# RACE**A**MERICA

INNOVATION. TECHNOLOGY. RELIABILITY.

# *ORBITS2SB*
# *Race Track Scoreboard Utility Software for PC's*

# *Owner's Manual*

Rev A.12.1

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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

The MyLaps Orbits Race Management Software provides an RMONITOR data feed available through a network or fed to a serial device connected to a PC serial port. RaceAmerica's Race Track Scoreboard Utility, Orbits2SB, is a software utility receiving the RMONITOR output directly from Orbits. The program outputs commands and data through a USB RaceAmerica Wireless Unit to wireless scoreboards on the track.

The Orbits2SB utility provides an interface to multiple configurations of RaceAmerica Race Track Scoreboards to displays current lap, laps to go, lead vehicle lap times, practice and qualifying lap times, and vehicle numbers for the top positions during a race.

This manual covers installation and configuration of the Orbits, the USB Wireless Unit, and the Orbits2SB software.

## INSTALLATION

Download the software package from the RaceAmerica website using the assigned Software License Number provided by RaceAmerica. Download the ZIP file to the desktop of your computer. Unzip the SETUP.EXE file by clicking on the ZIP file and dragging the file to the desktop.

Install the software drivers for the USB Wireless Unit by double clicking the FTDI_setup. exe file. Do not plug in the USB cable until the driver install program displays a message of install complete.

Connect the USB Wireless Unit to the PC USB port. Windows will detect the new hardware and install the drivers. A PC COM port will be assigned by Windows to teh USB Wireless Unit (i.e COM6, COM7, etc.). If the yellow and green LEDs on the USB Wireless Unit are dimly illuminated, the drivers need to be re-installed. If the red LED is brightly illuminated or blinking, the USB Wireless Unit is ready for use.

When this final step is complete, go to the Windows Control Panel --> Device Manage --> LPT and COM Ports. The new USB Wireless Unit will be displayed with a COM port assigned.

Remember this COM port number for the configuration step discussed next.

Install the Orbits2SB software by double clicking the SETUP.EXE file to start the install process and follow the onscreen prompts. After the install process completes, an icon will reside on the desktop for quick access to the Orbits2SB program.

## ORBITS CONFIGURATION

Run the Orbits software program and click on the SCOREBOARD tab and select Scoreboard Settings as shown in Figure 1.

The Scoreboard Setting screen will appear as shown in Figure 2. Note the IP ADDRESS and TCP/IP PORT number on this screen. These values will be used during the configuration of the Orbits2SB software.

Enable the RMONITOR feed by clicking on the ENABLE SCOREBOARD box at the top of the screen. Enable both the SEND QUALIFY RESULTS and SEND RACE RESULTS also. If your scoreboard displays positions, enter the number of positions on your scoreboard in the NUMBER OF LINES box. Under the SERIAL PORT area, insure the PORT is set to NONE. Click OK when done to close the Scoreboard Setting screen and save the selections.
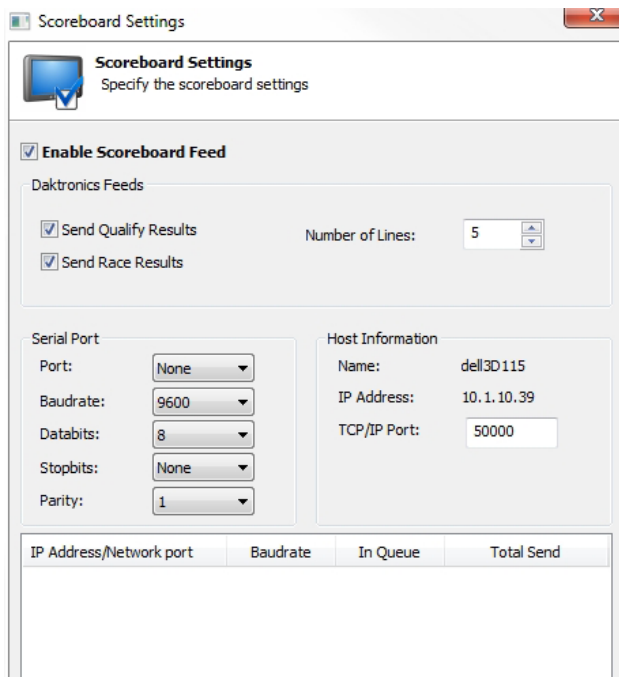


Figure 1 - Orbits Settings

Figure 2 - Orbits Scoreboard Settings

## ORBITS2SB CONFIGURATION

Locate the ORBITS2SB icon on the desktop and double click it to run the program. The control screen in Figure 3 will be displayed.

The IP ADDRESS listed earlier in the Orbits Scoreboard Settings screen must match the SERVER IP displayed in RaceAmerica's Race Track Scoreboard Utility program. Enter the TCP/IP PORT (listed on the Orbits Scoreboard Settings screen) into the SERVER PORT and click the ENABLE FEED box to connect the output from Orbits to the input of the utility program.

Next, click on the USB Wireless COM Port and a window will appear with a list of all available COM ports on the computer. Select the COM port listed previously in the Device Manager LPT and COM port screen. This will connect the output of the utility program with the USB Wireless Unit to communicate to the scoreboard.

At this point the utility is ready to use. Click the TEST button to insure communications through the USB Wireless Unit is functioning properly. The scorebaord will illuminate with 8's if communications is working. Click the CLEAR button to clear the scoreboard.

If your scoreboard displays vehicle positions, enter the number of scoreboard positions displayed in the SCOREBOARD POSITIONS box.

If your scoreboard displays laps, Orbits will feed the lap count to the utility program and be displayed in the NUMBER OF LAPS box at the start of the heat. Output from Orbits will count laps up starting from one. Setting the SHOW LAPS TO GO box will enable laps displayed on the scoreboard to be in a countdown fashion starting from the number of laps configured in Orbits for each heat and counting down to zero.

If your scoreboard displays lap times, during the racing heats, enable RACE MODE to display the lead vehicle's lap time each time it crosses the start/finish line. During Practice nd Qualifying, enable the PRACTICE/QUALIFY MODE to display the lap time for each vehicle for every lap.

Enable SAVE DATA to save an audit trail of data sent to the scoreboards. This can be used for troubleshooting if any scoreboard issues occur but should not be set for normal operation.

When the car number is three digits or more, the default is to use the rightmost two digits. Click the USE LEFT 2 DIGITS to display the leftmost 2 digits on the scoreboard.

If an alpha suffix has been added to a car number to manage drivers with same car numbers in the same race, the alpha suffix can be removed from the car number displayed on the scoreboard by clicking EXCLUDE ALPHA.

When running Westhold Race Manager software to manage lap times, click here to enable full features.

For scoreboards with separate scoreboards, one for laps and one for time, three additional functions are available to fine tune what is displayed on the time scoreboard based on information supplied by the transponder program. Enable the SEPARATE LAP/TIME DISPLAYS to enable. To show only the lead vehicle's time, enable SHOW LEADER TIME. To show the elapsed time of the race, enable SHOW RACE ELAPSED TIME. To display the time left in the race, enable SHOW TIME TO GO. All of these function are depndent on the transponder software being configured to provide the above information.

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**RaceAmerica RaceTrack Scoreboard Utility**
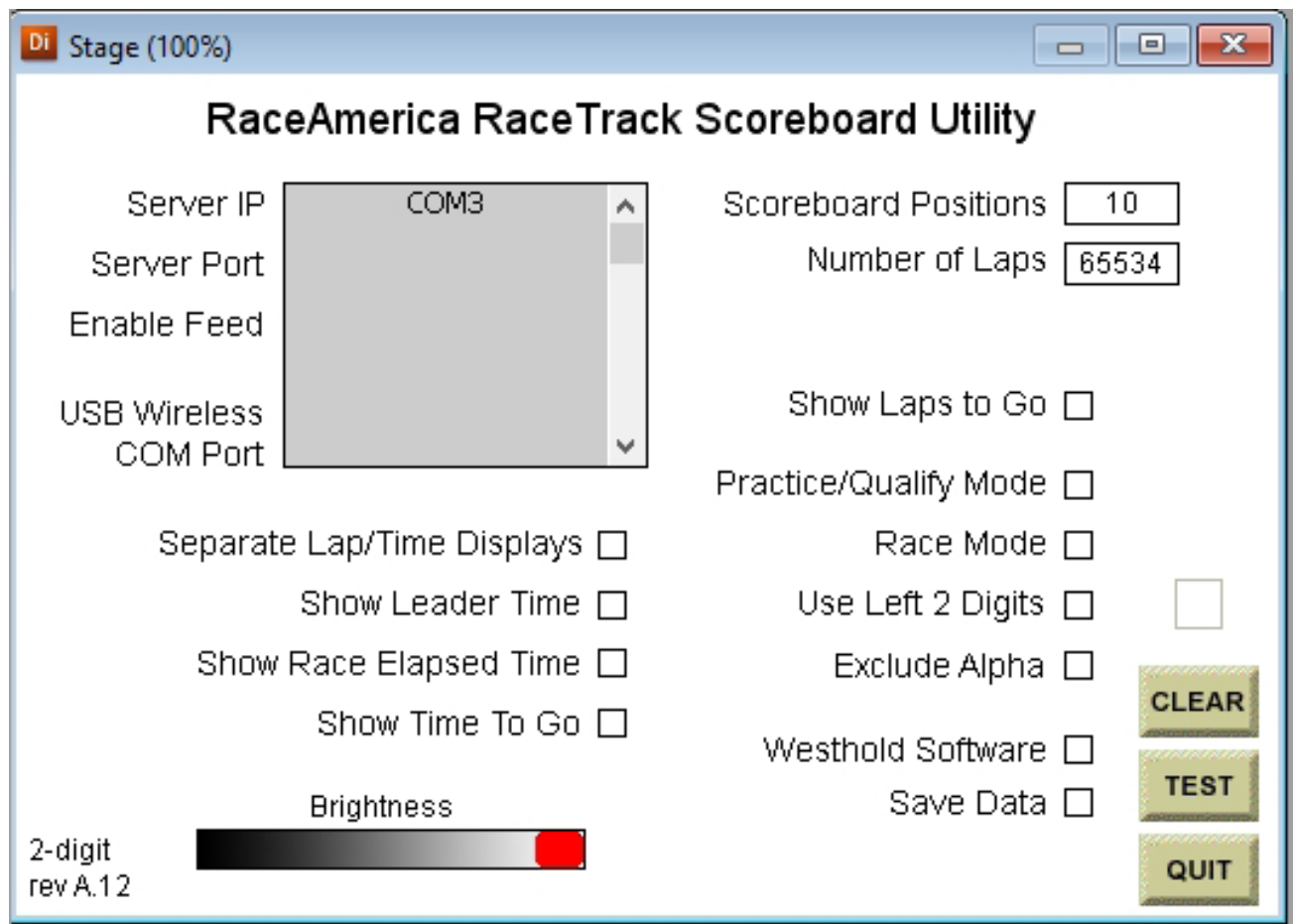
To verify Orbits and the ORBITS2SB utility are connected via the network, return to the Orbits Scoreboard Settings screen. The IPADDRESS/ NETWORK PORT of the ORBITS2SB utility program should be displayed in the lower box.

**SCOREBOARD BRIGHTNESS**

For scoreboards with adjustable brightness levels, RaceAmerica's Race Track Scoreboard Utility provides a convenient way to adjust brightness levels of the LED scoreboards in the event the brightness level if tot high for evening events.

First, click the TEST button to fill the scoreboard with 8's. Then click and hold the red button while sliding it left or right on the BRIGHTNESS bar. The scoreboard will respond with immediate brightness adjustments if the scoreboards contains the brightness level feature.

**USING TWO COMPUTERS**

The ORBITS2SB utility can also be run on a different computer than the one Orbits is running on as long as both computers are networked together. Insure the USB Wireless Unit is installed on the same computer running the ORBITS2SB utility program. Enter the SERVER IP and SERVER PORT displayed by Orbits Scoreboard Setting screen to connect the two computers' network communications together.