEN PRINTED on the Configuration Screen for SAVE RACE RESULTS enables the software to save race results to a file. If the manual.dat file currently exists, the software opens the file and adds new race results to the file without destroying previous race data. Restarting the XLSCORE software will also not lose any race results from previous runs. If the manual.dat file does not exist when the XLSCORE software is started, the software will create the file for new race results.

When race results are saved to a file, the data is stored in the various '.dat' files in a tab delimited format. This format provides easy import into most spreadsheet software applications.

Once the race results data is imported into a spreadsheet, the data forms a multi-column representation of the race results displayed on the PC screen after each race. Each race adds two lines of information to the '.dat' file, first the left lane results are added, then the right lane results are added.

Results for both lanes are added regardless if only one lane is used or only one lane finishes. If a lane is unable to finish, race results saved will consist of the stats measured by the timing system for each lane as far as the vehicle could progress. An example of this would be a vehicle in the right lane starts, crosses the 60 foot point then stalls and is unable to finish. The reaction time, redlight info, the dial-in value for the right lane, and 60 foot time will be saved. The elapsed time and vehicle speed will be zero and breakout defaults to NO. The saved race results for the right lane will be the same as displayed on the PC screen after the race.

The following column definitions apply to the spreadsheet when importing the 'manual.dat' file created from running races using the Manual Control feature of the XLSCORE software. Columns after the import of this file into a spreadsheet application are defined from left to right as:

Date and time stamp
Lane identification text
Driver's name as entered on PC screen
Elapsed time
Vehicle speed
Reaction time
Redlight as YES or NO
Dial-in as entered on PC screen
Breakout as YES or NO
60 foot elapsed time
330 foot or 101 meter elapsed time
660 foot or 201 meter vehicle speed
660 foot or 201 meter elapsed time
1,000 foot or 305 meter vehicle speed
1,000 foot or 305 meter elapsed time
WIN or LOSE or blank text
Win determination as blank or:
by xx.xxx
REDLIGHT
BREAKOUT
VIOLATION
SUPER DQ

Initially the data is sorted by the Date/Time Stamp column, then by the Lane Identification column. To view a single race, the left lane results will appear above the right lane results for the same race.

To view a driver's list of runs in a chronological order, sort by the Driver's Name column, then by Date/Time Stamp column.

NOTE: Many spreadsheet applications have preference settings which set the default for the Date/Time format giving the appearance of a shortened Date/Time stamp. The format of the Date/Time column is MM/DD/YY or DD/MM/YY for the date and HH:MM:SS AM/PM for the time. The date and time are acquired from the PC's date and time settings. If the date or time is logged incorrectly to the file, the problem is corrected by resetting the date or time in the PC operating system.

RACE MANAGEMENT OVERVIEW

The race management software functions of the XLSCORE PRO software are driven by classes and the drivers registered in each class. For new users of the XLSCORE PRO software, it is suggested to use the Manual Control method of running races on the Main Menu in order to become familiar with the operation of the XL Timing System in conjunction with the XLSCORE PRO software package. Once a good operational understanding of the hardware and software has been achieved, proceed to this Race Management portion of the XLSCORE PRO software package. Many references in the following documentation are built on previous knowledge of the hardware and software using the Manual Control method to run races. When selecting any of the race management functions, the software prompts for a class to be selected. All registered driver's names are separated and placed in pop-up lists. The following is a short definition of each of the race management and reporting functions.

Practice Round

Similar to Manual Control with the addition of driver names selected from popup lists when the Left Driver or Right Driver are clicked on. Individual race results are saved in a file named 'practice.dat'

Practice Standings

Displays standings of runs made during Practice Round for each class showing the lowest to the highest Elapsed Time by driver and the highest to lowest Speed by driver. Standings can display each driver's best ET, Speed, Delta to Dial-in, and 60ft time.

Assign Classes

Provides automated methods to assign drivers to classes based on runs made during Practice Round. Qualify Round is built based on class assignment criteria selected and Practice Results. These automated functions provide a means to assign drivers to classes after they have made passes rather than using a pre-assigned class during the

driver registration process.

Qualify Round

Operates the same as Practice Round with the results used to generate reports and ladders used in the Elimination Rounds. Individual race results are saved in a file named 'qualify.dat'

Qualify Standings

Displays standings of runs made during Qualify Round for each class showing the lowest to the highest Elapsed Time by driver or the highest to lowest Speed by driver. Standings can be displayed for each driver's best ET, Speed, Delta to Dial-in, and 60ft time.

Build/Rebuild Eliminations

This function uses the Qualifying Round results and ladder seeding from the Configuration Screen to create structured NHRA-style Race Ladders and freeform parings style Single Elimination lists. If elimination files currently exist, the Build Ladders button is replaced by a Rebuild Ladders button.

Race Ladders

Race ladders are structured pairing type ladders with round 1 seeded based on a driver's best qualifying runs and the seeding method selected on the Configuration Screen. Race ladders are built for each class with 2 or more drivers with valid qualifying runs. Ladders can range from 2 drivers to 64 drivers in a class. For classes with more than 64 drivers, the top 64 in the standings

are used. ET's and Lane Choice can be displayed when viewing the ladder. Individual eliminations race results are saved in the 'elims.dat' file.

Race Ladder Summary

To enable viewing of the Race Announcer summary screen, make sure the RACE LADDER ELIMINATIONS is enabled in the SYSTEM SETTINGS screen under Enable Announcer's webpages. From the Main Menu simply click on the LADDER SUMMARY button and then click OK. The Announcer summary index will pop up as an HTML screen. Click on the desired enabled announcer's screen for viewing. Alternatively, you can go to the HTML folder and double click the INDEX.HTM file. Your web browser will load the INDEX.HTM file to view Race Ladder Summary by class. The summary is updated after every run as shown in Figure 20.

No-Ladder Pairings

Operates under the 'pairings are selected for each round' elimination method with a maximum of five losses before being eliminated from competition. At the start of No-Ladder Eliminations, all drivers in a class completing qualifying runs are loaded into a driver pop-up list. Pairings are performed manually by selecting a name from the pop-up list of drivers for each lane. When a pair is selected from the list to run a race, the software keeps track of wins and losses by driver until the driver reaches the maximum number of losses as configured for their class. When the next round begins for that class, only the advancing driver names appear in the pop-up list until a winner is determined. Individual race results are saved in the 'elims.dat' file.

No Ladder Summary

To enable viewing of the No-Ladder Race Announcer summary screen, follow the instructions for Race Ladders Summary above and select No-Ladder Screen.

Chicago Shootout

Chicago Shootout is a racing format used widely in Australia providing Practice, Qualifying and a minimum of three rounds of Eliminations to each driver. For details see page 29.

Chicago Shootout Summary

To enable viewing of the Chicago Shootout Race Announcer summary screen, follow the instructions for Race Ladders Summary above and select Chicago Shootout Screen.

No Ladder Utilities

The utilities include functions to Eliminate a driver, if their vehicle can no longer come to the line, provide Buy Backs for any round, and use the remaining drivers in a class to generate a Race Ladder. The No-Ladder Utilities screen is shown in Figure 20.

SHORTCUT TIP: When running one of the above race management functions and a different class is desired, a shortcut exists to easily select another class without returning to the Main Menu. Position the cursor over the class name in the upper right hand corner. Once the class name changes **color to red**, click on the class name and the software will change to the class selection screen.

NOTE: Eliminations are handled separately by class. This feature provides the flexibility to use different elimination round methods on different classes. Once a class completes its first race and race results have been validated, the method of eliminations used for that class cannot change. Attempting to change to another method of eliminations will result in an error message. Other classes may use any elimination method as long as no races have completed in that class.

RACE MANAGEMENT SOFTWARE DRIVER & CLASS REGISTRATION

If no classes have been entered, the DRIVER REGISTRATION button on the Main Menu will be disabled until at least one race class exists. To enter a race class, click on the EDIT CLASSES button on the Main Menu and the Class Registration screen is displayed, Figure 9.

Enter a race class name under RACE CLASS on the left side of the screen. Select the desired DEFAULT STARTING TREE for the class. This is the tree the software will auto configure when running races in their class. The default starting tree can be changed manually while running races in this class.

The DEFAULT CLASS DIAL-IN is used when all drivers registered in the class will be assigned the same dial-in. Select USE MINIMUM ET and enter the class dial-in into the MINIMUM ET field to assign a class dial-in.

To generate a 'Quick Class' for the fastest qualifiers, click on the Quick 4, Quick 8, or Quick 16 in the QUICK OPTION field. When the Eliminations Round is created, the fastest 4, 8, or 16 drivers will be moved to a separate class with the same class name plus Q4, Q8, or Q16 suffix.

When the Eliminations Round is built for this class, structured ladders (Race Ladders) are created based on the type of seeding selected in the RACE LADDER SEEDING field. Select PROFESSIONAL, SPORTSMAN, RANDOM or FIRST ROUND BYES to select the type of

seeding to be used when building race ladders for this class. Professional seeding will pair the fastest in qualifying round to the slowest in qualifying round then second fastest to second slowest, etc. Sportsman seeding will divide the qualifying into two halves, the upper fast half and the lower slow half. The fastest in the fast half will be paired against the fastest in the slow half then second fastest to second fastest, etc.. Random seeding uses a computer generated random pairing seeding. Bye runs are distributed randomly. First Round Byes places all Bye runs in the first round awarding the fastest drivers with the Bye runs then uses the Professional seeding to pair the remaining drivers, fastest to the slowest. For more detail on seedings, visit our website at:

www.raceamerica.com/dragdata.html

Select what race results will be used to build the race ladders in the ELIMINATIONS SORT METHOD field. ET, Closest to Dial-in, Speed, and RT can be used when building the Race Ladder for this class.

When No Ladder Eliminations will be used for a class, select the number of losses before a driver is eliminated from competition. In the No Ladder Summary, the driver's name and their win/loss record will be displayed.

The CHICAGO SHOOTOUT ROUNDS field will determine how eliminations will be run for this class. Use of the Chicago Shootout Rules to pair drivers for each round can be selected as

Figure 9 - Class Registration Screen

Figure 10 - Selecting a Class

Driver Registration

Race Class: 64-car Any Truck
 Last Name: Adler
 First Name: Alex
 Index / Dial-in: 0.000
 Status: Y
 Sponsor: Valvoline
 Address: 66 Cayenne St
 City/State: Columbus, OH
 Vehicle Make: Nissan
 Vehicle Model: Titan
 Vehicle Color: Blue
 Age: 28
 Comments & Notes:

Adler, Alex
 Albert, Dennis
 Armani, Jodi
 Banks, Michael
 Banks, Mona
 Banks, Peter
 Banks, Ronald
 Blake, Cathy
 Brown, James
 Brown, Jessica
 Bryant, Susie
 Butler, Roy
 Crane, Danny
 Crawford, Nancy
 Crawford, Richard
 Dixon, Brad
 Dixon, Dick
 Dixon, Sean
 Donahue, Donald
 Fry, Carla
 Fry, John
 Gates, Phillip
 Gates, Robert
 Grant, Corey
 Grant, Sean

Buttons: PRINT, STATUS REVIEW, ADD, MODIFY, DELETE, MAIN MENU

Figure 11 - Driver Registration

well as manually assigning driver pairs.

When using the Autostart feature of the timing system, XLscore PRO enables the Autostart parameters to be assigned to each class. TIME TO STAGE is a protection lockout enabling the autostart process once one vehicle has blocked the stage beam for the number of seconds entered. STAGE TO START is the amount of time both vehicles must be staged before the tree comes down and TIMEOUT is the maximum time after the first vehicle stages when the tree will come down even if the other lane has not staged. An OVERRIDE AUTOSTART button will appear in Practice, Qualifying, and Eliminations race screens if the class selected has Autostart enabled. This allows for BYE runs within an Autostart class when two vehicles will not be staging and avoids waiting the TIMEOUT period before the tree comes down.

The MINIMUM ET and MAXIMUM ET can also be entered for use by the automated ASSIGN CLASS functions discussed later in this manual. Click ADD to add to the list of existing classes shown on the right side of the screen. If the class already exists, an error message will be displayed.

To edit or delete an existing class name, click on the class name as it appears in the list. The entry is highlighted and copied to the RACE CLASS field. Click on the DELETE button to delete this class from the list or make modifications to the class name and click on MODIFY. An error message will be displayed if the newly modified

class name already exists in the class listing. After all class names have been entered, click on the MAIN MENU button to return to the main menu.

To register drivers, click on the DRIVER REGISTER button on the Main Menu. The user is prompted to select a Race Class for the drivers to be registered as shown in Figure 10. Click on a Race Class from the list displayed to proceed.

Figure 11 is displaying the listing of all drivers currently registered in the selected race class. Enter the Driver's Last name, First Name, any Index/Bracket/Dial-in, and any Notes or Comments for this driver. If custom titles were defined on the Configuration Screen, they will appear below the STATUS field and above the COMMENTS & NOTES field. The user can enter up to 24 characters in the 7 defined custom fields. The Note & Comments field is limited to 100 characters. The STATUS field (enter Y or N, default is Y) indicates whether this driver will be racing in today's race event. Click on the ADD button to register the driver information into that class. If the driver is racing in multiple classes, the driver information should be entered for each class. An error message will be displayed if the driver is already registered in the class. To delete or modify driver information, click on the driver's name in the list. To delete the driver from that class, click on the DELETE button. To modify the existing entry, make all changes and click MODIFY. An error message will be displayed if the new modifications result in a name that already

Status Review

Status: Y Driver's Name: Crouch, Kenneth
 Y Zelds, Gilda
 Y Zelds, Gilda1
 Y Zelds, Gilda2
 Y Zelds, Gilda3
 Y Zelds, Gilda4
 Y Zelds, Gilda5
 Y Zelds, Grace
 Y Zelds, Grace1
 Y Zelds, Grace2
 Y Zelds, Grace3
 Y Zelds, Grace4
 Y Zelds, Grace5
 Y Zelds, GraceAAA

"Yes" Status indicates the driver in this class is racing in the current event and will appear in driver popup lists for practice and qualifying runs

Buttons: SET ALL TO 'YES', SET ALL TO 'NO', NEXT, PREVIOUS, SAVE SETTINGS

Figure 12 - Status Review Screen

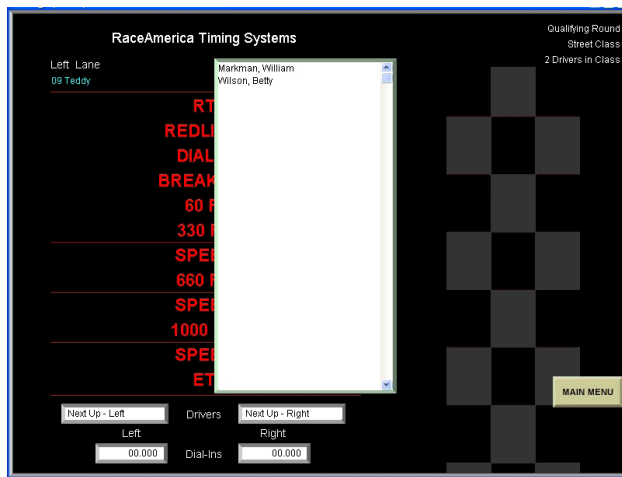


Figure 13 - Driver's List Pop-up

exists in the list for that class.

To print a list of drivers registered in this class, click on the PRINT button as shown in Figure 11. The print function will be available if a local printer was configured on the Configuration Screen of the XLSCORE PRO software.

When holding multiple race events with many of the same drivers, the ability to select which drivers will be racing during any one particular event is helpful to make the driver pop-up lists reflect who is racing rather than all the drivers registered in the XLSCORE PRO program. Clicking on the STATUS REVIEW button will display the current race day status of each driver registered in the selected class as shown in Figure 12. Click on a driver's name to toggle the Race Day Status from Yes to No. When set to Yes, the driver's name will appear in the driver pop-up lists during practice and qualifying



Figure 14 - Validation of Race Results

rounds. This status for a driver can be changed at any time.

To exit the Driver Registration screen, click on the Main Menu button.

If at least one class has been entered and at least one driver registered, many of the disabled features of the XLSCORE PRO software will become enabled. This is observed on the Main Menu where full color buttons replace the grayed out disabled buttons.

RACE MANAGEMENT SOFTWARE PRACTICE ROUND

When the PRACTICE ROUND button is selected from the Main Menu, the software prompts for a class selection to separate only those drivers registered in a class. Click on the desired class to enter the race screen under a practice mode scenario. The Practice Round screen is similar to the Manual Control screen with the addition of driver name entry replaced by a pop-up list of all drivers registered in the selected class. Positioning the cursor over the Left Driver Name or Right Driver Name and clicking will recall the scrolling pop-up list of driver's names as illustrated in Figure 13. Click on the desired name to select it or begin typing the desired entry on the keyboard. As each character is entered on the keyboard, the popup list is shortened to only those entries matching the characters typed. When only one entry remains, it is automatically selected for that lane. If no entries match the characters typed on the keyboard, the pop-up list will be blanked and contain no entries. Use the backspace key on the keyboard to erase typed characters. The list will

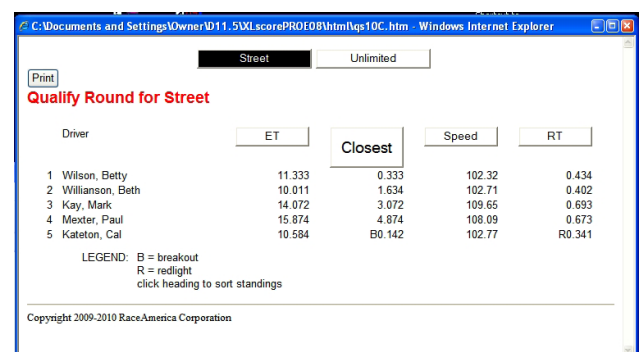


Figure 15 - Standings Screen

automatically lengthen as more entries match the remaining characters appearing in the Driver's Name field.

The Dial-in entered for this driver during registration will also be recalled to the screen. If no Dial-in was entered during driver registration, the Dial-in will default to '0.000'. The Dial-in can be altered by clicking on the current entry and highlighting the current value, then entering the new value.

Click on the START TREE button, same as when using Manual Control to run a race. When the race has completed, the software prompts for validation of the race results as illustrated in Figure 14. In the event some unforeseen situation occurred that is not detectable by the timing system, each lane can be validated separately. Click on the ACCEPT LEFT button if only the left lane has valid race results, ACCEPT RIGHT if only the right lane contains valid race results, ACCEPT BOTH if both lanes should be saved or RE-RUN BOTH if the race was an error operating the timing equipment or both lanes have invalid race results. When the results are saved in the practice.dat file, any lanes not containing valid runs will be marked as NOT VALIDATED. Practice Round is just what it says: practice runs with bad race results flagged. No win indication is displayed on the PC screen or saved to the practice.dat file since the winning lane means nothing during practice. This makes later statistical analysis of the practice runs more accurate with bad runs and operational errors easily identified in the race results. For the

occasional 'grudge matches', use Manual Control to run the race and indicate a winner.

AUTOSTART

Each class entered into XLscore PRO can enable and disable Autostart and establish Autostart parameters by class. Autostart can be used in Practice, Qualifying, and Eliminations rounds. When the race results screen is displayed for an Autostart enabled class, the OVERRIDE AUTOSTART button will appear as shown in Figure 16b.

Click the OVERRIDE AUTOSTART button to temporarily disable the Autostart feature for a BYE run in an Autostart class. If Autostart is enabled for a BYE run, the tree will not come down until the TIMEOUT parameter configured in class has expired.

The START TREE button is replaced with the AUTOSTART button and is clicked to start the staging. The tree will illuminate both reds and greens to inform the drivers Autostart is enabled and the first vehicle to break the stage beam will begin the Autostart timing process. The AUTOSTART button will then change to AUTOSTART ENABLES and the vehicles must stage to start the tree. The phandheld pushbutton at the start line can also enable Autostart and illuminate the reds and greens on the tree. Once the vehicles have staged, the tree will automatically come down and begin the race.

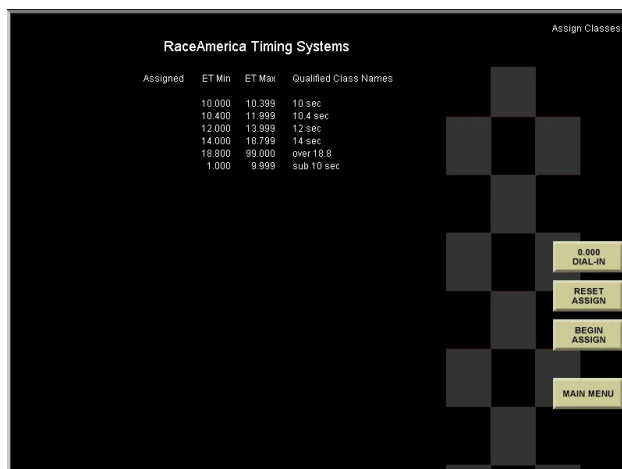


Figure 16a - Min/Max ET Range Screen



Figure 16b - Autostart function onscreen

RACE MANAGEMENT SOFTWARE PRACTICE ROUND STANDINGS

At any time during and after the qualifying round, the standings can be reviewed sorted by Elapsed Time, Closest to Dial-in, Speed or Reaction Time. Select the PRACTICE STANDINGS button from the Main Menu to open the Announcer's Screen containing the Practice Round Standings for all classes as shown in Figure 15. One PC can run the races while a second PC can display the standings for an announcer to view. Networking PC's together is discussed later in this manual. Practice Round Standings Announcer's Screens are enabled on the System Setting Screen.

RACE MANAGEMENT SOFTWARE ASSIGN CLASSES

The XLSCORE software offers two methods to assign drivers to classes. The standard method is to add classes and then add (register) drivers to each class on the front end before the racing action starts. A second method is to assign one class to all drivers, then after a few practice runs have been made, the software applies MIN/MAX ET criteria to the practice results to determine the final class each driver will be assigned to when eliminations begin. The result of this automated driver-to-class assignment (registration) process is drivers are registered in a second class and a mirror of the practice runs is placed as qualifying runs with the new class assignments.

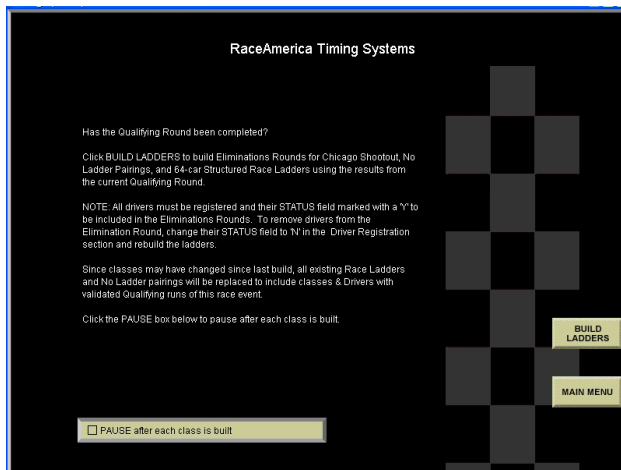


Figure 17 - Eliminations Build Screen

ASSIGN CLASSES MIN/MAX ET RANGE

This method of assigning classes to drivers is determined by comparing the driver's lowest ET during the Practice Round to the min ET & max ET entered for each class. To use this automated function, there are a few requirements to insure proper operation.

- (1) A class or classes are created with the MIN ET and MAX ET entered as 0.000 or left blank.
- (2) Drivers are initially registered into one of the classes created in (1). Registering drivers in these classes tells the automated class assignment function which drivers to evaluate and assign to a class.

- (3) The final desired classes are entered with the MIN ET and MAX ET set to the limits for that class. Note the Min/Max ET's can not overlap another class.

As shown in Figure 16, clicking on the MIN/MAX ET RANGE button displays a list of classes that exist and their ET ranges. These are the classes the drivers will be assigned to based on lowest ET.

When drivers are assigned to a class, the option of leaving their assigned dial-in as 0.000 is default. Clicking on the 0.000 DIAL-IN button toggles the button to the MIN ET RANGE. With this option selected, drivers are registered in their new class with a dial-in equal to the MIN ET that was entered for the class. Clicking on the MIN ET RANGE button toggles the button to the LOWEST ET option. With this option selected, drivers are registered in their new class with a dial-in equal to their lowest ET of the Practice Round.

Clicking on the BEGIN ASSIGN button starts the evaluation of the Practice Round results and the assignment of drivers by class. The number of assigned drivers increments on-screen as the assignments occur. Assignments are the same as registering a driver in a second class, that is, the original registration is retained and a new registration is added to the Driver Registration screen. Note the total count of drivers registered

has increased as displayed on the Main Menu.

To remove all new assignments from the Driver Registration count, click on the RESET ASSIGN button. This will delete all driver entries registered in classes where the Min/Max ET is non-zero.

At this point the Qualifying Round has been loaded based on lowest ET in the Practice Round and Min/Max ET of each class. The results are the same as if the drivers were initially registered in classes that would have matched their lowest ET, and, their lowest ET had been accomplished during an actual Qualifying Round. Click on the BUILD LADDERS function on the Main Menu to load the pseudo Qualifying Round results to build the Single Eliminations and Race Ladders..

RACE MANAGEMENT SOFTWARE QUALIFYING ROUND

When the QUALIFY ROUND button is selected from the Main Menu, the software prompts for a class selection. Click on the desired class to begin the qualifying process. Qualify Round operates identical to Practice Round with one important exception:

NOTE: In order for a driver to be included in the elimination rounds, there must be at least one run successfully completed and saved as a validated run during the qualifying round.

Redlights during qualifying have no meaning since the purpose of the qualifying round is to establish who will be participating in the eliminations round and what was their best run during qualifying.

RACE MANAGEMENT SOFTWARE QUALIFYING ROUND STANDINGS

At any time during and after the qualifying round, the standings can be reviewed sorted by Elapsed Time, Closest to Dial-in, Speed or Reaction Time. Select the QUALIFY STANDINGS button from the Main Menu to open the Announcer's Screen containing the Qualify Round Standings for all classes as shown in Figure 15. One PC can run the races while a second PC can display the standings for an announcer to view. Networking PC's together is discussed later in this manual. Qualify Round Standings Announcer's Screens are enabled on the System Setting Screen.

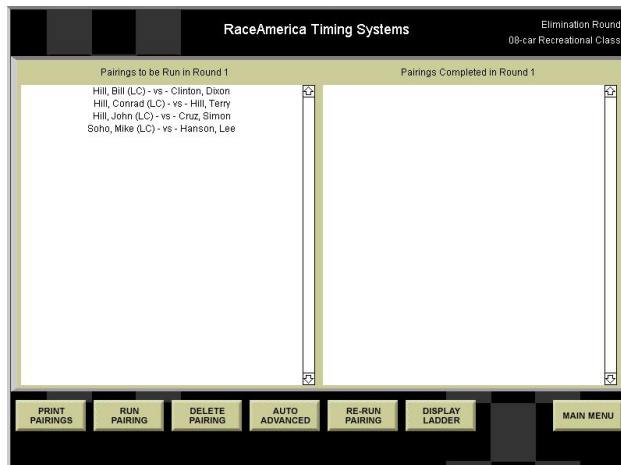


Figure 18a - Race Ladder Pairings Screen

RACE MANAGEMENT SOFTWARE BUILDING ELIMINATION ROUND

When the qualifying round has completed, the qualifying runs are used to generate the Race Ladders Eliminations (structured ladders), No Ladder Eliminations (free-form pairings), and Chicago Shoot-out Eliminations necessary for the elimination rounds. Clicking on the BUILD ELIMINATIONS button from the Main Menu will begin the elimination round building process for all classes in all three types of racing.

As a safety check, the software will prompt a second time to build eliminations before proceeding and deleting existing Elimination Round files. Clicking on the MAIN MENU button at this point will return to the Main Menu without performing the build process. Clicking on the BUILD LADDERS button will begin the

process of building the elimination files for each class. As each class is built, a message will be displayed until all classes have been built. When Build Complete is shown (only takes a few seconds) click Main Menu and you are ready for the elimination rounds to begin.

As each class is evaluated, elimination files are built based on the number of qualifying entries and the build status is listed on the screen. If the Announcer Webpages were selected for No Ladder, Race Ladders, or Chicago Shootout Eliminations on the System Settings screen, the appropriate files will be generated and placed in the HTML folder on the hard drive. If the files already exist on the hard drive from a previous eliminations build, the button will be labeled REBUILD LADDERS. Rebuilding the ladders replaces the existing information generated previously with the latest ladders. This is convenient when the ladders have been built and a last minute entry takes a quick qualifying run and should be included in the ladders. If elimination rounds have been started, clicking on the REBUILD LADDERS will erase all previous elimination runs so it is important to start the elimination round once all qualifying runs have completed.

If after building a class and examining the list of drivers, there may be need to remove a driver prior to the elimination round starting. To remove a driver from the build process, go to the driver registration screen and click on STATUS REVIEW. Locate the driver's name and click on it to change the Y status to N status. Save the changes and rebuild the ladders. Note during the class build the driver's name will be listed as removed to confirm the driver is out of competition. The driver's qualifying runs still remain in the qualifying standings list and the runs are not deleted. In the event the wrong driver was removed, simply return to the status review screen and click on the driver's name to change the N back to Y, save the changes, and rebuild the ladders.

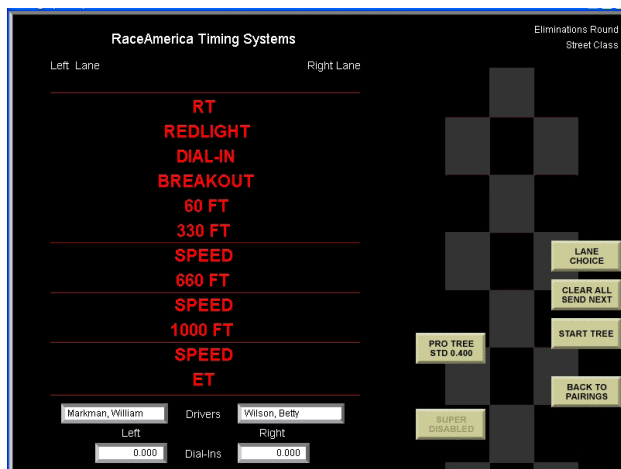


Figure 18b - Race Ladder Run Screen



Figure 18c - Race Ladder Confirm Screen

RACE MANAGEMENT SOFTWARE

RACE LADDER ELIMINATIONS

Clicking on the RACE LADDERS button on the Main Menu, then selecting a class will load driver's names for that class and automatically generate drivers pairings using the ladder size and seeding method selected on the EDIT CLASSES screen. If the class contains 64 or less entries, the size of the ladder is adjusted to match the size of the race field. Driver pairings are then displayed as shown in Figure 18a. Lane Choice is indicated by (LC) next to the driver's name.

To print the pairings, click on PRINT PAIRINGS. This function generates a print-out for the staging line personnel and audit trail.

To run a pairing, click on the desired pair, then click on RUN PAIRING. The names are loaded into the race screen and their respective dial-ins are loaded from the driver registration information for each driver as shown in Figure 18b. Dial-ins may be altered by pressing TAB until the Dial-in is highlighted or clicking and highlighting the Dial-in, then entering the new value. Since the software does not know the lane choice decision, driver's names are placed on the race screen based

on their position on the ladder screen. Click on the LANE CHOICE button to trade lanes between the two drivers to match how they are positioned at the start line of the race track. Clicking on the BACK TO PAIRINGS button will cancel the race and return to the ladder screen without running a race. The driver pairings screen is displayed and updated to reflect which pairings have completed their run in the current round. After running a race, the software prompts for validation of the race results. Since the winning lane is important during eliminations, the WIN LANE VIOLATION button enables the winning lane to be toggled to the other lane in the event a disqualifying event occurred (i.e. center line crossing, etc.) that the timing system is not able to detect. Clicking on the ACCEPT RESULTS button saves the race results in the elims.dat file and updates the ladder by advancing the winning driver. Clicking on the RE-RUN RACE button will not advance the winner, saves the race results, marks the race results as NOT VALIDATED, and returns to the ladder screen with nothing changed.

If a pair of drivers are listed and both drivers are unable to come to the line, click on the pair, then click on DELETE PAIRING to remove both drivers from competition. The ladder will reflect both drivers have been eliminated and no one advanced to the next round. A FORCED BYE will be inserted into the ladder slot in the next round. The FORCED BYE functions the same as a BYE run.

If a driver is paired up with a BYE run, and local rules do not require the driver to make a run to advance to the next round, click on the driver pairing, then click on AUTO ADVANCE to advance the driver to the next round without making a run. The ladder will be updated to indicate the driver advanced to the next round and will use the previous round's ET.

Once a race has completed as shown in Figure 18c and the race results displayed on the PC screen are valid, click on the PRINT TIMESLIP button to print a timeslip prior to accepting the race results (if auto print was not enabled on the System Settings Screen). During the Race Ladder elimination method, this is the only time

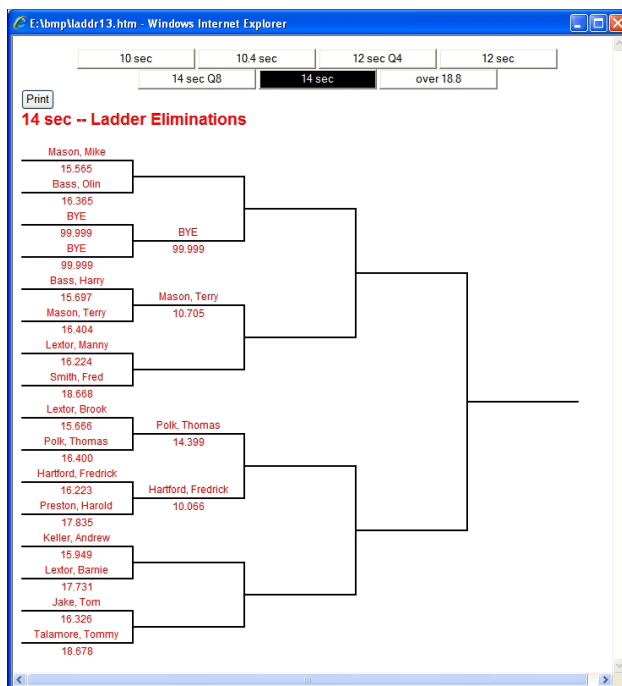


Figure 19
Announcer Screens - Race Ladders

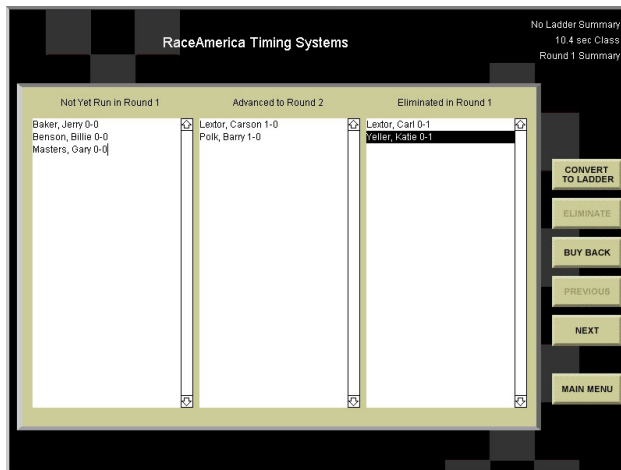


Figure 20 - No Ladder Utility Screen

a timeslip can be printed. Click on the BACK TO PAIRINGS to return to the driver pairings list for the next race.

If a pair was run, deleted or advanced in error, click on the pairing, then click on RE-RUN PAIRING to move the pair back to the Yet To Run list. The Ladder will be updated indicating the run never occurred.

When all pairings have run in a round, click on MAIN MENU to exit the Eliminations Round for this class. The software will notify the user that all drivers have run in this round and exiting the screen will advance this class to the next round. Ensure no changes are required before continuing as once the round has advanced, previous round information cannot be changed.

Once there is only one driver left in a class, the eliminations screens for the race ladders will not be accessible.

RACE MANAGEMENT SOFTWARE LADDER SUMMARY

To view live updating eliminations ladders with progress for each class, you can click on the LADDER SUMMARY button and then click OK on the pop up window. This will take you to the XLscore PRO Webpages index (Announcer's index page). Click on any of the enabled screens in order to view them. The screen index can also be accessed through the UTILITIES button from the Main Menu. From Utilities screen simply click ANNOUNCE SCREENS button. Finally, you go

outside the XLSCORE PRO program directly to the HTML folder and double click the INDEX. HTM file which will load your web browser with the Webpage index. Click on the Race Ladder Eliminations link.

To view a specific class, click on RACE LADDER ELIMINATIONS, then click on the desired class name as shown in Figure 19. As each elimination round progresses, the ladder is updated after every race. Ladders can range from 2 drivers to 64 drivers and are displayed up to 32 drivers at a time. Ladders larger than 32 drivers will be divided in half with buttons indicating the right or left side of the ladder.

This manual explains how to configure multiple PC's to view live race results and eliminations on-screen. Go to the XLSCORE PRO USING NETWORKED PC'S section of this manual for detailed information and example screen shots of networked PC's.

RACE MANAGEMENT SOFTWARE NO LADDER ELIMINATIONS

Clicking on the NO LADDER PAIRINGS button on the Main Menu, then selecting a class will begin the elimination round using freeform pairings (no structured ladders) for each round. Pop-up lists are created with driver's names for the each round of eliminations. The text in the upper right hand corner of the PC screen indicates how many drivers remain in the list for the current round. Selecting driver's for each lane is similar to the selection method of the qualifying round. Positioning the cursor over the Left Driver Name or Right Driver Name and clicking will recall the scrolling pop-up list of driver's names who have not yet raced in the current round. Click on the desired name to select it or begin typing the desired entry on the keyboard. As each character is entered on the keyboard, the pop-up list is shortened to only those entries matching the characters typed. When only one entry remains, it is automatically selected for that lane. If no entries match the characters typed on the keyboard, the pop-up list will be blanked and contain no entries. Use the

backspace key on the keyboard to erase typed characters. The list will automatically lengthen as more entries match the remaining characters appearing in the Driver's Name field.

Click on the START TREE button to start the race. When the race has completed, the race results are displayed on the PC screen and validation of the race results is required to determine who advances and who is eliminated. Since the winning lane is important during eliminations, the WIN LANE VIOLATION button enables the winning lane to be toggled to the other lane in the event a disqualifying event occurred (i.e. center line crossing, etc.) that the timing system is not able to detect. Clicking on the ACCEPT RESULTS button saves the race results in the elims.dat file, advances the winning driver, and removes both drivers' names from the popup list for the current round. Clicking on the RE-RUN RACE button will not advance the winner, saves the race results, mark the race results as NOT VALIDATED, and returns to the Single Elimination screen with nothing changed.

As each race completes, the winning driver advances to the next round of eliminations while the losing driver is eliminated from the next round if they have reached the maximum number of losses for their class. Both driver's names are removed from the current rounds driver's pop-up list and the text in the upper right hand corner of the PC screen is updated to reflect the number of remaining drivers in the current round.

To advance to the next round, insure all drivers in the current round have completed their races. When the remaining driver count reaches zero, the round will automatically advance when you exit the No Ladder Pairings screen. You can exit by returning to the Main Menu, or an alternate method is to position the cursor over the class name, wait until the text changes color to red, then click to select a different class. Select the same class and return to the No ladder Pairings screen and the round number and driver count are changed indicating eliminations have advanced to the next round.

NOTE: If a driver drops out of competition in the middle of a round, the driver must be removed

from the list in order to advance to the next round of eliminations. This can be accomplished under the NO LADDER SUMMARY function on the Main Menu and is discussed in the next section of this manual.

RACE MANAGEMENT SOFTWARE NO-LADDER UTILITY

The utility section enables drivers to be manually eliminated, provide a Buy-Back, and convert the remaining drivers into a structured race ladder. Driver's names are displayed in each column with their win/loss record. Drivers with an asterick next to their win/loss record indicates they have received a Buy Back sometime during the competition.

Some race events with very large classes use the No Ladder Pairings during the start of the eliminations round and convert over to a structured ladder once the number of remaining drivers becomes small enough to manage and use a traditional ladder pairings list. Once the number of drivers remaining is 64 or lower, click on the CONVERT TO LADDER button and the Race Ladder will be rebuilt for this class only. All Announcer's Web-pages will also be updated with the new ladder.

Click the PRINT button to print a summary of all rounds completed. The printout will indicate which drivers were eliminated and which advanced by round.

If a driver is listed in the Yet To Run

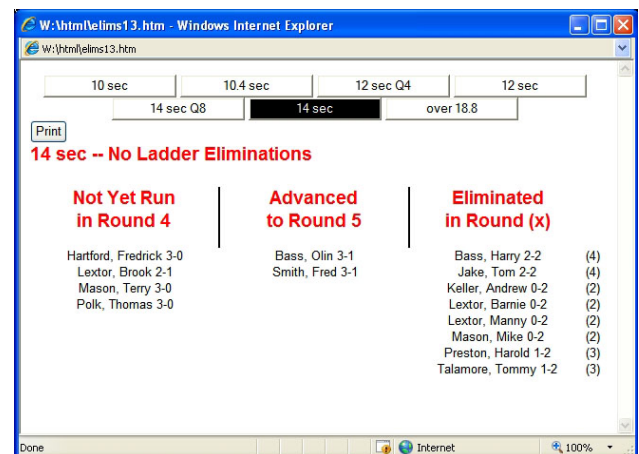


Figure 21

Announcer Screens - No Ladders

column and they are unable to continue to race, they can be eliminated from the list by clicking on their name, then click on the ELIMINATE button. The screen will update moving the driver to the eliminated column.

If the Buy-Back option is used at the race event, a driver can buy back into competition at anytime, any round giving the user the flexibility to match their local rules for Buy-Back. Click on a drivers name in the eliminated column, then click on BUY-BACK. If there are no drivers listed in the Yet To Run column, the Buy-Back will place the selected driver in the next round. If there are drivers listed in the Yet To Run column when clicking on the BUY-BACK button, the driver will be moved to the current round. Care should be taken to complete a round before using the Buy-Back function to ensure the driver moves to the next round of competition.

Use the NEXT and PREVIOUS buttons to move through each round's summary. When the NEXT button becomes grayed out, the last round of competition is being displayed for that class. Remember, the results displayed are completed results for the round indicated in the Eliminated and Completed columns. For example, if round 3 is in progress with half of the drivers having completed round 3 races, round 1 and round 2 summaries will indicate the complete list of drivers' results while round 3's summary will only indicate half the drivers, that is, only the drivers who have completed round 3. The remaining drivers to compete in round 3 are listed in round 1 and round 2 results and are listed in round 3 under the Yet To Run column. This can

Driver	Round 1	Round 2	Round 3	Rank	Finals
Amora, Armando	19.888 [19.900]w	19.905 [19.900]w	19.910 [19.900]w	1	
Lextor, Mary	22.101 [22.300]r	22.305 [22.300]w	22.311 [22.300]w	2	
Tesmorow, Harold	22.970 [22.960]w	22.962 [22.960]r	23.007 [22.960]	3	
Jake, Bailey	20.203 [20.210]b	20.211 [20.210]r	20.305 [20.210]	4	

LEGEND: ET (Dialin)
w = win
b = breakout
r = redlight

Figure 23

Announcer Screens - Chicago Shoot-out

be confusing when reviewing a round that has not fully completed all drivers racing for that round.

RACE MANAGEMENT SOFTWARE NO-ADDER SUMMARY

To view live updating eliminations ladders with progress for each class, you can click on the NO-LADDER SUMMARY button and then click OK on the pop up window. This will take you to the XLscore PRO Webpages index (Announcer's index page). Click on any of the enabled screens in order to view them. The screen index can also be accessed through the UTILITIES button from the Main Menu. From Utilities screen simply click ANNOUNCE SCREENS button. Finally, you go outside the XLSCORE PRO program directly to the HTML folder and double click the INDEX. HTM file which will load your web browser with the Webpage index. Click on the No-Ladder Eliminations link.

As each elimination round progresses, the on-screen columns are updated after every race indicating the driver's win/loss record (i.e. 2-1 means two wins one loss). If a driver has received a Buy Back, an asterick will appear next to their win/loss record.

When a driver is eliminated from competition, the round they were eliminated will appear in the ELIMINATED IN ROUND column and the round number is displayed as (x) where x is the round they were eliminated.

This manual explains how to configure

Driver	Round 1	Round 2	Round 3	Rank	Finals
Lextor, Mark LC vs Kallier, Andrew					
Carole, Ross LC vs Harford, Fredrick					
Yolk, Bradley LC vs Lextor, Manny					
Lextor, Eddie LC vs Jake, Tom					
Yelman, Patricia LC vs Bass, Olin					
Talamore, Kip LC vs Polk, Thomas					
Tesmorow, Jimmy LC vs Mason, Terry					
Preston, Beth LC vs Lextor, Barrie					
Mason, Mike LC vs Preston, Harold					
Lextor, Brook LC vs Smith, Fred					
Bass, Harry LC vs Talamore, Tommy					

Figure 22 - Chicago Shootout Screen

multiple PC's to view live race results and eliminations on screen. Go to the XLSCORE PRO USING NETWORKED PC'S section of this manual for detailed information and example screen shots of networked PC's.

RACE MANAGEMENT SOFTWARE CHICAGO SHOOT-OUT

Chicago Shootout is a racing format used widely in Australia providing Practice, Qualifying and a minimum of three rounds of Eliminations to each driver. The final round of eliminations is a race between the two top drivers in a class based mostly upon their number of wins and their delta to dial-in. Redlights and breakouts are also used to rank all drivers in a class. Rankings are determined by the program and the final two drivers are selected.

Click on CHICAGO SHOOT-OUT and then click on a class. Pairings are determined based on number of drivers and the round number. Rules to the Chicago Shoot-out can be found on our website at www.raceamerica.com/csrules.html and follow the links. Pairings are loaded

into a screen similar to the Race Ladders discussed earlier in this manual as shown in Figure 22.

To print the pairings, click on PRINT PAIRINGS. This function generates a printout for the staging line personnel and audit trail.

If a pair of drivers are listed and both drivers are unable to come to the line, click on the pair, then click on DELETE PAIRING to remove both drivers from competition. The ladder will reflect both drivers have been eliminated and no one advanced to the next round. A FORCED BYE will be inserted into the ladder slot in the next round. The FORCED BYE functions the same as a BYE run.

To run a race, highlight a race pair by clicking on a driver pair under the Pairing to Run column, then click RUN PAIRING to transfer the driver pair to the run screen as shown in Figure 18b. Dial-ins may be altered by pressing TAB until the Dial-in is highlighted or clicking and highlighting the Dial-in, then entering the new value. Since the software does not know the lane choice decision, driver's names are placed on the race screen based on their position on the ladder screen. Click on the LANE CHOICE button to trade lanes between the two drivers to match how they are positioned at the start line of the race track. Clicking on the BACK TO LADDER button will cancel the race and return to the ladder screen without running a race. The driver pairings screen is displayed and updated to reflect which pairing have completed their run in the current round. After running a race, the software prompts for validation of the

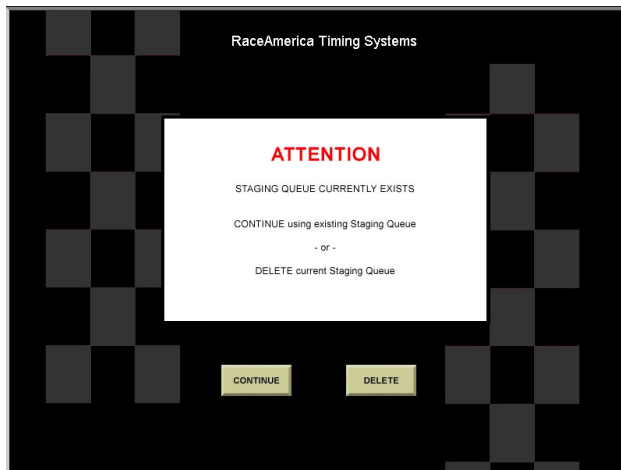


Figure 24 - Staging Queue Exists

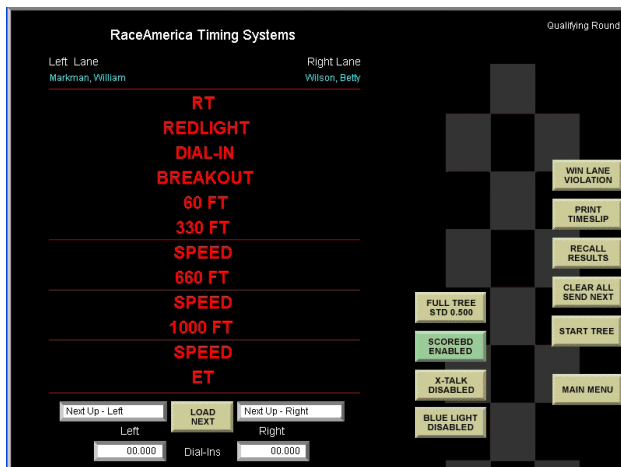


Figure 25 - Using the Staging Queue

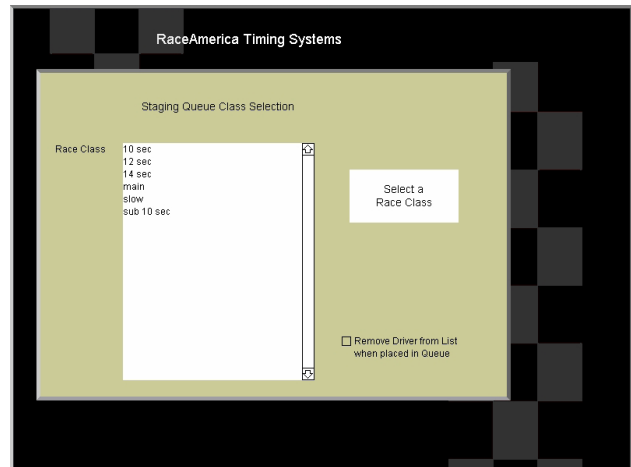


Figure 26 - Class Selection

race results. Since the winning lane is important during eliminations, the WIN LANE VIOLATION button enables the winning lane to be toggled to the other lane in the event a disqualifying event occurred (i.e. center line crossing, etc.) that the timing system is not able to detect. Clicking on the ACCEPT RESULTS button saves the race results in the elims.dat file and updates the ladder by advancing the winning driver. Clicking on the RE-RUN RACE button will not advance the winner, saves the race results, marks the race results as NOT VALIDATED, and returns to the ladder screen with nothing changed.

Once a race has completed as shown in Figure 18c and the race results displayed on the PC screen are valid, click on the PRINT TIMESLIP button to print a timeslip prior to accepting the race results (if automatic printing was not enabled on the Configuration Screen). During the Race Ladder elimination method, this is the only time a timeslip can be printed. Click on the BACK TO PAIRINGS to return to the driver pairings list for the next race.

When all pairings have run in a round, click on MAIN MENU to exit the Eliminations Round for this class. The software will notify the user that all drivers have run in this round and exiting the screen will advance this class to the next round. Ensure no changes are required before continuing as once the round has advanced, previous round information cannot be changed.

Once there is only one driver left in a class, the eliminations screens for the race ladders will

not be accessible.

RACE MANAGEMENT SOFTWARE CHICAGO SUMMARY

To view live updating for chicago Shootout with progress for each class, you can click on the CHICAGO SHOOTOUT SUMMARY button and then click OK on the pop up window. This will take you to the XLscore PRO Webpages index (Announcer's index page). Click on any of the enabled screens in order to view them. The screen index can also be accessed through the UTILITIES button from the Main Menu. From Utilities screen simply click ANNOUNCE SCREENS button. Finally, you go outside the XLSCORE PRO program directly to the HTML folder and double click the INDEX.HTM file which will load your web browser with the Webpage index.

Click on the Chicago Shootout link, then click on the desired class name as shown in Figure 23. As each elimination round progresses, the on-screen columns are updated after every race indicating the driver's ET and Dial-in for that round as well as wins, breakouts and redlights. After three rounds have been completed, the race results are analyzed and the list is reordered based on rank for the final round of eliminations, which is the top two drivers.

This manual explains how to configure multiple PC's to view live race results and eliminations on-screen. Go to the XLSCORE

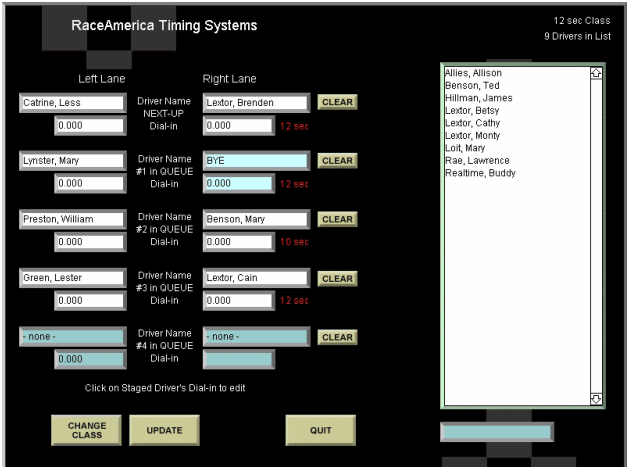


Figure 27 - The Staging Queue

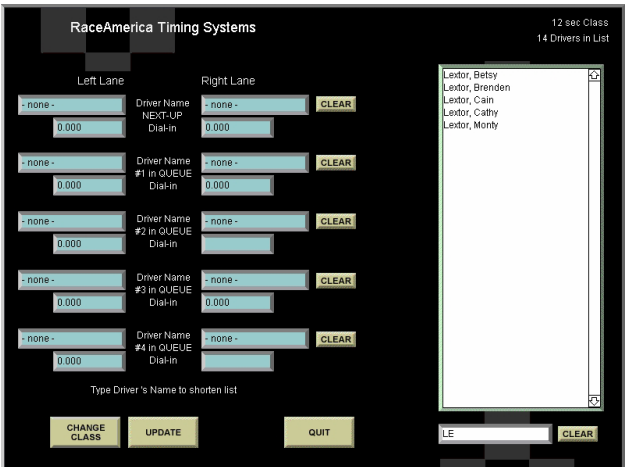


Figure 28 - Typed Name Selection

PRO USING NETWORKED PC'S section of this manual for detailed information and example screen shots of networked PC's.

EXTERNAL STAGING QUEUE

The XLSTAGE software provides advance staging of up to five pairs of vehicles. The XLSCORE PRO software uses this staging queue to provide the operator a single click load of the next two drivers in the queue during the Practice and the Qualifying rounds.

To enable the XLSCORE PRO software to use the staging queue, click the EXTERNAL STAGING QUEUE box on the SYSTEM SETTINGS screen. XLSCORE PRO will automatically build the Announcer's Web-pages for the staging queue.

If the XLSCORE PRO software detects an existing staging queue file, the software will prompt if the current staging queue should be used or if the current staging queue entries should be discarded as shown in Figure 24.

During Practice and Qualifying rounds, the run screen removes the driver pop-up windows and replaces them with a single LOAD NEXT button as shown in Figure 25.

When ready to run the next pair of drivers in the queue, click the LOAD NEXT button. If dial-ins were entered in XLSTAGE when the drivers were selected, the dial-ins will appear with the driver's names. Dial-ins can be edited in the Practice and Qualifying screen if needed prior to the run.

XLSTAGE PROGRAM

The XLSTAGE software provides advance staging of up to five pairs of vehicles. If the program created a staging queue file previously, the software will prompt if the current staging queue should be used or if the current staging queue entries should be discarded as shown in Figure 24.

Select the class to place into the staging queue as shown in Figure 26. The XLSTAGE software will display a list of drivers to choose

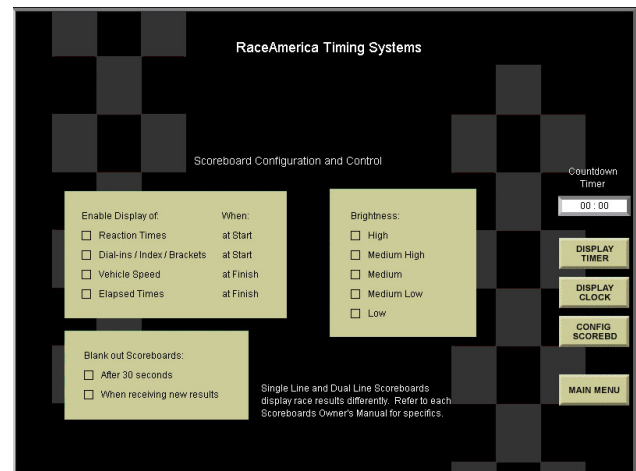


Figure 29 - Scoreboard Control Screen

from. When a driver is selected and placed in the queue, the XLSTAGE software can remove the drivers from the list or leave the drivers on the list. Click on the box to REMOVE DRIVER FROM LIST WHEN PLACED IN QUEUE. An X in this box will remove drivers names as they are queued. This is helpful when all drivers should make a run before any drivers make a second run.

After a class is selected, the main queue screen is displayed with the list of drivers in that class as shown in Figure 27. To queue a driver, click on the name to highlight, then click on the driver name box to add to the staging queue. Dial-ins will be loaded for each driver. Dial-ins can be changed at any time by clicking on the dial-in box. When a driver is placed in the staging queue, a BYE run is automatically loaded into the other lane. To replace the BYE run with a second driver, click on a driver name, then click on the BYE. Once the queue contains as many drivers as desired, click the UPDATE button to save the stage queue for the XLSCORE PRO software to use. Each time the XLSCORE PRO software completes a race, the drivers at the top of the queue are removed and all other queued drivers move up in the queue. If the queue has changed due to completed races, the displayed queue will update when the UPDATE button is pressed. The staging queue is updated in the background and the updated display occurs when UPDATE or CLEAR are pressed.

To clear out one of the queued pairs, press the CLEAR button next to the queue position.

Both drivers will be removed from the queue and returned to the driver's list and the queue will be updated in the event races have completed.

XLSTAGE allows different classes to be staged interleaved in the queue as long as both drivers are from the same class. To select a different class, click on the CHANGE CLASS button. If the option to remove drivers from the list when they are queued, the list will be kept up to date for all classes, therefore, when changing classes, the driver's list will be only the remaining drivers who have not been queued.

When the driver's list is very long, typing the beginning characters will automatically shorten the list to only those driver names matching exactly what is typed. Backspace will remove one character at a time lengthening the list to match what has been typed as shown in Figure 28. Once the list is shortened, click on a driver name, then click on the queue position to move the driver. Once the driver is moved, the typed input is cleared and the list returns to normal.

NOTE: For Practice and Qualifying rounds, the displayed queue is not transferred to the shared staging queue file until the CLEAR or UPDATE buttons are pressed. The XLSCORE PRO software will attempt to access the top of the queue to load the next pair of drivers. If driver names are

available, they will be loaded otherwise '- none -' appears in their names when the top of the queue is empty.

SCOREBOARD CONTROL

RaceAmerica LED Scoreboards connected to the XL Timing System can be controlled and reconfigured to selected specific race information to be displayed during each race over-riding the DIP switch settings on each display unit.

Clicking on the SCOREBD CONTROL button on the Main Menu displays the Scoreboard Control and Configuration Screen shown in Figure 29. The items on the screen are enabled by placing an 'X' in the appropriate box by clicking on the box or text of the feature to be enabled. To disable display of the race results on the scoreboards,

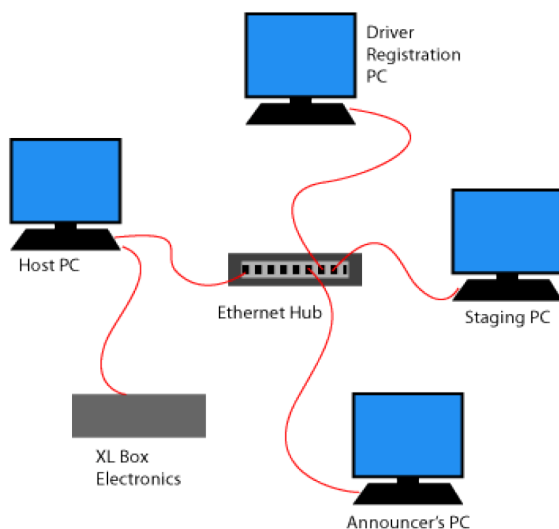


Figure 30 - Networked Computer Example

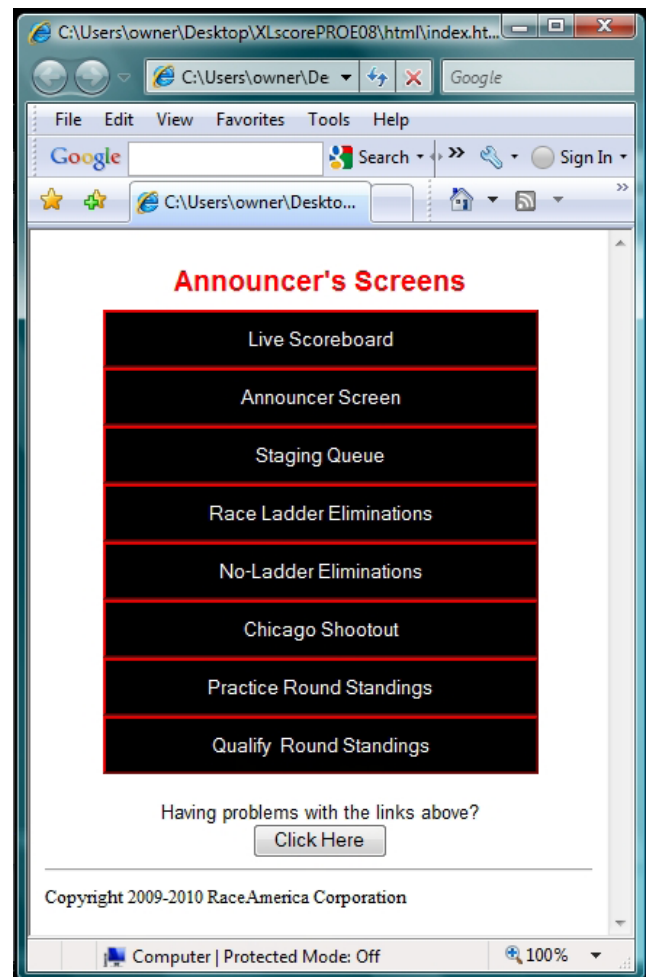


Figure 31
Announcer's Web-pages Index

remove the 'X' from the square by clicking on the box or the text.

For XL Wireless systems, scoreboard control is performed in the CONFIG functions directly from the timer and are not enabled in the scoreboard control screen.

RaceAmerica Digital Scoreboards are pre-configured with DIP switches. The XLSCORE PRO software can reconfigure what will be displayed and the length of time the race results are displayed before blanking out the display. The XLSCORE PRO software allows selection of 30 seconds before blanking the display or the scoreboards can be cleared when new information is sent from the XL Timing System, generally at the start of the next race.

The following settings can be enabled:

REACTION TIME - displayed at the beginning of the race when both lanes have started.

DIALINS/INDEX - displayed at the start of a race when dialins were entered.

VEHICLE SPEED - displayed at the end of a race. When both ET and Speed are selected, the scoreboard displays both.

ELAPSED TIME - displayed at the end of a race. When both ET and Speed are selected, the scoreboard displays both.

To change the brightness level of the scoreboard, first go to the Manual Control screen and enter dialins. Click **CLEAR ALL SEND NEXT** to display the dialins on the scoreboards,

then return to the **SCOREBOARD CONTROL** screen. Click one the five brightness levels to immediately change the brightness level of the dialins being displayed on the scoreboards. Each time the Scoreboard Control screen is accessed, the brightness level will be reset to High.

Once the desired configuration settings have been selected on-screen, click the **CONFIG SCOREBD** button to reconfigure the scoreboards.

To display the time of day present in the PC, click on the **DISPLAY CLOCK** button and the scoreboards will display the current time of day and function as a time of day clock.

During an intermission in the racing action, there may be times when it is preferred to display a countdown timer. Enter the minutes and seconds of the intermission as MM:SS and click on the **DISPLAY TIMER** button to display a countdown timer on the scoreboards.

XLSCORE PRO USING NETWORKED COMPUTERS

XLSCORE PRO can be run as a distributed program over several computers networked together using standard Peer-to-Peer network software supplied with the Windows OS and ethernet connections between computers.

Live race results, scoring, staging, driver registration information, and previous runs are available to the announcer. These screens are updated before and after each race.

The main 'host' computer is the computer

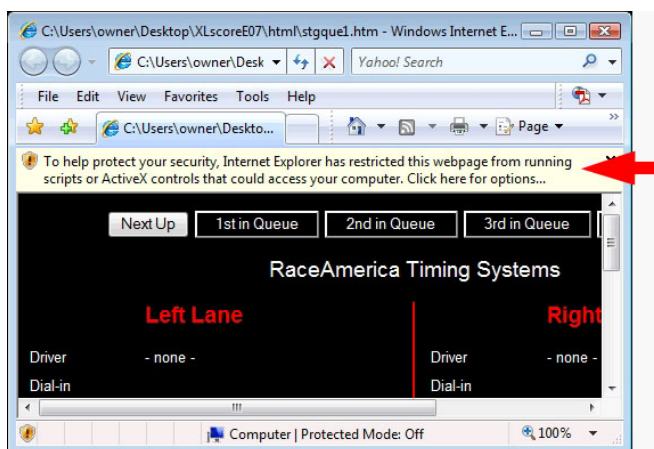


Figure 32a - ActiveX Control warning

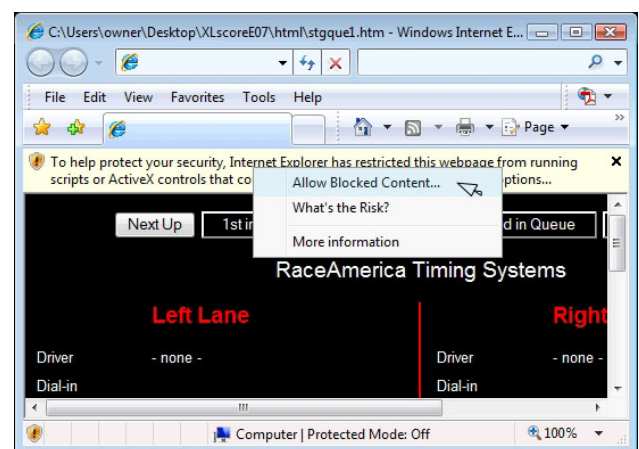


Figure 32b - Disabling ActiveX Control

C:\Documents and Settings\Owner\011.5\XLscorePRO\08\html\lsc...

RaceAmerica Timing Systems

Left Lane		Right Lane	
Markman, William	by 1.501	Wilson, Betty	WIN
0.585	RT	0.627	
NO	REDLIGHT	NO	
0.000	DIAL-IN	0.000	
NO	BREAKOUT	NO	
2.461	60 FT	2.068	
4.645	330 FT	5.118	
58.26	SPEED	56.24	
6.539	660 FT	6.601	
76.68	SPEED	84.79	
7.935	1,000 FT	8.413	
108.71	SPEED	105.49	
13.593	ET	12.050	

Qualifying Round Street Class

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E:\bmlpladdr13.htm - Windows Internet Explorer

10 sec 10.4 sec 12 sec Q4 12 sec

14 sec Q8 14 sec over 18.8

Print

14 sec -- Ladder Eliminations

Mason, Mike	15.585
Bass, Olin	16.365
BYE	99.999
BYE	99.999
Bass, Harry	15.697
Mason, Terry	16.404
Lextor, Manny	16.224
Smith, Fred	18.668
Lextor, Brook	15.666
Polk, Thomas	16.400
Hartford, Fredrick	16.223
Preston, Harold	17.835
Keller, Andrew	15.949
Lextor, Barnie	17.731
Jake, Tom	16.326
Talamore, Tommy	18.678

E:\bmlplannounce.htm - Windows Internet Explorer

RaceAmerica Timing Systems

Left Lane		Right Lane	
Driver	Bass, Olin	Driver	Talamore, Tommy
Dial-in	0.000	Dial-in	0.000
Model	Dodge	Model	Pontiac
Make	Charger	Make	Firebird
Sponsor	Able State	Sponsor	Bill's Race Supply
City	Trent	City	New York
State	New Jersey	State	New York
Vehicle Year	2008	Vehicle Year	1970
Driver's Age	42	Driver's Age	30

ET	Speed	RT	Dial-in	Lane/Time
Practice:				
Qualify:	16.365	0.00	0.000	03:03P
Eliminations:				
w 10.772	103.60	0.602	0.000	L 03:46P
w 15.674	106.77	0.614	0.000	R 03:47P
11.471	106.16	0.634	0.000	R 03:48P
w 10.698	104.07	0.627	0.000	R 03:50P

Class: 14 sec w = win R = right lane
b = breakout L = left lane
r = redlight

E:\bmlplstgque4.htm - Windows Internet Explorer

Next Up 1st in Queue 2nd in Queue 3rd in Queue 4th in Queue

RaceAmerica Timing Systems

Left Lane		Right Lane	
Driver	Polk, Thomas	Driver	Talamore, Kip
Dial-in	0.000	Dial-in	0.000
Model	Ford	Model	Pontiac
Make	Mustang	Make	G8
Sponsor	Bill's Race Supply	Sponsor	General Motors
City	Nateley	City	Cheyenne
State	Alabama	State	Wyoming
Vehicle Year	1966	Vehicle Year	2008
Driver's Age	26	Driver's Age	39

ET	Speed	RT	Dial-in	Lane/Time
Practice:				
Qualify:	16.400	0.00	0.000	03:03P
Eliminations:				
w 12.345	106.01	0.545	0.000	R 03:45P
w 17.569	108.23	0.405	0.000	L 03:47P
w 14.273	100.97	0.640	0.000	R 03:48P

Class: 14 sec w = win R = right lane
b = breakout L = left lane
r = redlight

E:\bmlplshoot115.htm - Windows Internet Explorer

10 sec 10.4 sec 12 sec 14 sec

over 18.8

Print

over 18.8 -- Chicago Shootout

Driver	Round 1	Round 2	Round 3	Rank	Finals
Amona, Armondo	19.888 [19.900]w	19.905 [19.900]w	19.910 [19.900]w	1	
Lextor, Mary	22.101 [22.300]r	22.305 [22.300]w	22.311 [22.300]w	2	
Tesmorow, Harold	22.970 [22.960]w	22.962 [22.960]r	23.007 [22.960]	3	
Jake, Bailey	20.203 [20.210]b	20.211 [20.210]r	20.305 [20.210]	4	

LEGEND: ET [Dial-in]
w = win
b = breakout
r = redlight

W:\html\elms13.htm - Windows Internet Explorer

10 sec 10.4 sec 12 sec Q4 12 sec

14 sec Q8 14 sec over 18.8

Print

14 sec -- No Ladder Eliminations

Not Yet Run in Round 4	Advanced to Round 5	Eliminated in Round (x)
Hartford, Fredrick 3-0	Bass, Olin 3-1	Bass, Harry 2-2 (4)
Lextor, Brook 2-1	Smith, Fred 3-1	Jake, Tom 2-2 (4)
Mason, Terry 3-0		Keller, Andrew 0-2 (2)
Polk, Thomas 3-0		Lextor, Barnie 0-2 (2)
		Lextor, Manny 0-2 (2)
		Mason, Mike 0-2 (2)
		Preston, Harold 1-2 (3)
		Talamore, Tommy 1-2 (3)

Figure 33a - Sample Announcer Web-pages (top to bottom, left to right) Live Scoreboard, Announcer Screen, Chicago Shoot-out, Race Ladder Eliminations, Staging Queue, No Ladder Eliminations

12 RIVER RACER -- Qualify Round

Driver	ET	Closest	Speed	RT
1 Harrington, Paul	12.052	0.052	87.89	1.232
2 Booth, Caleb	12.186	0.077	82.69	0.125
3 Collier, Edward	11.829	0.217	76.16	1.666
4 Shepherd, Suzy	13.370	1.074	77.05	1.209
5 Alley Jr., Skully	12.703	B0.212	84.17	0.194
6 Lawrence, Tyler	12.378	B0.322	88.65	0.325

LEGEND: B = breakout
R = redlight
click heading to sort standings

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Classic -- Practice Round

Driver	ET	Closest	Speed	RT
1 2866 DONNELLY, JASON	5.225	B0.000	131.50	0.061
2 1768 DUFFY, PETER	5.567	B0.000	89.39	0.142
3 179 STEWART, MARK	5.669	B0.000	111.05	0.125
4 3849 WASSTAFF, ANDREW	6.194	B0.000	122.74	0.357
5 6006 NAUGHTON, SUE	7.824	B0.000	123.22	0.236
6 1469 ACHILLES, ROBERT	10.288	B0.000	63.29	0.485
7 6027 WEISE, ANGELA	10.683	B0.000	64.72	0.151

LEGEND: B = breakout
R = redlight
click heading to sort standings

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Figure 33b - Sample Announcer Web-pages (top to bottom, left to right) Qualifying Standings, Practice Standings

connected to the timing system and would contain the XLSCORE PRO software program and all files. Other computers can be used for Driver Registration, Staging Queue, and Announcer Screens for live statistics and standings, and a computer in the Pits for quick lookup of standings.

To configure the host computer to share, select the folder with the XLSCORE PRO software and enable File Sharing. Once other computers are physically networked together, map a Network Drive from each computer to the shared folder on the host computer. Both the XLSCORE PRO and the XLSTAGE programs will reside only on the host computer.

ANNOUNCER'S COMPUTER

Race results can be accessed from the host computer and all networked computers with access to the HTML folder residing on the host computer. By double clicking on the INDEX.HTM file in the HTML folder, a web browser will open and display the index screen as shown in Figure 31. Some web browsers use ActiveX Control to reduce the possibility of viruses through the web browser and provide a warning message as shown in Figure 32a. ActiveX Control must be disabled to navigate the Announcer's Web-pages. Disabling ActiveX Control and Blocked Content is simple and safe since no access to the outside web will be performed. To temporarily disable ActiveX Control for the Announcer's Web-pages

only, click on the highlighted band at the top of the page, then click Allow Blocked Content as shown in Figure 32b. Repeat this process for each browser window the first time a new browser window opens.

REMOTE IPAD APPS

The iPad can be used to perform remote function much like a second or third PC with the convenience and portability of the iPad. Run an app and start by tapping the white gear in the lower righthand corner. Enter the IP Address and Port number as displayed in the XLSCORE PRO System Settings screen (see Fiture 2a), then touch SAVE. Insure the ENABLE SERVER is checked in the XLSCORE PRO software to enable the iPad to communicate with the XLSCORE PRO software.

DRIVER REGISTRATION APP

Driver Registration can be entered on the host computer or on multiple iPads running the XLregisterHD App available at the Apple Itunes Stores. Classes are created on the main host computer and the XLregisterHD app provides driver registration, driver lookup, and cross class searches on the iPad.

After downloading the app to an iPad, run the app and start by touching the LOAD CLASSES button. All classes entered into the XLSCORE PRO software will be downloaded to the iPad. Next select a class to load all current registered drivers in that class. New drivers can be added to this class, or existing drivers can be edited.

For classes with a large number of drivers registered, the DRIVER FILTER can be used to shorten the list. Up to the first five character of the driver's last name as previously registered can be entered as a filter. Clear the filter to return to the full class list of drivers.

Search for a driver name across all classes by entering in part of their first and/or last name. Touch the FIND DRIVER button to search for a driver anywhere in the registerd drivers database. Once the search is complete, touch the drivers list to view matching driver names and the class they are currently registered in.

If repetitive information is entered, enter it once and touch the SAVE FORM button. To recall and use this information, touch the

RECALL FORM button prior to adding other driver information for a new driver. This keeps from having to retype the same information over and over into the form.

STAGING QUEUE APP

The start line staging queue can be entered on the host computer or on asingle iPad running the XLstageHD App available at the Apple Itunes Stores. Up to five pairs of drivers can be paired at the starting line enabling the tower to simply select the next pair with a single click.

After downloading the app to an iPad, run the app and start by touching the LOAD CLASSES button. All classes entered into the XLSCORE PRO software will be downloaded to the iPad. Next select a class to load all current registered drivers in that class. As new drivers are registered, the XLstageHD app will load new entries each time a class is selected on the iPad.

Select a driver from the driver list pulldown then tap the position in the staging queue to assign the driver. Once the staging queue is complete, touch the UPDATE QUEUE to send it to the tower. If runs have been made since the last update, the staging queue will advance on the iPad removing all drivers in the queue who have completed staging and runs.

For long lists of drivers in a class, the FILTER DRIVERS function allows entry of the first five characters of the driver's last name. The list is reduced to only those drivers in the class matching the filter. Clear the filter to restore all drivers in the class.

DAT FILE COLUMN DEFINITIONS FOR SAVED RACE RESULTS

<u>Column Data Stored in .dat file</u>	<u>XLSCORE Screen Running a Race</u>			
	<u>Manual</u>	<u>Practice</u>	<u>Qualify</u>	<u>Elimination</u>
Date and Time Stamp	Y	Y	Y	Y
Class Name		Y	Y	Y
Lane Identification as LEFT or RIGHT LANE	Y	Y	Y	Y
Driver's Name as entered on PC screen	Y	Y	Y	Y
Elapsed Time	Y	Y	Y	Y
Vehicle Speed	Y	Y	Y	Y
Reaction Time	Y	Y	Y	Y
Redlight as YES or NO	Y	Y	Y	Y
Dial-in as entered on PC screen	Y	Y	Y	Y
Breakout as YES or NO	Y	Y	Y	Y
60 foot Elapsed Time	Y	Y	Y	Y
330'/660'/1000' Intermediate Times (2850)	Y	Y	Y	Y
330'ET/600/1000 ET/Speed (2700)	Y	Y	Y	Y
WIN or LOSE or blank text	Y			Y
Win Determination as blank or: by xx.xxx REDLIGHT BREAKOUT VIOLATION	Y			Y

COMPUTER SCREEN DEFINITIONS

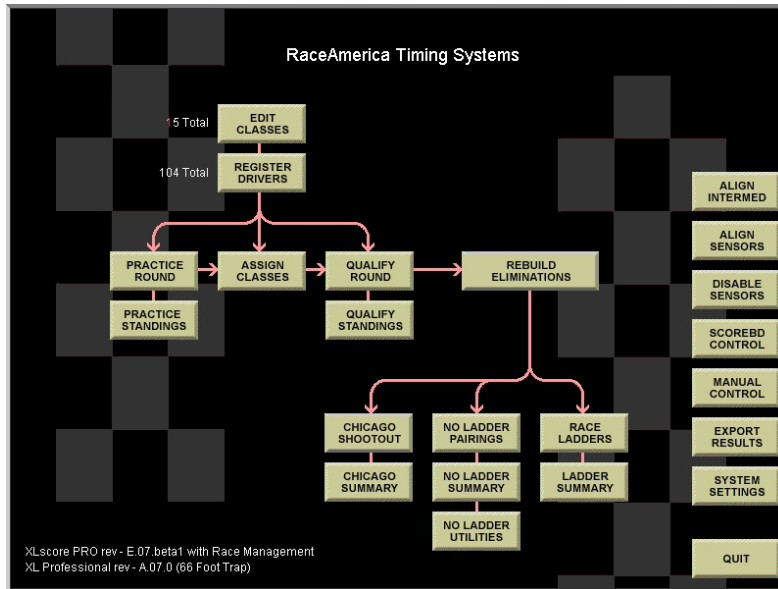


Illustration 1 - Main Menu Screen Definitions

EDIT CLASSES

create and edit race class names

REGISTER DRIVERS

driver registration by class

MANUAL CONTROL

run races with manual entry of information

PRACTICE ROUND

run races selecting from registered drivers

PRACTICE STANDINGS

generate practice standings from practice round runs

ASSIGN CLASSES

automated driver-to-class assignment based on practice runs

QUALIFY ROUND

run races building standings for ET and Speed

QUALIFY STANDINGS

generate qualifying standings from qualify round runs

BUILD ELIMINATIONS

build race ladders from qualifying runs

NO LADDER PAIRINGS

run single elimination racing by class

NO LADDER SUMMARY

instructions to review single elimination round results

NO LADDER UTILITY

provide manual elimination, buy backs, conversion to ladders

RACE LADDERS

run on-screen 64-car NHRA style race ladders

LADDER SUMMARY

instructions to display ladders by class

CHICAGO SHOOTOUT

run chicago shootout tyle racing events by class

CHICAGO SUMMARY

instructions to review chicago shootout race results

DISABLE SENSOR (2850)

disable missing or failed track electronics for 60ft and Speed

ALIGN SENSORS (2850)

track electronics setup and realtime alignment

ALIGN INTERMED (2850)

intermediate track realtime alignment

SCOREBD CONTROL

control what is displayed by RACEAMERICA Scoreboards

SYSTEM SETTINGS

configuration settings for the XLSCORE PRO and computer

QUIT

exit the XLSCORE PRO software program

COMPUTER SCREEN DEFINITIONS

Difference between the two lanes finishing

Winning lane indication

Intermediate times show based on track length selection 1/4Mile, 1/8thMile, Other

Driver names and Dial-ins for the next race are entered here

RaceAmerica Timing Systems

Manual Control

Left Lane Wells, Jerry

Right Lane Wilson, Carin

0.493 0.123 RT 0.616

NO REDLIGHT NO

0.000 DIAL-IN 0.000

BREAKOUT

60 FT

330 FT

SPEED

660 FT

SPEED

1000 FT

SPEED

ET

Next Up - Left Drivers Next Up - Right

Left Right

00.000 00.000

FULL TREE STD 0.500

SCOREBD ENABLED

X-TALK DISABLED

BLUE LIGHT DISABLED

Illustration 2 - When displaying race results

Differential time between both lane's reaction time

RaceAmerica Timing Systems

Manual Control

Left Lane Wells, Jerry

Right Lane Wilson, Carin

0.493 0.123 RT 0.616

NO REDLIGHT NO

0.000 DIAL-IN 0.000

BREAKOUT

60 FT

330 FT

SPEED

660 FT

SPEED

1000 FT

SPEED

ET

Next Up - Left Drivers Next Up - Right

Left Right

00.000 00.000

FULL TREE STD 0.500

SCOREBD ENABLED

X-TALK DISABLED

BLUE LIGHT DISABLED

Illustration 3 - During a race, both lanes have started

SAMPLE PRINTOUTS

The Pro Tree XL Drag Timing System
XLSCORE PC Race Management Software

- Single Eliminations -
Funny Car Class

- - - R O U N D # 1 - - -
- ADVANCED - - ELIMINATED -
Carolsen, Lisa Kirk, Roger
Wilson, Bill Templeton, Gregory

- - - R O U N D # 2 - - -
- WINNER - - ELIMINATED -
Carolsen, Lisa Wilson, Bill

09/25/01 01:48:43 PM

RACEAMERICA TIMING SYSTEMS
www.raceamerica.com

LEFT: Printout from
Single Eliminations
showing Lisa Carolsen
as the winner of the
class after two rounds
of eliminations.

TIMESLIPS

XL Professional Drag Timing System
XLscore PRO PC Race Management S/W

Next Up - Left Next Up - Right

LEFT	WIN by 0.004	RIGHT
8.819	ELAPSED TIME	8.837
176.81	VEHICLE SPEED	175.71
0.694	REACTION TIME	0.680
NO	REDLIGHT	NO
0.000	BRACKET/INDEX	0.000
NO	BREAKOUT	NO
1.346	60 FOOT ET	1.409
3.315	330 FOOT ET	3.354
5.168	660 FOOT ET	5.201
7.053	1000 FOOT ET	7.063

Run on 04/15/05 at 02:34:39 PM

RaceAmerica Timing Systems
www.raceamerica.com

1320 Ft Track (402M)

XL Professional Drag Timing System
XLscore PRO PC Race Management S/W

Next Up - Left Next Up - Right

LEFT	WIN by 0.004	RIGHT
8.819	ELAPSED TIME	8.837
176.81	VEHICLE SPEED	175.71
0.694	REACTION TIME	0.680
NO	REDLIGHT	NO
0.000	BRACKET/INDEX	0.000
NO	BREAKOUT	NO
1.346	60 FOOT ET	1.409
3.315	330 FOOT ET	3.354

Run on 04/15/05 at 02:34:39 PM

RaceAmerica Timing Systems
www.raceamerica.com

660 Ft Track (201M)

The timeslip printouts vary based on the track length selected in the Setup section.

The first four lines of any timeslip can be changed to reflect the local race program information.

XL Professional Drag Timing System
XLscore PRO PC Race Management S/W

Next Up - Left Next Up - Right

LEFT	WIN by 0.004	RIGHT
8.819	ELAPSED TIME	8.837
176.81	VEHICLE SPEED	175.71
0.694	REACTION TIME	0.680
NO	REDLIGHT	NO
0.000	BRACKET/INDEX	0.000
NO	BREAKOUT	NO
1.346	60 FOOT ET	1.409

Run on 04/15/05 at 02:34:39 PM

RaceAmerica Timing Systems
www.raceamerica.com

Other Track

ADDENDUM 1

OPTIONAL GUARD BEAM ALIGNMENT

If optional Tri-Beam Start Line Track Electronics were purchased to add the True Guard Beam to the Stage and Pre-stage beams at the starting line, follow this alignment technique to properly align all three beams.

Position the Tri-Beam Emitters and Sensors on the track and connect the start line cables as outlined in the timing system hardware manual. Power on the timing system and enter into alignment mode using the XLscore PRO software. Align the Pre-stage beams as usual and confirm Pre-stage beam alignment and operation. Next block the Stage beam on either the Tri-Beam Emitter or Sensor. With the Stage beam blocked, the Stage light on the tree will illuminate when the Guard beam is properly aligned. Rotating the Tri-Beam Sensor left or right on the track will cause the Guard beam to go out of alignment and the Stage light on the tree to go out. Position the Tri-Beam Sensor so the Pre-stage beam and the Guard beam are fully functional. This can be tested by blocking and unblocking the Pre-stage and Guard beams. Unblock the Stage beam and the Stage light on the tree will go out. If the Stage beam does not go out, fine tune the positioning by slowly rotating the Tr-Beam left or right until the Stage light goes out. Recheck the Pre-stage and Guard beams for alignment.

To final check all three beam are properly aligned, block the Pre-stage beam and the Pre-stage light on the tree will illuminate. Block the Stage beam and the Stage light on the tree will illuminate. With the Stage beam blocked, block the Guard beam also and the Stage light on the tree should go out.

If all three beams are not aligned, check the parallel position of the Tri-Beam Emitter then repeat the Tri-Beam Sensor alignment process on the above rotating the Tri-Beams in smaller increments left or right.

If optional 16 inch Dual Beam Start Line Track Electronics were purchased to add the True Guard Beam to the Stage beam at the starting line, follow the alignment technique outlined for the Tri-Beams omitting alignment and adjustment of the Pre-stage beam not present in the Dual Beam.

ADDENDUM 2

HARDWARE AND SOFTWARE COMPATIBILITY CHART

XL PRO Hardware	XL W hardware	XLscore PRO Software	Description of Updates and Product Enhancements Implemented
04.x		C.0x	- PC screen format changed to 800 x 600
05.0		D.00	- Add option for FULL tree at 0.400 seconds - Add option for PRO tree at 0.500 seconds. - Add SUPER START functionality
05.0		D.01	- Minor code changes to increase execution speed
05.1		D.02	- Add option to Disable Track Printer to decrease print time - Add option for Perfect RT equal to 0.000 seconds
05.1		D.03	- Code update for Intermediate ET recall - Code update for 16-car ladder printing
05.1		D.04	- Add Selectable Track Lengths to customize the display
05.2		D.05	- Add printing of WIN to Practice/Qualifying - Add X-TALK functionality
05.3		D.06	- Add support for Dual Line 15" and 24" Scoreboards - Update for Perfect RT 0.000
05.3		E.00	- Add capability to Practice Offline without the XL Box attached - Expanded Race ladders to 64 car Pro and Sportsman seeding - Add pairing lists to Race Ladder eliminations - Add Ladder Summary to view 64-car ladders onscreen - Expanded Driver Registration with user definable fields - Expanded standings to ET, Speed, 60ft, Closest to Dial-in - Add dynamic driver selection to driver popup lists - Add Buy Back function to Single Eliminations - Add Eliminate function to Single Eliminations - Add capability to convert from Single Elims to Race Ladders - Add archive and backup capability of previous events - Generate HTML webpages for Live Scoreboard of race - Generate HTML webpages for Race Ladders & Single Elims
05.3	A.30.0	E.01	- Add support for XL Wireless Drag Timing System - Add driver lookup in text ladder screen
06.2	A.30.0	E.03	- Add active practice off-line
06.2	A.30.0	E.04	- Add capability to run practice races using START TREE

ADDENDUM 2

HARDWARE AND SOFTWARE COMPATIBILITY CHART

XL PRO Hardware	XL W Hardware	XLscore PRO Software	Description of Updates and Product Enhancements Implemented
06.2	A.31.0	E.05	- Add RANDOM seeding option for Race Ladder Eliminations - Single Eliminations changed to No Ladder Pairings - Add Win/Loss tracking for No Ladder Pairings - Echo Win/Loss tracking on html No Ladder Pairings - Add Buyback indicator on W/L record - Add up to five losses before elimination for No Ladder Pairings - Add Scoreboard Configuration for XL Wireless systems - Add scoreboard brightness control - Add auto reconnect to timer if comm is lost
06.2	A.31.0	E.06	- Correct possible error when deleting registered drivers - Enable wider range of printers on wireless - Fix intermittent error during ELIMINATE function - Update HTML webpages for No Ladder and Race Ladders - Add win and margin into Practice & Qualifying DAT files - Fix intermittent no autoprint during eliminations - Fix header print when in REPORTS ONLY mode - Add multi-computer edit to Driver & Class registration - Reduce occurrence of No Timer message with 2700 - Fix 32-ladder HTML webpage generation - Fix slow class select causes intermittent no selection - Fix local printer timeslip print on all recalls - Fix local printer multiple timeslip print with remote disabled
07.0	A.32.1	E.07	- Add Staging Queue for Practice & Qualifying rounds - Announcer Webpages updated - Add faster timeslip printout - Add timer-side timeslip print to 2850 to free up computer - Add UNLIMITED losses selection to Class Registration - Add Announcer Screen with previous run info & driver info - Add adjustable webpage refresh times - Update HTML index and content selection - Add Chicago Shootout eliminations style racing format - Add capability to print all Announcer Webpages - Remove NEXTUP drivers form standings - Add Custom Fields entered when using Assign Classes function - Add autoprint capability after ACCEPTED race results

ADDENDUM 2

HARDWARE AND SOFTWARE COMPATIBILITY CHART

XL PRO Hardware	XL W Hardware	XLscore PRO Software	Description of Updates and Product Enhancements Implemented
07.1	A.33.2	E.08	- Add 330ftET, 660/1000ft ET&Speed - Compatible with XP, Vista, Windows7, 32-bit & 64-bit - Expanded on-screen error reporting - Expanded error detection and reporting - Add Tower Ready function - Add Manual Pairing option to Chicago Shootout - Add points ready capability to driver registration - Update XLstage compatibility - Add feature to enable/disable automatic sensor testing - Add tree type selection pop-up list - Customize display and timeslips for each ET label & location - Add use of Staging Queue to Chicago Shootout - Add eliminations build by ET, Closest to Dial-in, Speed, and RT - Add auto assign class dial-in during driver registration - Add Announcer Screen for Practice & Qualify Round Standings - Add edit data functions for Practice & Qualify runs - Add ability to change driver's registered class on-the-fly
10.5	A.34.1	E.09	- Add class level autostart with full parameters - Add tree, speed metric, and speed trap selections - Compatibility with 2700 and 2900 - Add Left-Before-Yellow (LBY) indication onscreen - Add seed position displayed on ladders - Add ET/RT/SPD displayed on ladders - Add logo to Announcer Screens - Add 'follow me' rollover on selection lists
10.6	A.34.3	E.10.1	- Add remote Driver Registration on the iPad compatibility - Add compatibility to all Windows OS Regional Settings - Fix 'sticky buttons' on slower computers - Fix random missing data on announcer screen - Fix quick click of class then driver in CHANGE CLASS - Fix Qualify/Practice runs when driver changes classes
10.7	A.34.4	E.10.2	- Add scoreboard enable/disable by run - Add First Round Byes seeding to class ladder build choices - Add remote Staging Queue on the iPad compatibility - Fix speed readout on ladders if speed < 10.00 - Fix TOWER READY resets when START TREE on some OS - Fix LANE VIOLATION button intermittent operation - Fix XL PRO align not displayed on screen properly

ADDENDUM 2

HARDWARE AND SOFTWARE COMPATIBILITY CHART

XL PRO Hardware	XL W Hardware	XLscore PRO Software	Description of Updates and Product Enhancements Implemented
10.7	A.34.5	E.10.4	- Enhanced XLstageHD iPad app operation - Add EDIT ELIMS for ladder editing
10.8	A.34.5	E.10.5	- Fix for some WIndows versions and processors when using Apps - Minor fixes for EDIT ELIMS on some Windows versions