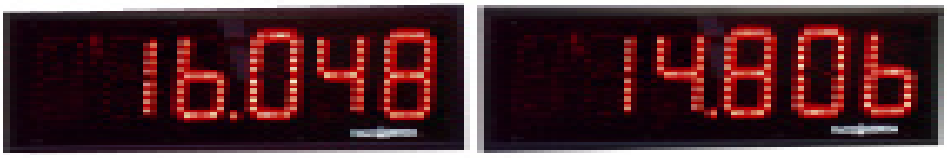
The Leader in Event Critical Timing Electronics

Drag Racing Scoreboards



Owner's Manual

Models 6528D, 6828D, 6510D, 6810D - Rev S

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Table of Contents

LIMITED WARRANTY 3
PRODUCT OVERVIEW....4

SCOREBOARD SET-UP....4
POWER-ON SELF-TEST....5
SCOREBOARD OPERATION....5
Model 2600/2650 XL Advanced....5
Model 2800/2850 XL Professional....5
Model 2700....6
Model 3230 S-Trap....6
SCOREBOARD CONTROL XL PRO 6

DIP SWITCH DEFINITIONS....7

SCOREBOARD POSITIONS....9

INDIVIDUAL MODEL SPECIFICATIONS & DETAILS.... 10-13
6528 5in Single Line....10
6828 8in Single Line....11
6510 5in Dual Line 12
6810 8in Dual Line 13

WIRING DIAGRAM FOR LEFT AND RIGHT UNITS SEPARATED 14
WIRING DIAGRAM FOR COMMON COMMUNICATIONS POD....15
WIRING DIAGRAM FOR SCOREBOARDS <100FT....16
WIRING DIAGRAM FOR WIRELESS NETWORK 17

SCOREBOARD MAINTENANCE....18
SPARE PARTS 18
SUPPORT AGREEMENTS....18
SCOREBOARD STAND ASSEMBLY INSTRUCTIONS....19

Figures

FIGURE 1 - XL score PRO SCOREBOARD CONTROL SCREEN....6
FIGURE 2 - CABLING DIAGRAM UNITS SEPARATED RS422 14
FIGURE 3 - CABLING DIAGRAM UNITS CLOSE TOGETHER RS422....15
FIGURE 4 - CABLING DIAGRAM UNITS CLOSE TOGETHER RS232....16
FIGURE 5 - CABLING DIAGRAM WIRELESS 17
FIGURE 6 - SCOREBOARD STAND ASSEMBLY 19

RACE AMERICA

Timing Systems

LIMITED WARRANTY

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 (models 2600/2650 'XL advanced' models 2800/2850 'XL professional' and model 2700 'XL Wireless'). 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).

Race results to be displayed are selected through DIP switches located on the rear panel of the scoreboard or configured remotely with the XLscore Pro software or 2700 XL wireless console.

All Scoreboards can display Dial-Ins, Speed and ET; models 2700, 2800 and 2850 can also display Reaction Time, Time of Day and a countdown clock for intermission sessions. Multiple race results can be displayed in sequence as a race is run; Dial-Ins, then RT, and lastly speed and ET. A five inch scoreboard can be used as a Dial-In board at the starting line with or without larger scoreboard systems. Brightness control is available with the 2700/2850 systems.

A separate WIN light option is available for each scoreboard system. The WIN light is on a 10ft cable which connects to the scoreboard for power and data. The WIN light will flash for the winning lane. Wireless Win Lights are also available.

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 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; the scoreboards are configured and labeled for Left or Right lane; 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.

STEP 3 - Connect the interface

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

All five and eight inch models must receive RS232 data which can be a hard wire connection up to 100 ft away (RS232) or greater wired distances with communication PODs (RS422) 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 a 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.

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 configured position (by DIP switches) and revision level of the firmware code running in the microprocessor are displayed. The display will dim between dimmest and brightest to show the range of control available.

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.

SCOREBOARD OPERATION

Single line scoreboards can display Speed and ET by toggling between the two; otherwise ET only.

Dual line scoreboards will display RT/ET in the upper display and Dial-in/Speed in the lower display. A WIN light option is available to indicate the winning lane.

Model 2650 XL Advanced -

Scoreboards operating with the XL Advanced timing system can display Dial-ins, Speed and ET. See DIP switch settings for the desired race results display.

Models 2800/2850 XL Professional -

The XL Professional systems operate with XLscore Pro software. These systems can display Dial-ins, RT, Speed and ET. Additionally, through the XLscore Pro software 'SCOREBD CONTROL' button, the scoreboard can display the time of day (from the PCs clock) or function

as a countdown timer. The XLscore Pro software can also remotely reconfigure the display of the scoreboard, over-riding the DIP switch settings.

Model 2700 XL Wireless -

The XL Wireless system can display Dial-ins, RT, Full-track Speed and Full-track ET as well as time of day and function as a count-down timer. The 2700 will display the items selected in the Display menu.

Model 3230 S-Trap

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

SCOREBOARD CONTROL - XLscore

RaceAmerica Digital Scoreboards connected to the XL Wireless and XL Professional Timing Systems can be controlled and reconfigured to display specific race information after each race over-riding 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, or the scoreboards can be cleared when new information is sent from the XL Professsional Timing System, generally at the start of the next race or when the **CLEAR ALL SEND NEXT** button is clicked.

The following settings can be enabled:

REACTION TIME - displayed at the beginning of the race when both lanes have started (with XLscore Pro software only on 2700/2800/2850 models).

DIAL-INS/INDEX/BRACKETS - at the start of a race when dial-ins were entered before the start; with XLscore Pro, 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).

BRIGHTNESS - select one of the five brightness levels. All units are on High after power-on.

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.

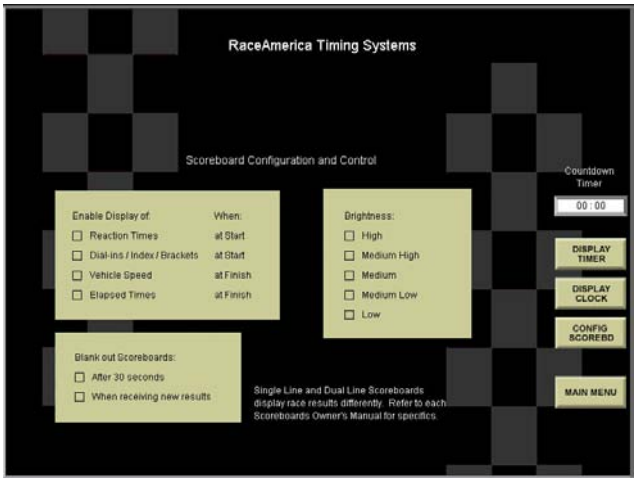


Figure 1 - Scoreboard Control Screen

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. Switch function and setting are discussed below.

Model 6510D and 6810D Dual Line scoreboard factory settings for internal wireless models:

Upper position

Switch	Position
1	OFF
2	OFF
3	ON
4	OFF
5	OFF
6	OFF
7	OFF
8	ON

Lower position:

Switch	Position
1	OFF
2	OFF
3	OFF
4	OFF
5	OFF
6	OFF
7	OFF
8	ON

This configuration will display non-zero Dial-In (lower) before the race, Reaction Time (upper) after both vehicles start (2800/2850 Timers), Speed or non-zero Dial-In (lower) and ET (upper) after both lanes finish. Data will remain on the scoreboard for 30 seconds or until it is cleared or new data is received.

Model 6528D & 6828D Single Line scoreboard factory settings for internal wireless models:

Switch	Position
1	OFF
2	OFF
3	ON
4	OFF
5	OFF
6	ON
7	OFF
8	ON

This configuration will display Dial-In before the race, Reaction Time after both vehicles start (2700/2800/2850 Timers), Speed and ET toggling after both lanes finish. Data will remain on the scoreboard for 30 seconds or until it is cleared or new data is received.

If other configurations are desired, refer to the specific DIP switch functions; XLscore PRO software users can use the scoreboard control panel to remotely reconfigure the scoreboards.

Data Interface

DIP Switches 7 and 8 determine which data mode will send the data:

Data Interface	7	8
Wired/External Wireless	ON	OFF
Internal Wireless	OFF	ON

Single Line/Dual Line

DIP Switch number 6 sets data display positions for Single Line or Dual Line Scoreboards:

Scoreboard configuration	6
Single Line (models 6X28)	ON
Dual Line (models 6X10)	OFF

SPEED and Display Position

DIP Switch number 3 works in conjunction with DIP Switch 6 to determine whether to display SPEED and the proper display position for SPEED based on a single or dual line display.
Single Line Display:

Single Line Display (6 ON)	3
Disable SPEED	ON
Enable SPEED	OFF

Dual Line Display (6 OFF)	3
Upper Display	ON
Lower Display	OFF

Display Hold Time

DIP Switch number 1 determines 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 or until new data is received. If the display is sent new race results prior to the 30 second timeout, the display will be updated with the new results and the display hold time timer is reset to 30 seconds or new data.

Display Hold Time	1
Clear on New Data	ON
Clear after 30 seconds	OFF

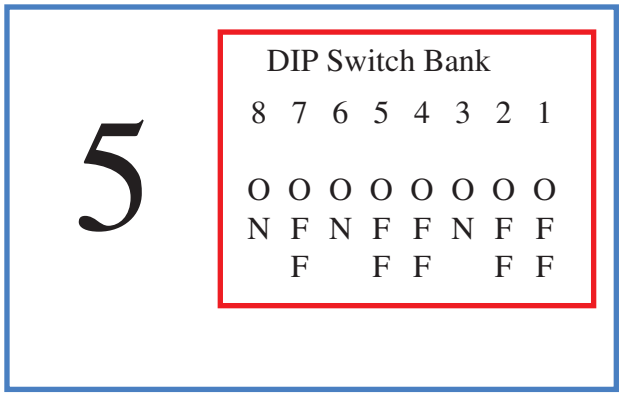
Race Results

DIP Switches 3, 4 and 5 on the back of the Scoreboard unit determine which race results will be displayed:

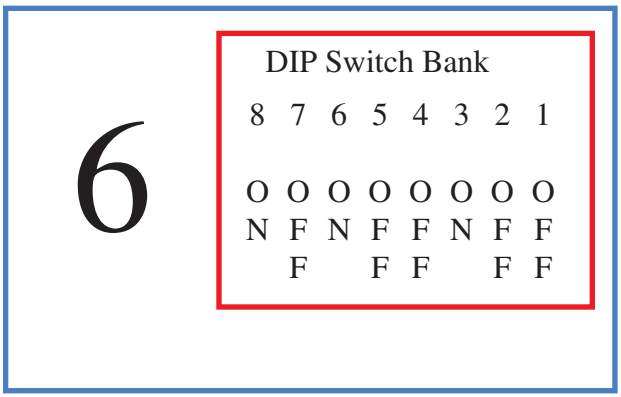
Race Result	Switch	Position
Dial-in	4	OFF
Reaction Time (RT)	5	OFF
SPEED (see note)	3	OFF

When SPEED is selected on a single line scoreboard, the scoreboards will toggle between SPEED and ET at the end of the race and the winning lane will not flash the ET.

Single Line Dual Lane

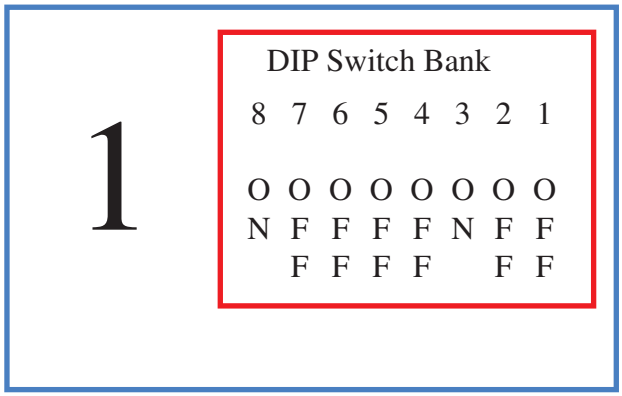


Left Lane - DIP Settings Position 5

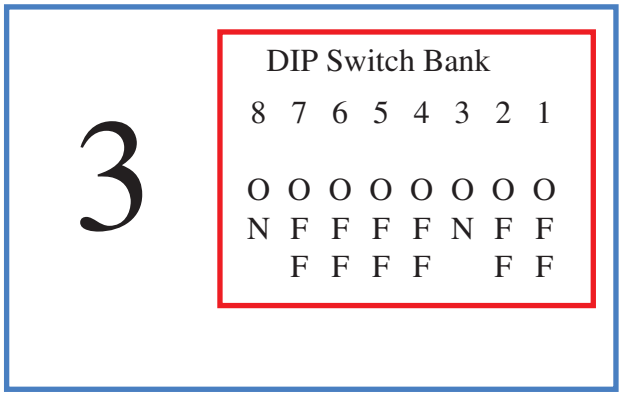


Right Lane - DIP Settings Position 6

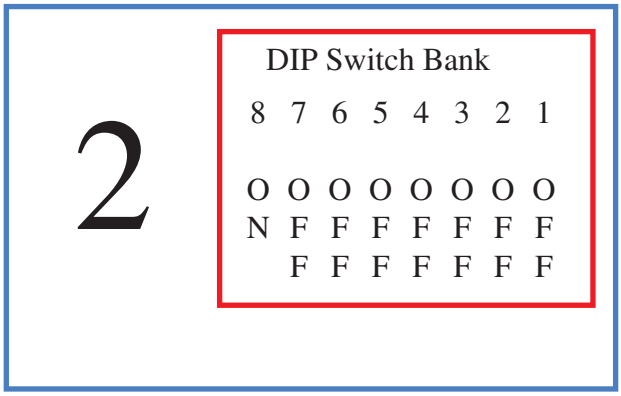
Dual Line Dual Lane



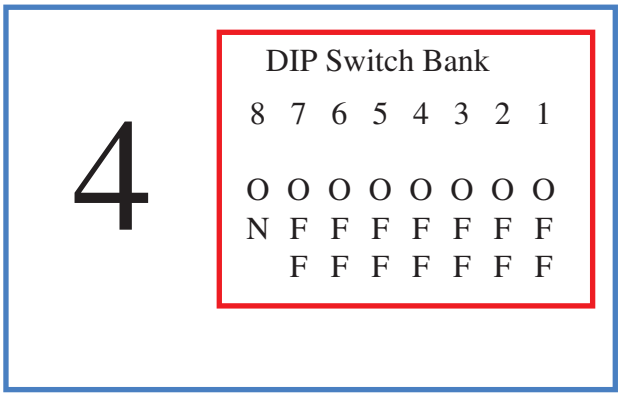
Left Lane - DIP Settings Position 1
Upper Scoreboard



Right Lane - DIP Settings Position 3
Upper Scoreboard

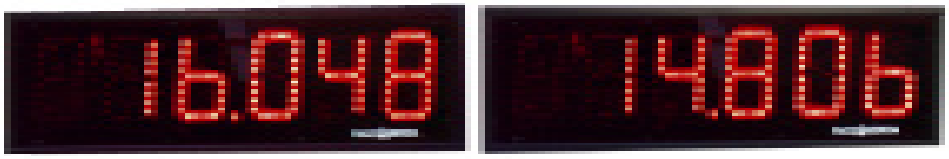


Left Lane - DIP Settings Position 2
Lower Scoreboard



Right Lane - DIP Settings Position 4
Lower Scoreboard

Fig. 5 - At the conclusion of power-on testing, a single digit will display, corresponding to the scoreboard position. With the settings shown, scoreboards will display non-zero Dial-Ins, RT, SPEED and ET. Dual line scoreboards display RT/ET in the Upper Scoreboard and Dial-In/SPEED in the Lower Scoreboard. Dial-In, RT and SPEED can be disabled using switches 3, 4 and 5 (see earlier section).



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'
4500 Data Communication POD (for placement greater than100ft 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

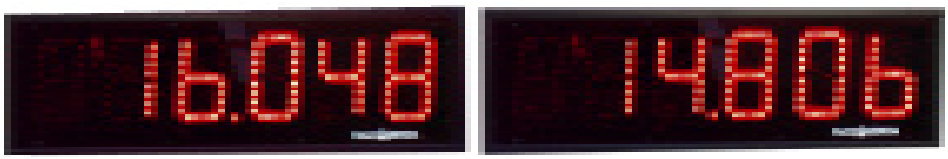
Other requirements:
AC power source for AC adapters

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 Reqt:	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 than100ft 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 Reqt:	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 than100ft 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 Reqt:	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 than100ft 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

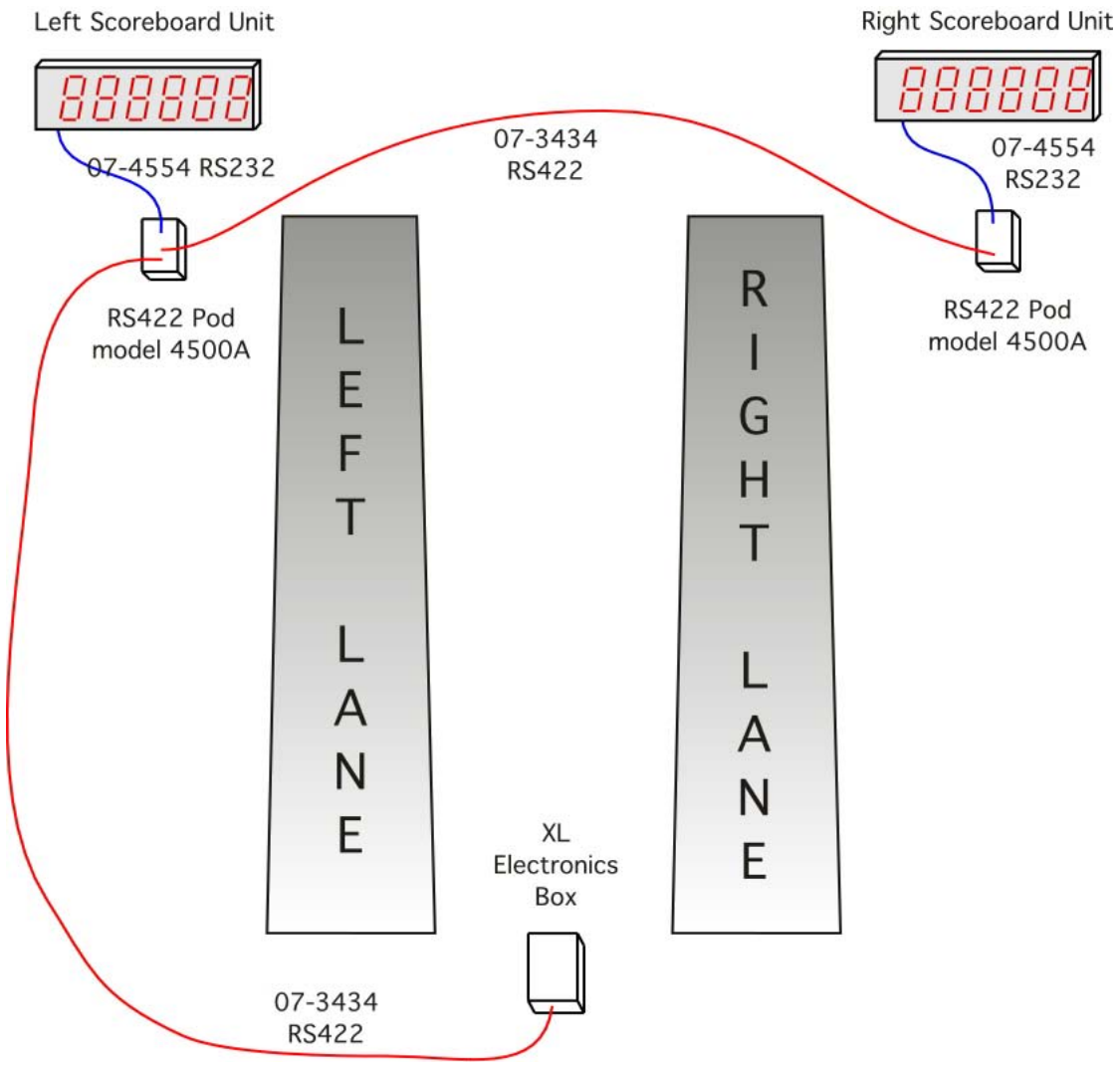
Display Type:	7-Segment
Digit Size:	8" x 3.75"
Number of digits:	Six
Dimensions (unit):	46.8"W x 14.3"H x 3"D
Mounting:	Top 1/4" Eyelets - 30"c
Housing:	Powder coated steel
View Filter:	Red Transparent acrylic
View Range:	320' in full sun
Power Reqt:	11.5 to 12.6VDC/.8A x 2
Data Comm:	RS232 Serial
Weight (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:

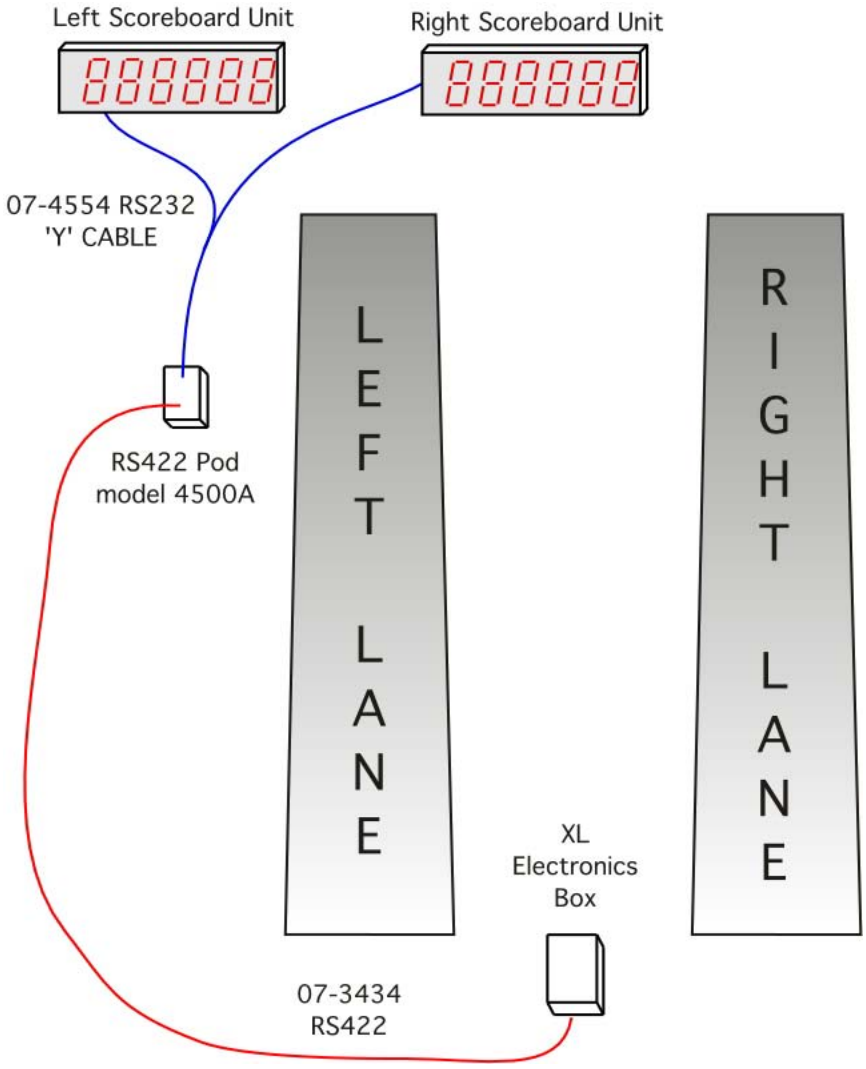
1. Connect the longer RS422 cable part number 07-3434 to the XL Electronics Box. Plug one end into the connector labelled RS422 SCOREBOARD. The other end of this cable connects to one of the model 4500 RS422 PODs located near the scoreboards. This cable plugs into either of the RS422 connectors.

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



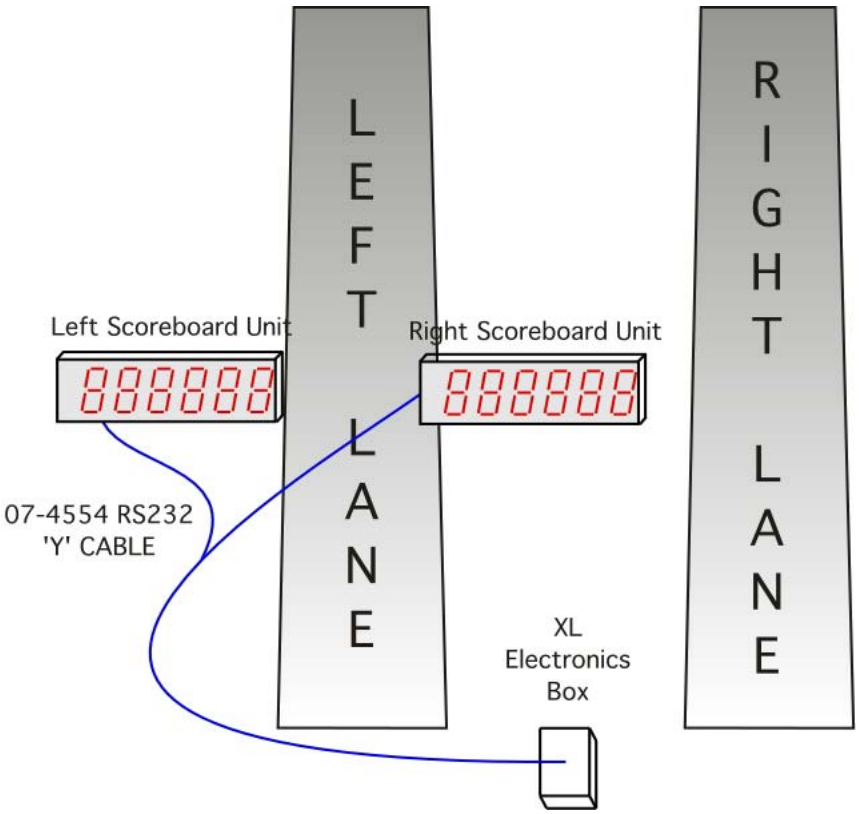
The Left and Right Single Line Dual Lane Scoreboards connect to the XL Electronics Box through a RS422 Multidrop communication link as follows:

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

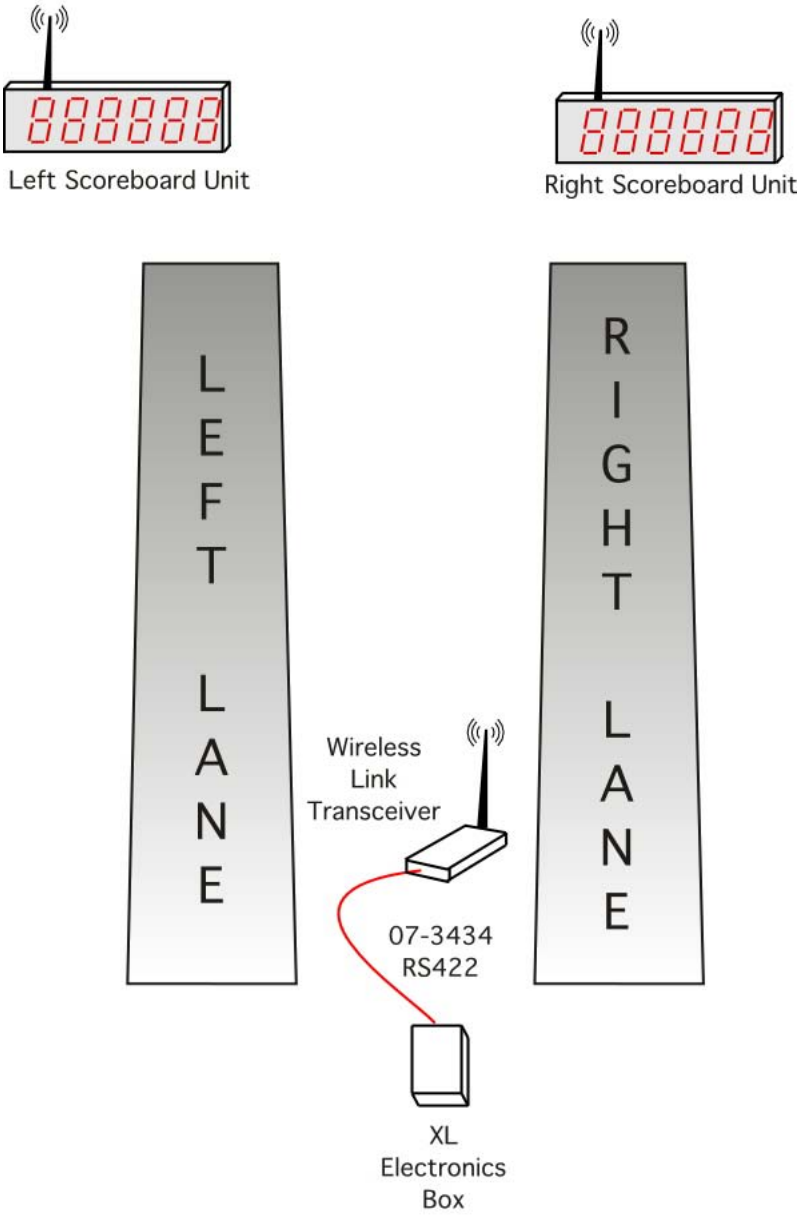


The Left and Right Single Line Dual Lane Scoreboards connect to the XL Electronics Box through a single RS232 ‘Y’ cable as follows:

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 nework

1. Connect the RS422 cable part number 07-3434 to the XL Electronics Box. Plug one end into the connector labelled RS422 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

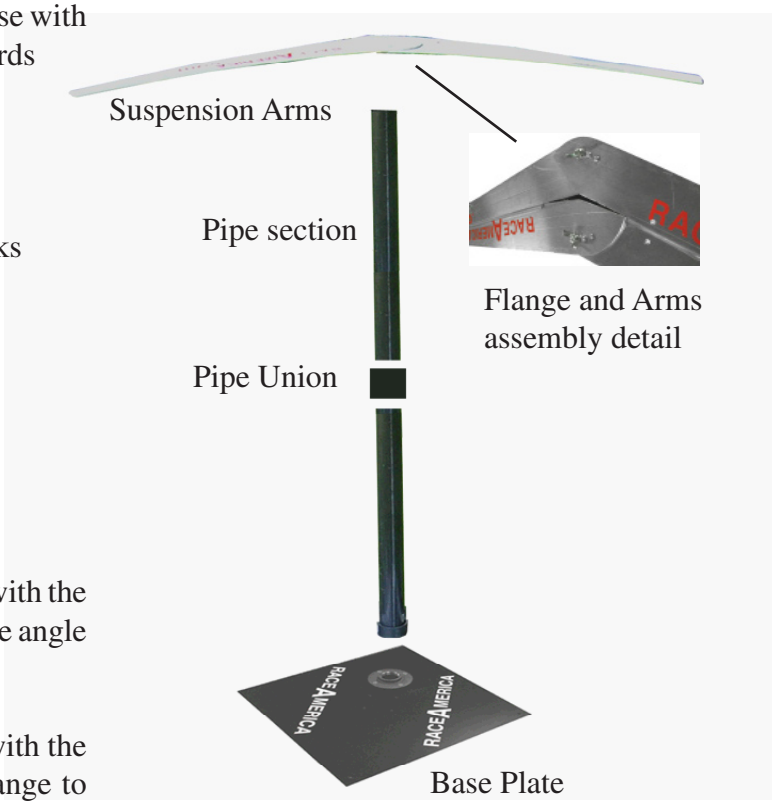
Further to minimize race program interruptions, RaceAmerica recommends some spare parts. While the Scoreboard may not shut down the racing action, a spare emitter/sensor pair and end of track cable sections should be available in the event of an unfortunate accident during a program. Related cables and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

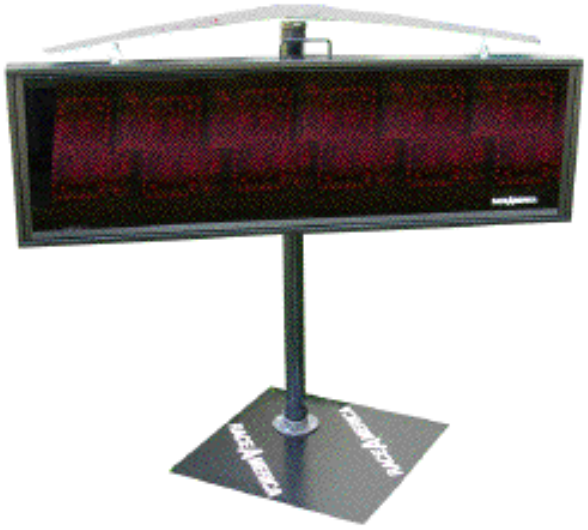
2) Connect the two pipe sections with the coupling and screw into the base plate flange to assemble the post.

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



Assembled Suspension Stand

Fig. 6 - Scoreboard Stand Assembly