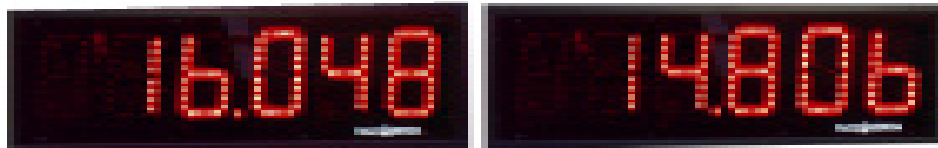




The Leader in Event Critical Timing Electronics

## *Drag Racing Scoreboards*



## *Owner Manual's*

Models 4528, 6528, 6828, 6510, 6810 - Rev R

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# RACE AMERICA

*T i m i n g   S y s t e m s*

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## LIMITED WARRANTY

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To the original purchaser of this RaceAmerica product, RaceAmerica warrants it to be in good working order for a period of ninety (90) days from the date of purchase from RaceAmerica or an authorized RaceAmerica distributor. Should this product malfunction during the warranty period, RaceAmerica will, at its option, repair or replace it at no charge, provided the product has not been subjected to misuse, abuse, or alterations, modifications, and/or repairs not authorized by RaceAmerica.

Any product requiring Limited Warranty service during the warranty period should be returned to RaceAmerica with proof of purchase. If return of merchandise is by mail, the customer agrees to insure the product, prepay shipping charges, and ship the product to RaceAmerica, Inc., 280 Martin Avenue Unit 1, Santa Clara, CA 95050.

ALL EXPRESSED AND IMPLIED WARRANTIES FOR THIS PRODUCT ARE LIMITED IN DURATION TO THE ABOVE NINETY DAY PERIOD.

UNDER NO CIRCUMSTANCES WILL RACEAMERICA BE LIABLE TO THE USER FOR DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF, OR INABILITY TO USE, SUCH PRODUCT.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

## PRODUCT OVERVIEW

RaceAmerica Drag Race Scoreboards are a microprocessor controlled system based upon the 7-segment format display digit using the latest technology Ultra-Bright LEDs. The scoreboard uses a RS232 serial link to receive data to be displayed. The serial link is preconfigured for use with RaceAmerica two lane drag timing systems (model 2600 'XL Advanced' and model 2850 'XL Professional'). Each scoreboard contains its own CPU chip to analyze the data string received and correctly display the desired race results (e.g. left/right lane, speed, ET, winner flash).

Race results to be displayed are selected through DIP switches located on the rear panel of the scoreboard or configured remotely with the XL SCORE Pro software.

The Scoreboards can display Dial-ins, Reaction Time, 60 ft ETs, Speed and Elapsed Time for each lane depending on the specific timer model. Multiple race results can be displayed in sequence as a race is run; dial-ins, then RT, and lastly speed and ET. The five inch scoreboard can be used as a Dial-in board at the starting line with or without larger scoreboard systems. Systems controlled with XL Score software can display a time of day clock and a countdown timer for intermission sessions.

Data communication to all models is available via internal wireless data link units (requires timer side wireless transmitter) or hard wired RS232/RS422 connections (scoreboards placed more than 100 ft from the console require conversion to RS422 data format).

Multiple scoreboards can be daisy chained down the track for spectator viewing or controlled from a single wireless transmission.

Scoreboards are available in single or dual line formats in five and eight inch digit heights for viewing up to 320 ft away. Each product is addressed for its unique properties in this manual.

**NOTE:** THESE PRODUCTS USE ULTRA-BRIGHT LED TECHNOLOGY. DUE TO THE BRIGHTNESS LEVEL OF THIS DISPLAY, CARE SHOULD BE TAKEN, AS WITH ANY BRIGHT LIGHTING SOURCE, TO AVOID PROLONGED VIEWING AT CLOSE RANGE AND SHORT DISTANCES. AS WITH ANY BRIGHT LIGHTING SOURCE, VISION MAY BE AFFECTED SHORT TERM SIMILAR TO CAMERA FLASHES.

## SCOREBOARD SET-UP

**STEP 1** - Assemble/mount the scoreboard

Each scoreboard model and race track have unique requirements; see suggestions and instructions with each respective model in this manual. Generally, hanging or hard mounting provisions are provided on each enclosure.

**STEP 2** - Configure the scoreboard

The scoreboards ship from the factory with the most likely selections enabled for starters. DIP switches control the scoreboards completely when used with the model 2600/2650 'XL advanced' system and partially when used with the model 2700 XL Wireless and 2800/2850 'XL professional' system. Refer to the DIP switch section before making any changes.

**NOTE:** IF DIP SWITCH NUMBER 1 IS SET TO 'OFF' DURING THE POWER UP SELF-TEST, THE DISPLAY WILL CONTINUOUSLY LOOP ON THE SELF-TEST UNTIL SWITCH NUMBER 1 IS SET TO THE 'ON' POSITION.

**STEP 3** - Connect the interface

The timers output both RS232 and RS422 serial data formats; be sure to match/convert data formats as follows:

Five and eight inch models must receive RS232 data which can be a hard wire

connection up to 100 ft away or greater distances with communication PODs or Wireless Link networks.

Several cabling options are available depending on the scoreboard placement on the race track.

Scoreboards without an internal wireless unit use interface cables containing RJ45 modular connectors on both ends of the cable and are connected to the scoreboard using the RS232 SERIAL PORT connector on the back of the scoreboard. When inserting this connector, press inward until a click is heard to lock the cable in place. If the cable remains loose and no click is heard, carefully bend outward the locking tab on the RJ45 connector approximately 45 degrees from the connector body. Re-insert the cable into the serial port until the click is heard and the cable remains locked in place. To remove this cable, pinch the locking tab against the body of the RJ45 connector and pull the connector out.

For wireless models, an Internal Wireless Data Network or external unit is used. For external wireless installations, connect the 07-4554 cable between the wireless link and the scoreboard (RJ45 connector). The external wireless link unit is mounted on the back of the display. For internal wireless, simply install the antenna on the display and connect the Wireless Data Transceiver at the data source. A display with internal wireless will have a jumper block between the RJ45 connector and the bank of DIP switches. This jumper is installed as shown in the diagram to switch between internal wireless and hard-wire/external wireless.

View the wiring diagrams in this manual to properly connect the scoreboard units, RS422 Communication PODs and wireless networks to the RaceAmerica Drag Timing Systems.

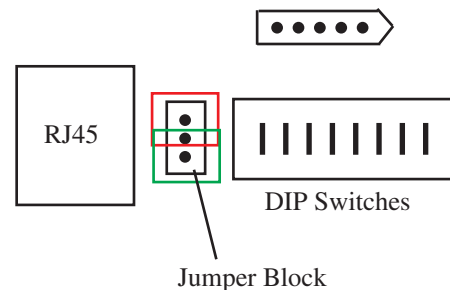
#### STEP 4 - Connect the power

Power is supplied to each scoreboard unit through the DC POWER INPUT connector located on the rear of the display. Connecting power to the display will set the display into a power-up self-test mode. Once the self-test has successfully completed, the display is ready for use.

#### POWER-ON SELF-TEST

When the power source is connected, each display unit begins an internal self-test and external visual check of the display elements.

The self-test begins by stepping through each segment of all digits, one segment at a time including the colon or decimal points. The self-test continues by sequentially illuminating each segment until all segments, colons, and decimal points are on. The self-test continues by drawing a square frame by sliding a small square from left to right, then down and right to left. The square then collapses and the revision level of the code running in the microprocessor is displayed. When the internal self-test and external visual test is complete, [rEAdy] scrolls in from left to right and blanks out. The display is now ready for use.



Jumper Positions

Green - Internal wireless

Red - Hard-wired RJ45

## SCOREBOARD OPERATION

### Model 2600/2650 XL Advanced systems -

All scoreboards operating with the XL Advanced timing systems can display Dial-ins, Speed and ET. If Speed and ET are displayed, single line scoreboards will toggle between the two; otherwise with ET only, the winning lane ET will flash.

See DIP switch settings for the desired race results display.

### Model 2800/2850 XL Professional -

The XL Professional systems operate with XL Score Pro software. These systems can display Dial-ins, RT, 60 ft ET, Speed and ET.

When operating a 2800/2850 with XL Score software, the 'SCOREBD CONTROL' button on the Main Menu displays the Scoreboard Control and Configuration Screen shown in Figure 1. The items in the green areas of 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, remove the 'X' from the square by clicking on the box or the text.

### Model 2700 XL Wireless

When operating from a 2700, the display of RT, Dial-In, Speed and ETs is controlled from the console. A time of day and countdown function are also configured on the console.

For use with 2700/2800/2850 systems, DIP switches 2, 3, 4 and 6 should be ON.

Nonetheless, the DIP switches must be used to select left/right lane display preferences.

### Model 3230 S-Trap

When operating with a 3230, the display should be set to display configured for Speed in the Right lane. The 3230 must be operating with code revision C.0x.x as displayed during powerup.

## SCOREBOARD CONTROL - XL PRO

RaceAmerica Digital Scoreboards connected to the XL Professional Timing System can be controlled and reconfigured to display specific race information after each race overriding the DIP switch settings on each scoreboard unit. Clicking on the SCOREBD CONTROL button on the Main Menu displays the Scoreboard Control and Configuration Screen shown in Figure 1. The items in the green areas of 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, remove the 'X' from the square by clicking on the box or the text.

Scoreboards are configured with DIP switches to determine 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, 120 seconds, or the scoreboards can be cleared when new information is sent from the XL Professional Timing System, generally at the start of the next race or when the CLEAR ALL SEND NEXT button is clicked.

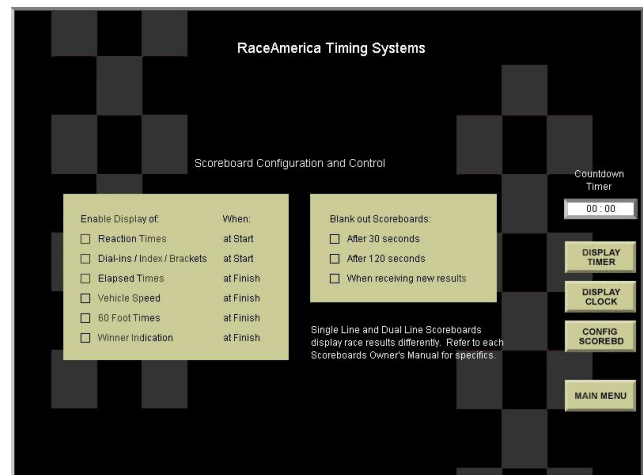


Figure 1 - Scoreboard Control Screen

The following settings can be enabled:

**REACTION TIME** - displayed at the beginning of the race when both lanes have started (with XL Score Professional software only on 2700/2800/2850 models). RT is not available with the XL Advanced.

**DIAL-INS/INDEX/BRACKETS** - at the start of a race when dial-ins were entered before the start; with XL Score, click **CLEAR ALL/SEND NEXT** to update the scoreboards. With the XL Advanced, press # **[ENTER]**.

**ELAPSED TIME/VEHICLE SPEED** - displayed at the end of a race. Depending on the model, either both display (dual line) or they toggle between ET and Speed (single line).

**60 FOOT TIMES** - displayed at the end of a race (2700/2800/2850 models only).

**WINNER INDICATION** - The winning lane may flash race results at the end of a race.

Once the desired configuration is selected on-screen, click on the **CONFIG SCOREBD** button to reconfigure the scoreboards. The scoreboards should show 'rEAdy' and then blank out.

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.

## DIP SWITCH DEFINITIONS

All scoreboard models have eight DIP switches located on the back of the unit that are numbered from 1 to 8 and can be switched ON or OFF. The ON position is indicated on the switch itself. Each switch function and setting are discussed below.

### Race Results

Switches 2, 3, 4, and 6 on the back of the Scoreboard unit determine which race results will be displayed: (for non 2700/2800/2850 models)

<u>Race Result</u>	<u>Switch</u>	<u>Position</u>
Dial-in	2	OFF
Reaction Time (RT)	3	OFF
SPEED	4	OFF
Elapsed Time (ET)	6	OFF

When both SPEED and ET are selected on a single line scoreboard, the scoreboards will toggle between SPEED and ET at the end of the race. The Win Indicator will not be active.

### Lane Selection

Switch number 7 determines which lane's race results will be displayed:

<u>Lane to Display</u>	<u>7</u>
Left	ON
Right	OFF

### Display Hold Time

Switch number 8 works in conjunction with Switch 5 to determine the length of time to display the race results before clearing the display. When race results are displayed, the display options for display of the results are 30 seconds for fast paced action, 120 seconds for large viewing audiences or until new data is received. If the display is sent new race results prior to the 30 or 120 seconds expiring, the display will be updated with the new results and the display hold time timer is reset to 30 or 120 seconds.

<u>Display Hold Time</u>	<u>5</u>
Clear per Switch 8	ON
Clear only on new data	OFF

<u>Display Hold Time</u>	<u>8</u>
30 seconds	ON
120 seconds	OFF

### Diagnostic mode

Switch number 1 enables and disables the diagnostic capabilities of the scoreboard. When enabled, the scoreboard receives data and displays error codes when invalid data has been received. The following table is used to set switch number 1 to enable/disable the diagnostic feature:

<u>Diagnostic Mode</u>	<u>1</u>
Disabled	ON
Enabled	OFF

### FACTORY DIP SWITCH SETTINGS

Compatible with currently shipping models.

<u>Switch</u>	<u>Position</u>
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	Rt Lane - OFF      Lt Lane - ON
8	ON

### XL SCORE CONFIGURABLE ONLY

The 60' and Win Indicator (flashing ON/OFF for winning lane) can only be configured from the XL SCORE Scoreboard Control and Configuration screen. Both 60' times (default OFF) and SPEED (default ON) cannot be displayed together.



## 4528 Five Inch Dial-In Scoreboards

### Model 4528 DIAL-IN SCOREBOARD

#### PACKAGE COMPONENTS

- 2 - Scoreboard Units
- 2 - Power Patch Cords
- 1 - Owner's Manual

#### Model 4528 Available Options:

- 06-Y155 RS232 Cable up to 100'
- 4500 Data Communication POD (for placement greater than 100ft from timer)
- 4X20A Wireless Network Links (2 or 3 req'd)
- 6501A AC Power Adapter (2 req'd)
- 07-3434 RS422 Cable for use with PODs
- 'B' suffix - Internal rechargeable battery
- 'W'/'X' suffix - Internal Wireless Datacomm link
- 6075A - Carry/Storage case (2 req'd)

#### LOCAL REQUIREMENTS

Additional items required to operate the 4528 Single Line Scoreboard and options:

- 1 - 12VDC automotive battery for each unit

Other requirements:

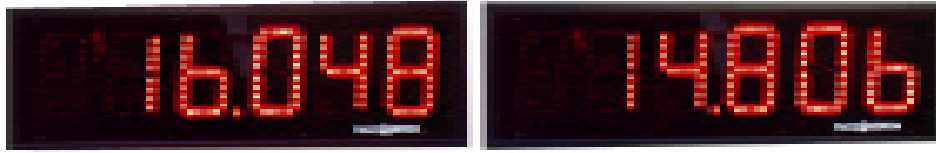
- AC power source for AC adapters

#### PRODUCT SPECIFICATIONS Model 4528

Display Type:	7-Segment
Digit Size:	5" x 2.75"
Number of digits:	Four
Dimensions (half):	20.3"W x 8.8"H x 3"D
Mounting:	Top 3/16" Eye - 16.6"c
Housing:	Powder coated steel
View Filter:	Red Transparent acrylic
View Range:	200' in full sun
Power Req't:	11.5 to 12.6VDC/.8A x 2
Data Comm:	RS232 Serial
Weight (total)	18#

#### PRODUCT SET-UP

Model 4528 Single Line Scoreboard is designed to hang free using the top eyelets supplied with the display. It is suggested to use the hanging method in windy conditions to avoid damage to the display and the display housing. The 4528 scoreboard is intended to display dial-in times at the starting line.



## 6528 Five Inch Single Line Scoreboard

### Model 6528 SCOREBOARD

#### PACKAGE COMPONENTS

- 2 - Scoreboard Units
- 4 - Table Stands
- 2 - Power Patch Cords
- 1 - Owner's Manual

#### Model 6528 Available Options:

- 06-Y155 RS232 Cable up to 100'
- 450 Data Communication POD (for placement greater than 100ft from timer)
- 4X20A Wireless Network Links (2 or 3 req'd)
- 6501A AC Power Adapter (2 req'd)
- 07-3434 RS422 Cable for use with PODs
- 6075B -Softside storage/carry case (2 req'd)
- 'B' suffix - Internal rechargeable battery
- 'W'/'X' suffix - Internal Wireless Datacomm link

#### LOCAL REQUIREMENTS

Additional items required to operate the 6528 Single Line Scoreboard and options:

- 1 - 12VDC automotive battery for each unit

Other requirements:

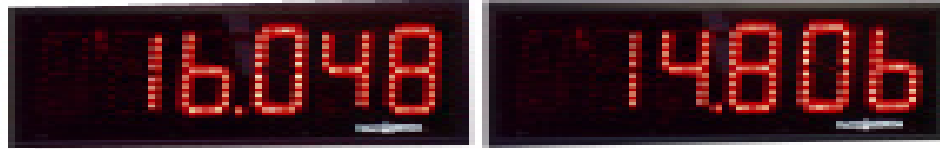
- AC power source for AC adapters

### PRODUCT SPECIFICATIONS Model 6528

Display Type:	7-Segment
Digit Size:	5" x 2.75"
Number of digits:	Six
Dimensions (half):	27.6"W x 11.6"H x 3"D
Mounting:	Top 3/16" Eyelets - 22"c
Housing:	Powder coated steel
View Filter:	Red Transparent acrylic
View Range:	200' in full sun
Power Req't:	11.5 to 12.6VDC/.8A x 2
Data Comm:	RS232 Serial
Weight (total)	18#

#### PRODUCT SET-UP

Model 6528 Single Line Scoreboard is designed to hang free using the top eyelets supplied with the display. It is suggested to use the hanging method in windy conditions to avoid damage to the display and the display housing. Table stands can place the scoreboard on a surface.



## 6828 Eight Inch Single Line Scoreboard

### Model 6828 SCOREBOARD

#### PACKAGE COMPONENTS

- 2 - Scoreboard Units
- 2 - Power Patch Cords
- 1 - Owner's Manual

#### Model 6828 Available Options:

- 06-Y155 RS232 Cable up to 100'
- 4500 Data Communication POD (for placement greater than 100ft from timer)
- 4X20 Wireless Network Links (2 or 3 req'd)
- 6501A AC Power Adapter
- 6077A Soft Side Storage/Carry Case (2 req'd)
- 6076A Heavy Duty Carry Case (2 req'd)
- 7606B Suspension Arm Display Stand  
40" tall/8" only - 2 req'd
- 07-3434 RS422 Cable for use with PODs
- 'B' suffix - Internal rechargeable battery
- 'W'/'X' suffix - Internal Wireless Datacomm link

#### LOCAL REQUIREMENTS

Additional items required to operate the 6828 Single Line Scoreboard and options:

- 1 - 12VDC automotive battery for each unit

Other requirements:

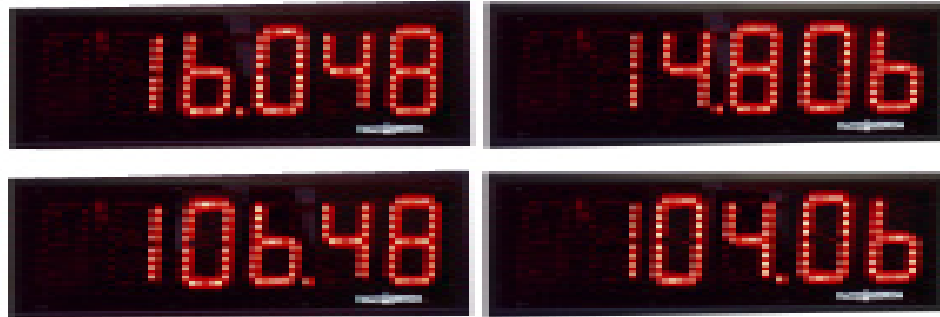
- AC power source for AC adapters

#### PRODUCT SPECIFICATIONS Model 6828

Display Type:	7-Segment
Digit Size:	8" x 3.75
Number of digits:	Six
Dimensions (half):	46.8"W x 14.3"H x 3"D
Mounting:	Top 1/4" Eyelets - 30" c
Housing:	Powder coated steel
View Filter:	Red Transparent acrylic
View Range:	320' in full sun
Power Req't:	11.5 to 12.6VDC/1A x 2
Data Comm:	RS232 Serial
Weight (total):	46#

#### PRODUCT SET-UP

Model 6828 Single Line Scoreboard is designed to hang free using the top eyelets supplied with the display. It is suggested to use the hanging method in windy conditions to avoid damage to the display and the display housing. A scoreboard stand is also available from RaceAmerica to hang the 8" display at a good viewing level 40" above ground level.



**6510 Five Inch Dual Line Scoreboard**

**Model 6510 SCOREBOARD**

**PACKAGE COMPONENTS**

- 4 - Scoreboard Units
- 4 - Power Patch Cords
- 1 - Owner's Manual
- 8 - Table Stands

**Model 6510 Available Options:**

- 06-Y555 RS232 Cable up to 100'
- 4500 Data Communication POD (for printers and displays greater than 100ft from timer)
- 4X20A Wireless Network Links (4 or 5 req'd)
- 6501A AC Power Adapter
- 07-3434 RS422 Cable for use with PODs
- 6075B Soft side storage/carry case
- 'W'/'X' suffix - Internal Wireless Datacomm link
- 'B' suffix - Internal Battery/External Charger

**LOCAL REQUIREMENTS**

Additional items required to operate the 6510 Dual Line Scoreboard and options:

- 1 - 12VDC automotive battery for each two units

Other requirements:

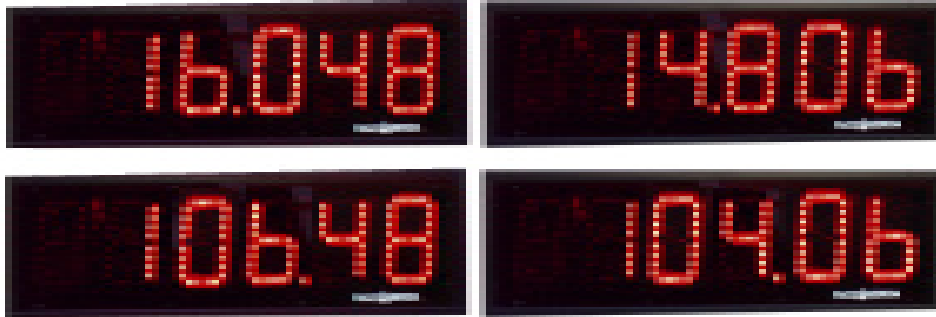
- AC power source for AC adapters

**PRODUCT SPECIFICATIONS Model 6510**

Display Type:	7-Segment
Digit Size:	5" x 2.75"
Number of digits:	Six
Dimensions (unit):	27.6"W x 11.6"H x 3"D
Mounting:	Top 3/16" Eyelets - 22" c
Housing:	Powder coated steel
View Filter:	Red Transparent acrylic
View Range:	200' in full sun
Power Req't:	11.5 to 12.6VDC/.8A x 2
Data Comm:	RS232 Serial
Weight (total):	36#

**PRODUCT SET-UP**

Model 6510 Dual Line Scoreboard is designed to hang free using the top eyelets supplied with the display. The lower scoreboard can be hung from the upper one using screw eyes in the PEM nuts on the bottom of the scoreboard.



### 6810 Eight Inch Dual Line Scoreboard

#### Model 6810 SCOREBOARD

#### PACKAGE COMPONENTS

- 4 - Scoreboard Units
- 4 - Power Patch Cords
- 1 - Owner's Manual

#### Model 6810 Available Options:

- 06-Y555 RS232 Cable up to 100'
- 4500 Data Communication POD (for printers and displays greater than 100ft from timer)
- 4X20A Wireless Network Links (4 or 5 req'd)
- 6501A AC Power Adapter
- 07-3434 RS422 Cable for use with PODs
- 6075B Soft side storage/carry case
- 'W'/'X' suffix - Internal Wireless Data link
- 'B' suffix - Internal Battery/External Charger

#### LOCAL REQUIREMENTS

Additional items required to operate the 6810 Dual Line Scoreboard and options:

- 1 - 12VDC automotive battery for each two units

Other requirements:

- AC power source for AC adapters

#### PRODUCT SPECIFICATIONS Model 6810

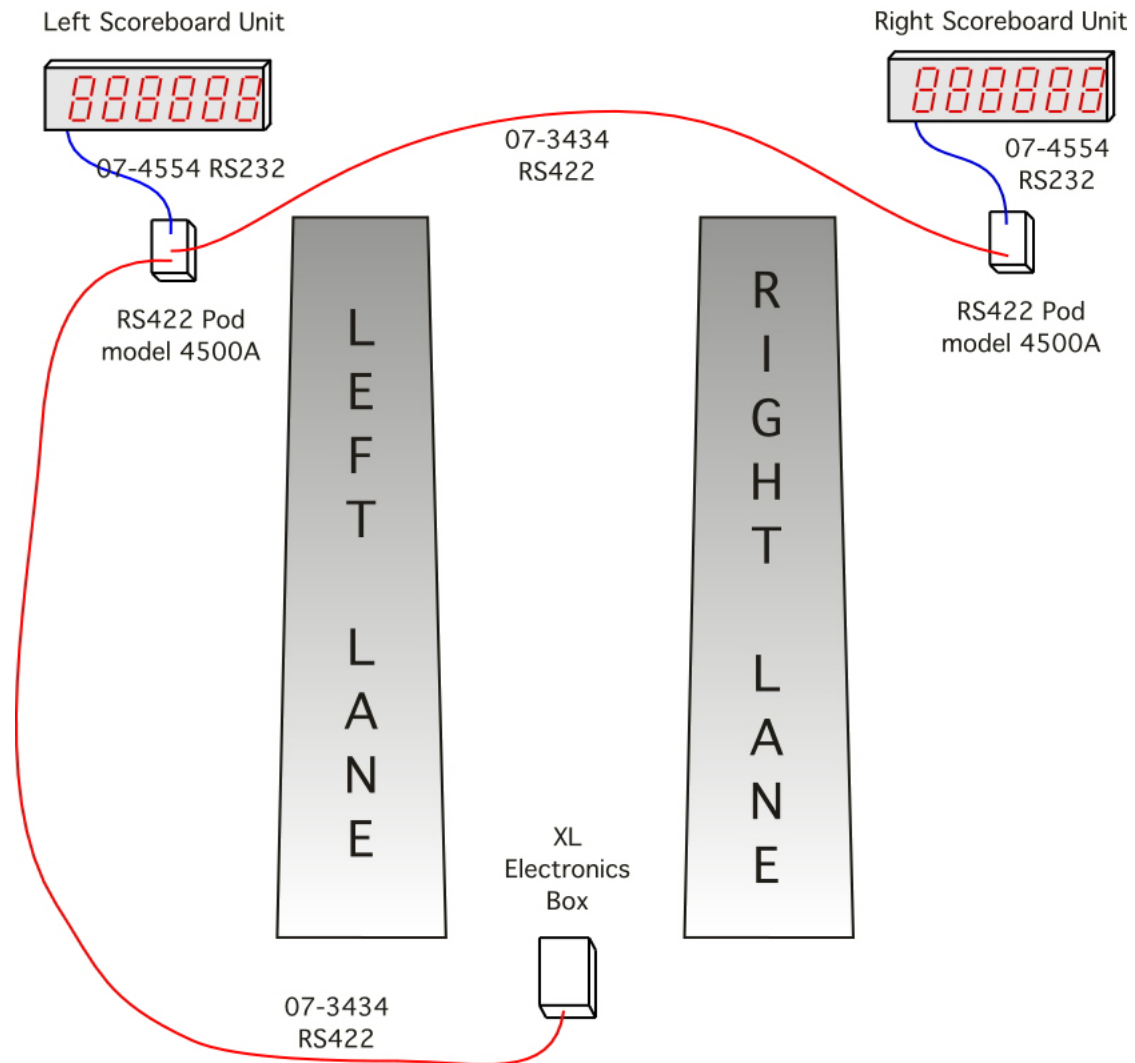
Display Type:	7-Segment
Digit Size:	8" x 3.75"
Number of digits:	Six
Dimensions (unit):	46.8"W x 14.3"H x 3"D
Mounting:	Top 1/4" Eyelets - 30" c
Housing:	Powder coated steel
View Filter:	Red Transparent acrylic
View Range:	320' in full sun
Power Req't:	11.5 to 12.6VDC/.8A x 2
Data Comm:	RS232 Serial
Weight (total):	96#

#### PRODUCT SET-UP

Model 6810 Dual Line Scoreboard is designed to hang free using the top eyelets supplied with the display. The lower scoreboard can be hung from the upper one using screw eyes in the PEM nuts on the bottom of the scoreboard.

Alternately, upper and lower units can be bolted together and hung from the upper eyelets.

## WIRING DIAGRAM FOR LEFT AND RIGHT UNITS SEPARATED

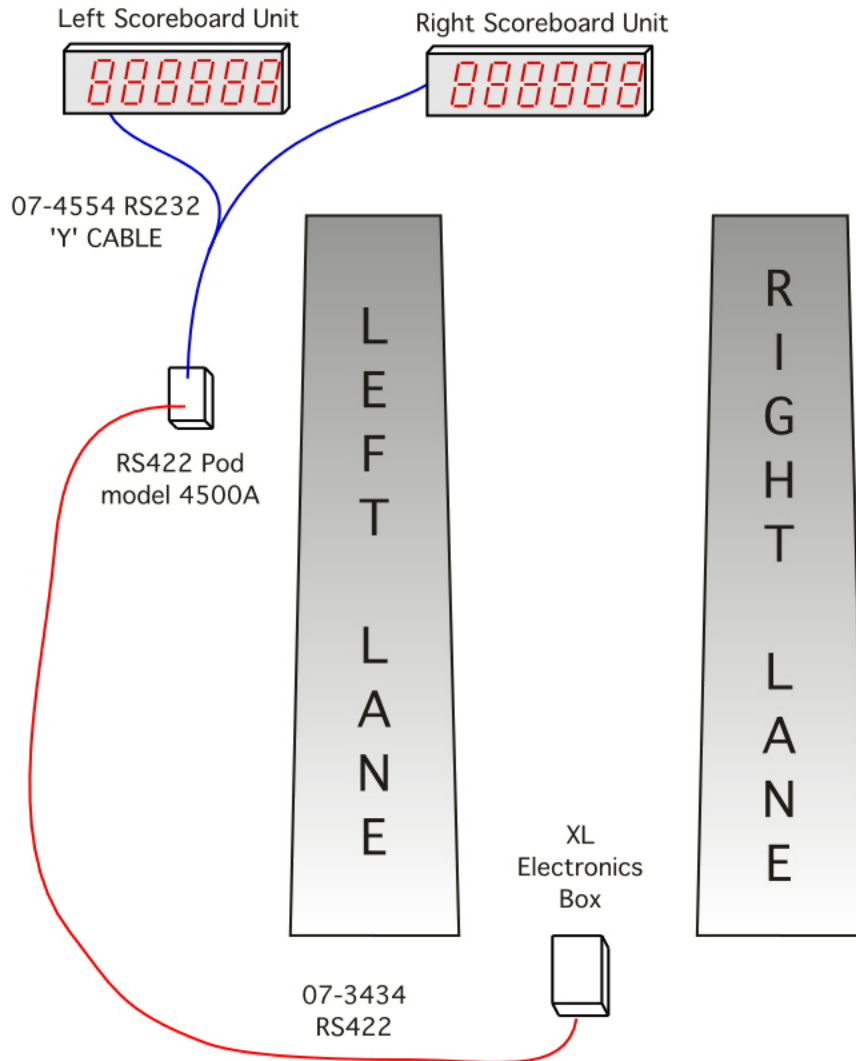


The Left and Right Single Line Dual Lane Scoreboards connect to the XL Electronics Timer through a RS422 Multidrop communication link as follows:

1. Connect the longer RS422 cable part number 07-3434 to the XL Electronics Box. Plug one end into the connector labelled DIFFERENTIAL RS422 COMMUNICATIONS SCOREBOARD. The other end of this cable connects to one of the model 4500 RS422 PODs located near the scoreboards. This cable plugs into either of the RS422 connectors.
2. Connect the shorter RS422 cable part number 07-3434 to the remaining RS422 connector of the model 4500 RS422 POD. Connect the other end of this cable to the other 4500 RS422 POD into one of the RS422 connectors.
3. Connect the RS232 cable part number 07-4554 to the RS232 connector of the 4500 RS422 POD and the other end to the connector on the rear of the scoreboard.

**Fig. 2 - Cabling Diagram Units Separated**

## WIRING DIAGRAM FOR COMMON COMMUNICATIONS POD

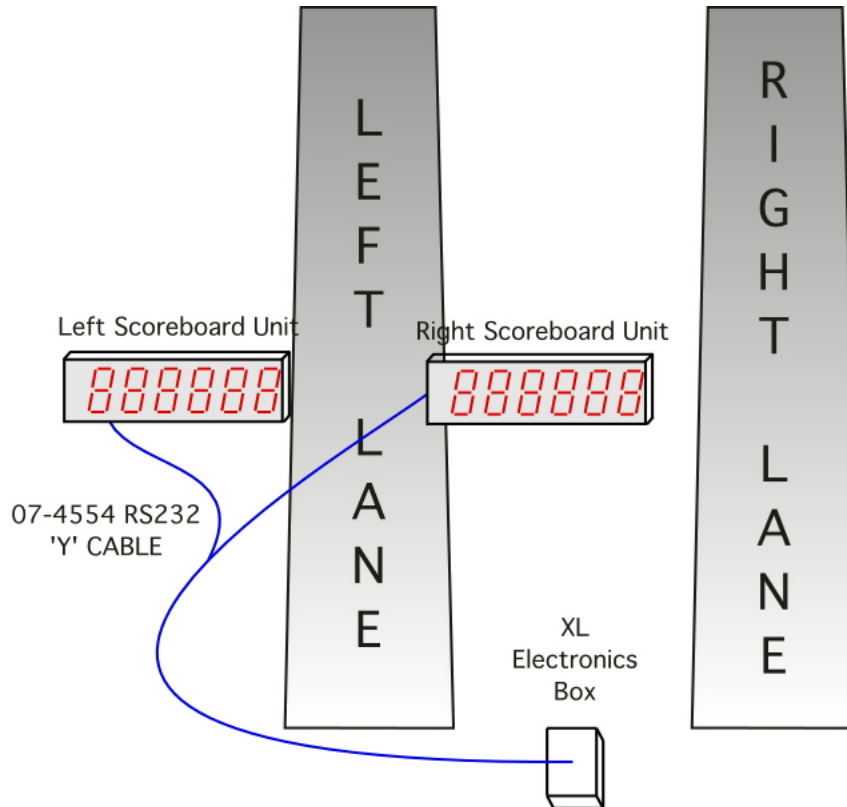


The Left and Right Single Line Dual Lane Scoreboards connect to the XL Electronics Box through a RS422 Multidrop communication link as follows:

1. Connect the longer RS422 cable part number 07-3434 to the XL Electronics Box. Plug one end into the connector labelled DIFFERENTIAL RS422 COMMUNICATIONS SCOREBOARD. The other end of this cable connects to one of the model 4500 RS422 PODs located near the scoreboards. This cable plugs into either of the RS422 connectors.
2. Connect the RS232 'Y' cable part number 07-4554 to the RS232 connector of the 4500 RS422 POD and the other end to the connector on the rear of the scoreboards.

**Fig. 3 - Cable Diagram Units Close Together**

### WIRING DIAGRAM FOR RS232 UNITS WITHIN 100FT

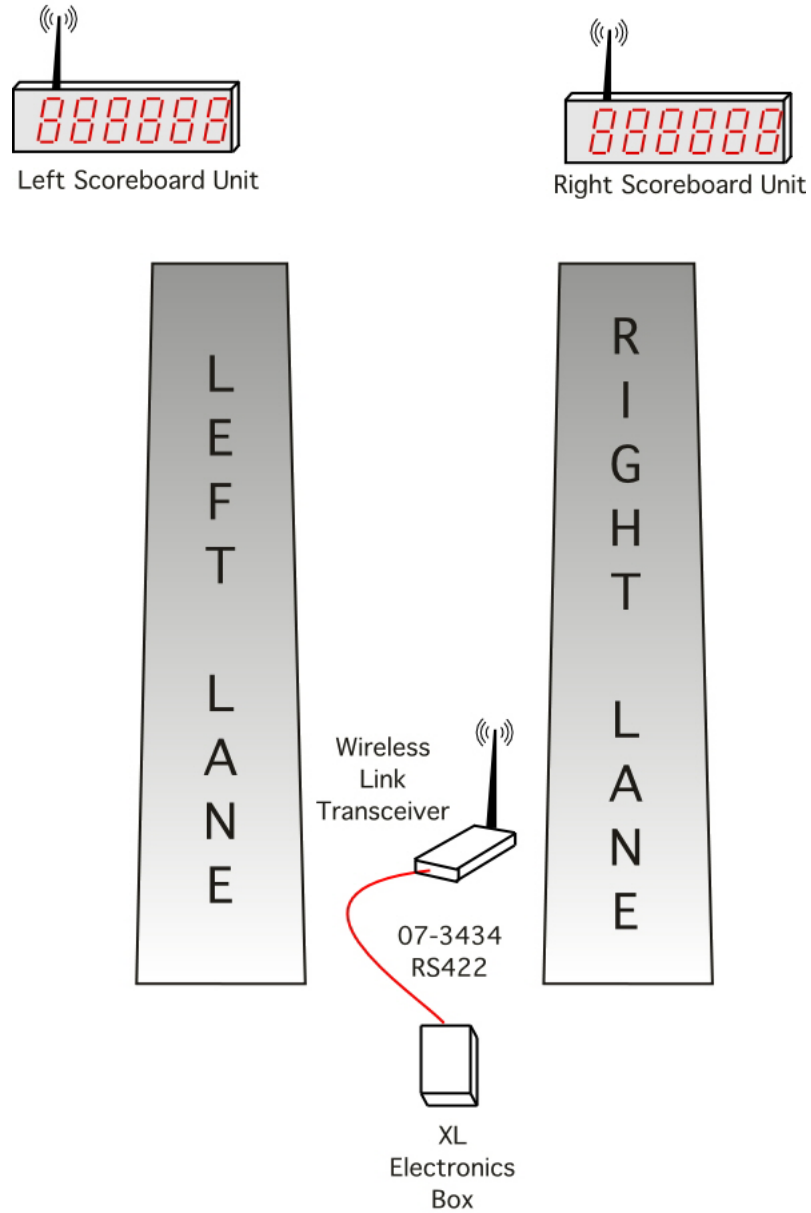


The Left and Right Single Line Dual Lane Scoreboards connect to the XL Electronics Box through a single RS232 'Y' cable as follows:

1. Connect the RS232 'Y' cable part number 07-4554 to the RS232 scoreboard connector of the console and the other ends into the scoreboards.

**Fig. 4 - Cable Diagram Units less than 100ft from Console**

### WIRING DIAGRAM FOR WIRELESS MODELS



The Left and Right Single Line Dual Lane Scoreboards connect to the XL Electronics Box through a wireless link network

1. Connect the RS422 cable part number 07-3434 to the XL Electronics Box. Plug one end into the connector labelled DIFFERENTIAL RS422 COMMUNICATIONS SCOREBOARD. The other end of this cable connects to the plug on the Wireless Link Transceiver.

**Fig. 5 - Cable Diagram Wireless Network**

## **DISPLAY MAINTENANCE**

The drag racing Scoreboards do not require any maintenance to maintain proper operation. If the scoreboard is to be used in rainy or wet conditions, it is suggested to protect the back panel from direct moisture by shielding the connection to power and the serial port.

To clean the red acrylic lens, use a non-abrasive cleaner with a soft cloth. This will keep the protective lens clean and maximize visibility and clarity of the digits. If the red lens is soiled with mud or dirt, gently remove the grit using a soft cloth/water being careful not to press when wiping to avoid scratching the red lens acrylic material.

## **SPARE PARTS**

Further to minimize race program interruptions, RaceAmerica recommends some spare parts. While the Scoreboard may not shut down the racing action, a spare emitter/sensor pair and end of track cable sections should be available in the event of an unfortunate accident during a program. Related cables and PODs for the Scoreboard should be considered. Contact RaceAmerica for availability and pricing.

## **SUPPORT AGREEMENTS**

Support agreements are available from RaceAmerica providing Telephone Assistance on technical issues and operational questions, repair and/or replacement of hardware failures, Software and Firmware updates and bug reporting. Contact RaceAmerica for more information and pricing of Support Agreements.

## SCOREBOARD STAND ASSEMBLY INSTRUCTIONS

This assembly instruction is intended for use with six digit eight inch scoreboards and Dial-In scoreboards.

### 7606B Stand Kit Contents

- 2 - Suspension Stand Arms with 'J' hooks
- 1 - Pipe Flange
- 2 - 20 in pipe sections
- 1 - Pipe union
- 1 - Base Plate with Pipe Flange
- 2 - 1/4-20 bolts with wing nuts

### Assembly

1) Assemble the suspension arms with the pipe flange and 1/4-20 bolts at most extreme angle setting. Orient flange and 'J' hooks down.

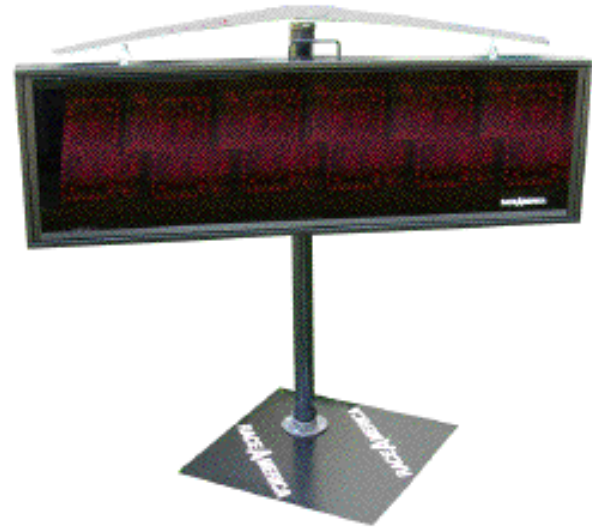
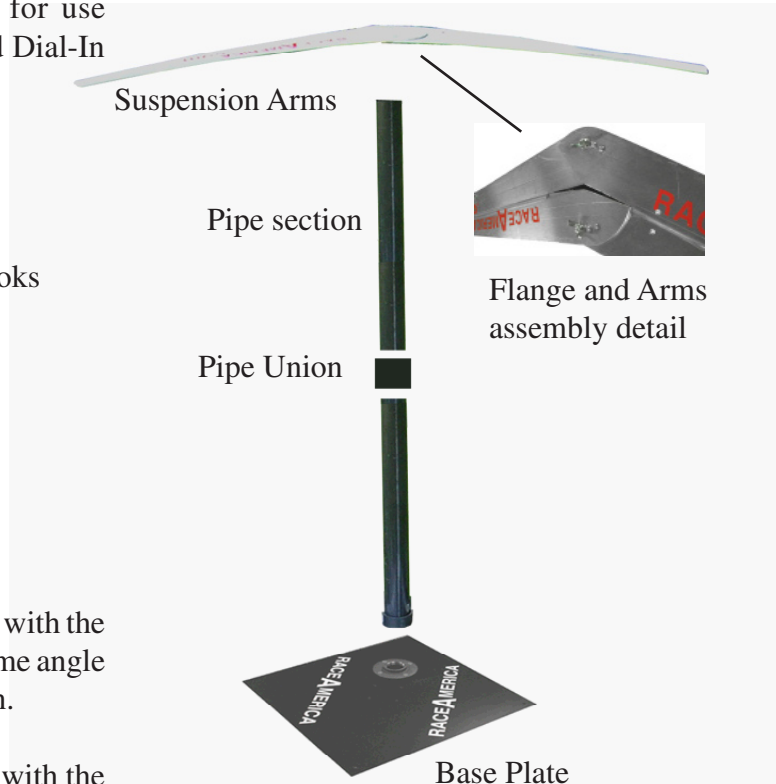
2) Connect the two pipe sections with the coupling and screw into the base plate flange to assemble the post.

3) Carefully screw the suspension arm assembly onto the post. Align such that arms will suspend the display over the center of the base plate on the diagonal for maximum stability.

4) Hang the scoreboard on the 'J' hooks; some droop is normal; the display will swing in the wind.

### Additional Stability - (if required)

1) Place a weight onto the base plate or stake it into the ground



**Fig. 6 - Scoreboard Stand Assembly**

Assembled Suspension Stand