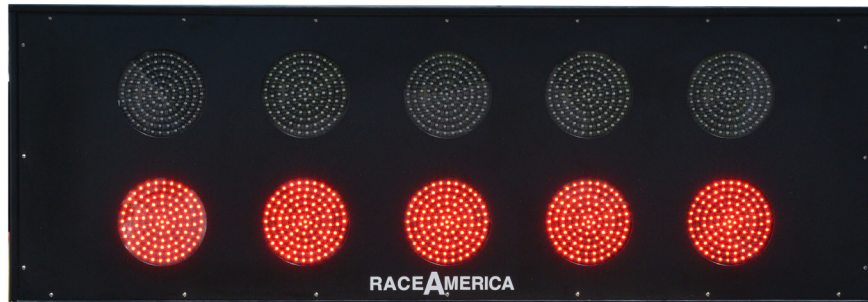




Innovation. Technology. Reliability.

Race Track Starting Light Owner's Manual

Model 6790F - Rev A



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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

The Race Track Starting Light is a microprocessor controlled FIA-style overhead starting light system using the latest technology Ultra-Bright LEDs. Model 6790F Starting Light can be connected to a 6632CSRT Start Clock to display count up or count down times.

The display is viewable at wide angles and in conditions from full sun to total darkness without adjustment.

NOTE: THIS PRODUCT USES 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 FLASHBULBS ON CAMERAS.

PACKAGE COMPONENTS

Each Race Track Starting Light package includes:

- 1 - Start Light Display (2 row by 5 lamp)
- 1 - Start/Abort/Clear Pushbutton - 25' cable
- 1 - Power Patch Cord
- 1 - Owner's Manual
- 1 - 6601D Permanent Install Kit

POWER REQUIREMENTS

The Race Track Starting Light powered by a 110VAC/230VAC AC Power Adapter. This power adapter is part of the 6601D Permanent Install Kit included with the product and provides 15VDC to the start light.

THEORY OF OPERATION

The Race Track Starting Light is a standalone Starting Lights system offering pre-programmed FIA-style starting sequences controlled by the

tower via the race track's network or from a handheld pushbutton from the gantry. The Race Track Starting Light also offers manual control of solid red, green or yellow lamps as well as flashing red, green, or yellow lamps.

The handheld pushbutton can initiate a sequence selected by the tower. The pushbutton can also abort the current running sequence and reset the starting light and clock..

TIMER SET-UP

The Race Track Starting Light is designed to mount using six 3/8in dia. mounting PEMs located on the backside of the start light..

Cabling is provided to control the start light and interconnect the track's IP network to the start light. Wiring is illustrated with and without the 6632SCRT Race Track Clock.

STEP 1 -

Familiarize yourself with the components pictured in this manual and how they interconnect. Note the larger 16-conductor connector and the smaller 4-conductor connector on each side of the enclosure. These connectors attach to the handheld pushbutton and the IP TrackNet link to the race track's IP network to link to the software running in the tower. as shown in Illustrations 1 and 2.

STEP 2 -

Power is supplied to the start light using the pn 6601D Permanent Install Kit attached to the backside of the start light as shown in Illustration 3.

POWER-ON SELF-TEST

When power is applied to the start light, the power on selftest begins testing the internal control circuitry and providing a visual display for inspection. The selftest begins by illuminating each LED color lamp one at a time then advancing to the next lamp. The selftest continues by illuminating each LED lamp adding one additional lamp until all lamps are illuminated. The selftest

then illuminates all reds, then all yellows, then all greens, then goes blank and is ready for use.

SOFTWARE OPERATION

The Start Light Control PC software can control all operations of the Starting Light and Start Clock from the tower connected to the race tracks IP network. When the software begins Figure 1 is displayed identifying the PC IP network address, input and output ports, and the mask to be used in conjunction with the PC's IP address. Edit the mask as required and click the SAVE IP MASK button.

Figure 2 displays the controls and functions available to control the Start Light and Start Clock. This is an explanation of each function.

FIA STYLE CONTROL

This set of functions are selected as the next sequence to start and begin when START SEQUENCE is pressed or the handheld pushbutton connected to the Start Light is pressed. The button will change colors to indicate the sequence is selected as the next to begin.

START RACE - Each red is illuminated from left to right until all five reds are illuminated, then all five reds go out. Once selected, the handheld pushbutton connected to the Start Light can initiate the sequence.

PRACTICE SESSION - Greens are illuminated to signify the track is open for practice.

Once selected, the handheld pushbutton connected to the Start Light can initiate the sequence.

FORMATION LAP - This sequence is the 15-minute sequence prior to the start of the formation lap. If the optional Start Clock is connected, it will begin to count down from 15:00 when this sequence begins running. This includes a double flash of reds at 10 minute to go, indication of 5-minute, 3-minute, 1-minute, and 15-seconds prior to start of the formation lap which is started with the greens illuminated for 30-seconds. Once selected, the handheld pushbutton connected to the Start Light can initiate the sequence.

FORMATION RESTART - This is the restart of an aborted FORMATION LAP. The sequence is the same as the FORMATION LAP starting at the 10-minute point. If the optional Start Clock is connected, it will begin to count down from 10:00 when this sequence begins running. Once selected, the handheld pushbutton connected to the Start Light can initiate the sequence.

RACE RESTART - This is the restart of an aborted race in progress. The sequence is the same as the FORMATION LAP starting at the 3-minute point. If the optional Start Clock is connected, it will begin to count down from 3:00 when this sequence begins running. Once selected, the handheld pushbutton connected to the Start Light can initiate the sequence.

ABORT - Selecting this button will immediately abort the current FIA-style sequence with all yellows flashing. Pressing the handheld pushbutton connected to the Start Light during a running FIA-style sequence will also abort the



Figure 1 - IP Network Screen

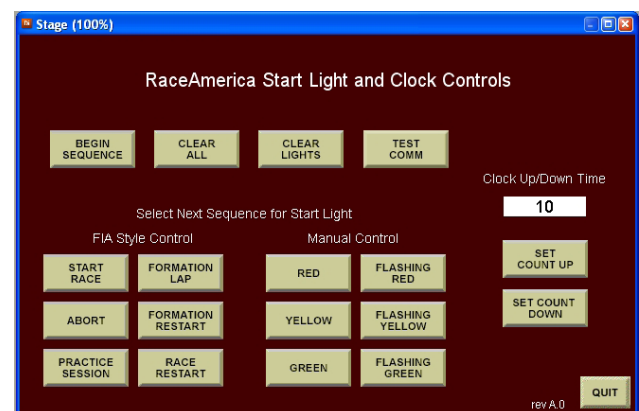


Figure 2 - Main Menu Screen

sequence and flash the yellows.

BEGIN SEQUENCE - To start a sequence, click this button or press the handheld pushbutton connected to the Start Light. The button will change to **START LITE ACTIVE** as shown in Figure 3.

CLEAR ALL - Used to clear the Start Light and running Start Clock. Pressing the handheld pushbutton connected to the Start Light during an **ABORT** sequence will also clear both the Start Light and Start Clock.

CLEAR LIGHTS - Used to clear the Start Light and leave the running Start Clock continue to count. This is convenient when operating the Start Light with the Manual Control functions while the Start Clock is counting up or counting down not related to the FIA-Style Sequences.

TEST COMM - Click this button to test the network communications between the PC in the tower and the Start Light. All reds, yellows, and greens will flash once to confirm the connection is active.

MANUAL CONTROL

This set of functions are initiated immediately when pressed. The Start Light aborts the current running process and executes the selected manual control sequence.

RED - Illuminates all reds.

YELLOW - Illuminates all yellows.

GREEN - Illuminates all greens.

FLASHING RED - Flashes all reds.

FLASHING YELLOW - Flashes all yellows.

FLASHING GREEN - Flashes all greens.

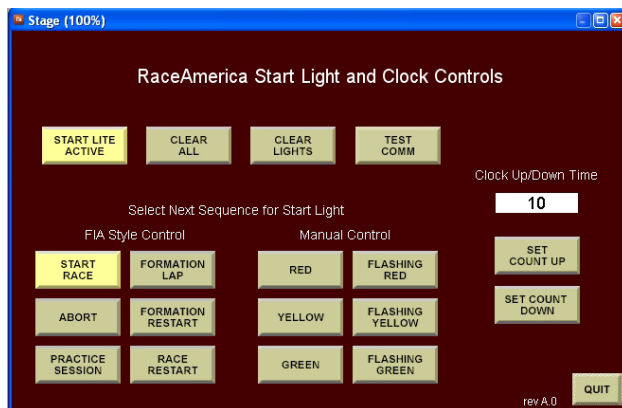


Figure 3 - Selected Sequence Screen

START CLOCK FUNCTIONS

This set of functions are used to preset the Start Clock's starting time for Count Down and the stopping time for Count Up when the Start Clock is operated using the handheld pushbutton connected to the Start Clock. These count up and count down times are not related to the Start Light's FIA-style functions.

CLOCK UP/DOWN TIME - Enter the start time (for count down) or stop time (for count up) in minutes. The Start Clock will convert the minutes to hours and minutes. The maximum time is 599 minutes which will be converted to 9 hours 59 minutes.

SET COUNT UP - To preset the count up stop time to the entered time, click this function.

SET COUNT DOWN - To preset the starting count down time to the entered time, click this function.

Once the start or stop time is set, the Start Clock is operated by the handheld pushbutton connected to the Start Clock.

COUNT DOWN OPERATION

Press and release the handheld pushbutton connected to the Start Clock to preset the clock to the selected time. The preset time is displayed. Press and release the pushbutton again to begin the count down. Press and release the pushbutton again to stop the count down. Pressing the pushbutton again resets the clock and loops back to displaying the preset count down time.

COUNT UP OPERATION

Press and release the handheld pushbutton connected to the Start Clock to preset the clock to zero. 0:00 is displayed. Press and release the pushbutton again to begin the count up. Press and release the pushbutton again to stop the count up. Pressing the pushbutton again resets the clock back to 0:00 displayed.

Illustration 1
6790F Starting Light Standalone
with connection to race track's IP network
and local Handheld Pushbutton control

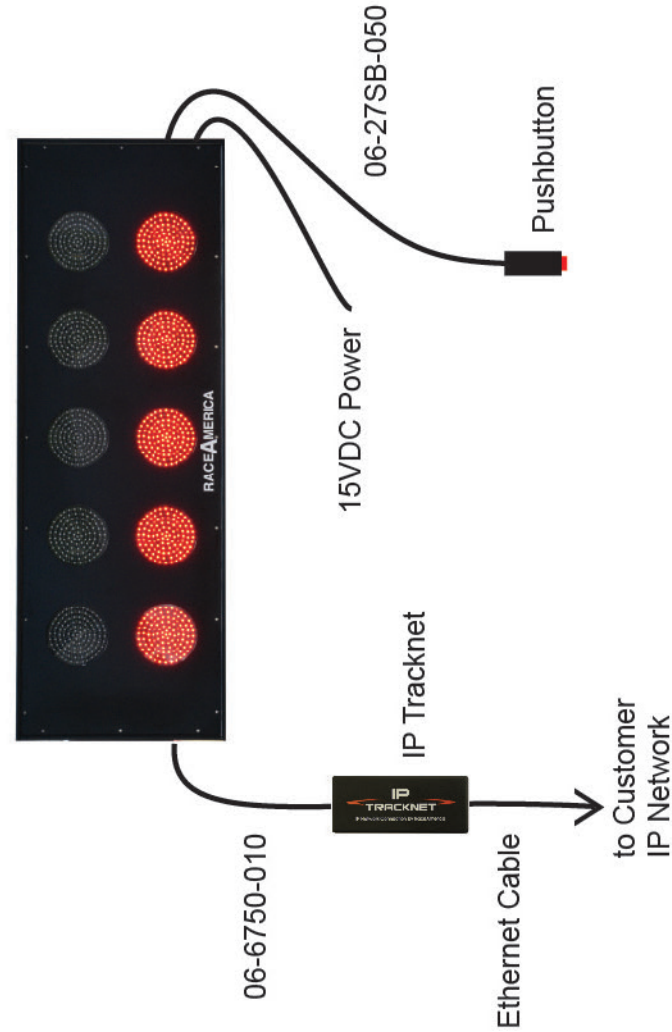


Illustration 2
6790F Starting Light with 6632SCRT Start Clock
with connection to race track's IP network
and local Handheld Pushbutton control

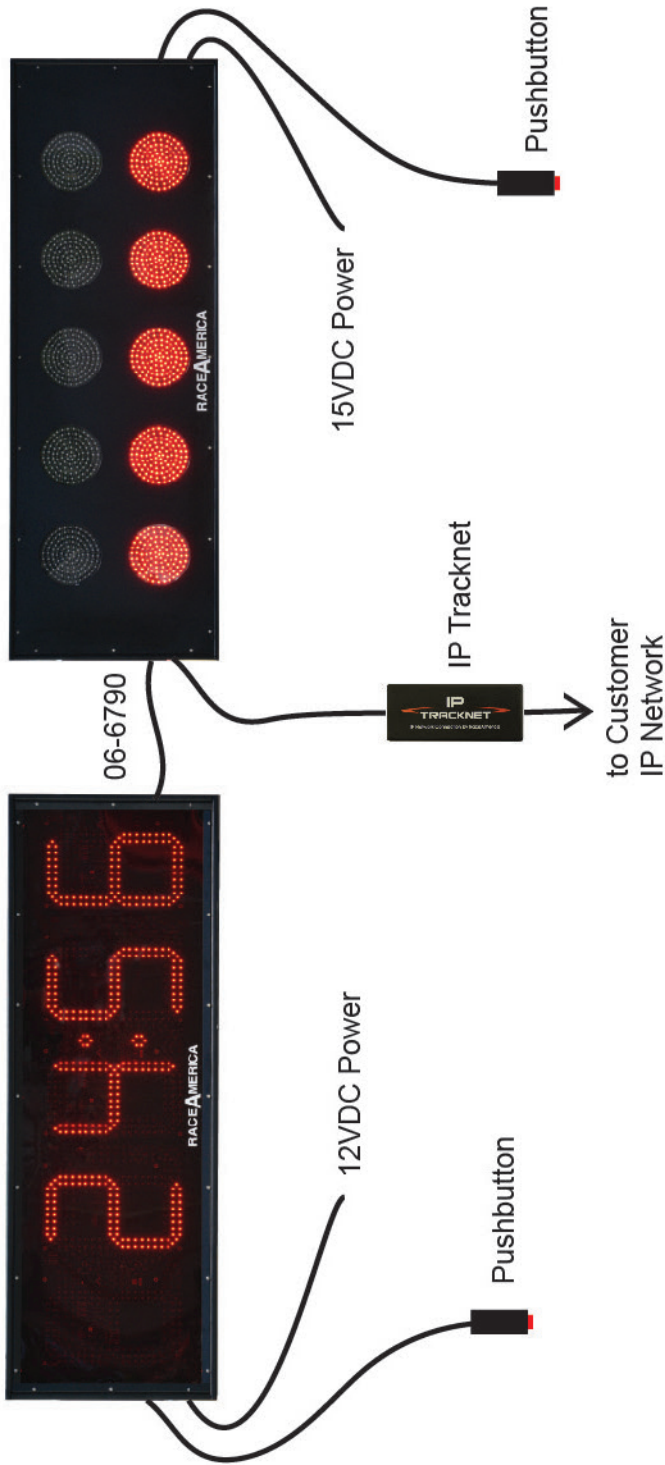
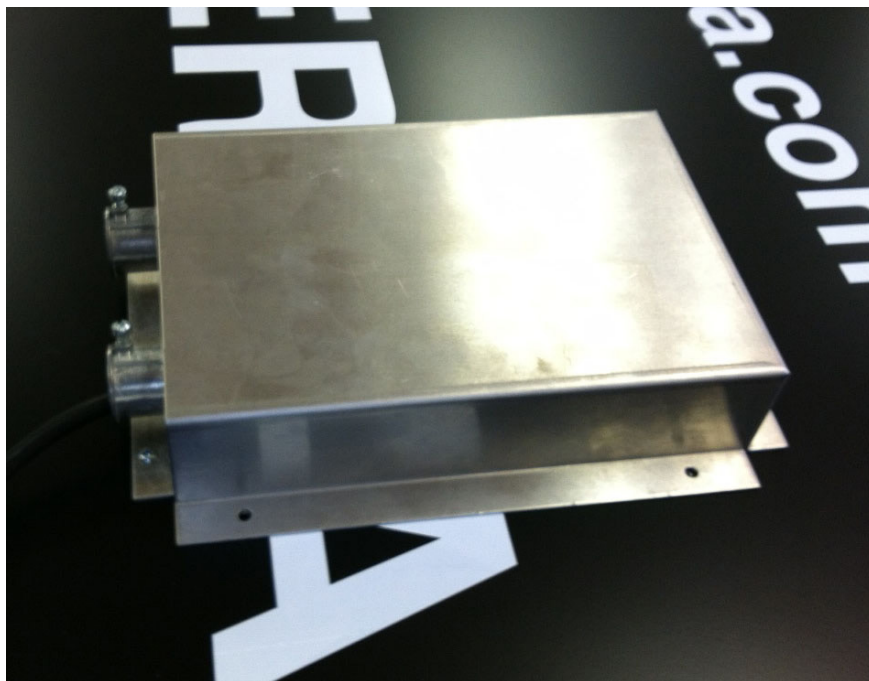


Illustration 3

6601D Permanent Install Kit



Install the lower bracket on the backside of the Start Light. Install the AC Power Adapter wired to 110VAC/230VAC power source.



Install the upper cover assembly to complete the installation.

MAINTENANCE

The Start Light requires minimal maintenance. To clean the front lens, use a non-abrasive cleaner on a soft cloth. This will keep the protective lens clean and maximize visibility and clarity of the digits. If the front lens is soiled with mud or dirt, gently remove the grit using a soft wet cloth being careful not to press when wiping to avoid scratching the polycarbonate material.

SPARE PARTS

RaceAmerica recommends a spare handheld pushbutton. Contact RaceAmerica for availability and pricing of spares items.

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.