Intelligent Track Safety Light
Owner’s Manual

Models 6751, 6750 & 6752

Rev F

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

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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.,

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 Intelligent Track Safety Light (iTSL) is a microprocessor controlled display using the latest technology Ultra-Bright LEDs configured as a segmented matrix of red, yellow, green and blue LEDs. The Safety Light communicates with a remote handheld controller or centrally controlled ‘Track Safety’ software via an internal Wireless Data Comm Link or a hard wire. Multiple colors can be displayed in each segment of the iTSL; Model 6751 has four segments and models 6750 and 6752 have eight segments. Each segment in an iTSL can flash or display any of 16 preloaded animations. The wireless iTSL models maintain two way communication with the Track Safety software in the tower to confirm the correct flag is displayed and reports Battery Level and RF Integrity. In the event of a communications breakdown with the tower or very low battery condition, the iTSL can implement a Default Panic Flag automatically pre-selected by the software. Each wireless iTSL can be operated as a live RF signal meter displaying wi-fi network RF signal levels between the tower and locations on the track.

The iTSL is viewable up to 20 degrees in conditions from full sun to total darkness with an adjustable brightness level controlled by the PC software.

Up to 16 safety lights can be controlled from one PC running ‘Track Safety’ software. Up to 16 wireless iTSLs will operate grouped or independently using the same network Optimizer Code.

For ease of installation and placement, iTSLs can be grouped together and operate as one unit displaying the same flag at the same time for areas of the track requiring multiple safety lights.

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 CAMERA FLASHES.

PACKAGE COMPONENTS

Each package includes:

1 - Intelligent Track Safety Light (675xAy)
2 - Mounting screws 10-32 x 3/4”
1 - Antenna (wireless models)
1 - Owner’s Manual

AVAILABLE OPTIONS

3125A Track Safety control software
3125B Software to allow MyLaps/Orbits control
3125C Track Safety for Karting software
3125D Option to allow smart phone interface
4591A High gain antenna for increased range
6758A Rechargeable Battery Pack
6759A Stand with internal Battery Pack
5897A Battery Charger
6757A AC adapter for 6750/6751 12VDC/2A
6757B AC adapter for 6752 12VDC/3A

SET-UP

The iTSL can be mounted in a vertical or horizontal orientation using the 10-32 PEMs located on the back panel. Each iTSL includes connectors on the back panel for external battery power. The dual battery power inputs make the iTSL hot swappable without losing power. iTSLs can be operated with two battery packs for extended time between charges.

It is strongly suggested the system be set up and operational familiarity gained prior to actual use. This can be done virtually anywhere.
Figure 1 - Track Safety Lights with PC, Smart Phone and Wireless Data Comm Link
Figure 2 - Track Safety Lights with PC, Smart Phone and Hard wire fiber network with RS422 data drops
DISPLAY OPERATION

When power is applied, the Safety Lights begin a short power-up self-test. One LED segment will ‘walk’ through all LED segments of the iTSL. Each color (blue, green, red, yellow) will in turn ‘walk’ through the iTSL. Next, a color will extend from one segment to all segments, cycling through all four colors. The reserve battery power will display next as a color bar of red, yellow and green. A full display of color is 100% charge available, reds and yellows only is approximately 50% reserve available, reds only is approximately 25% reserve battery power available. Battery level is cleared and the iTSL’s ID is displayed as a color and number of illuminated segments. Spare iTSLs IDs are identified by two or more segments with different colors.

At this point, the iTSL is ready to communicate with the tower and the Track Safety PC software or with smart phones.

MAINTENANCE

The Track Safety Light requires minimal maintenance. Keeping the protective lens clean will maximize visibility and clarity of the flag. To clean the polycarbonate lens, use a non-abrasive cleaner on a soft cloth. If the 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 lens material.

To extend battery life, maintain a minimum battery level of 25% reserve power and stored fully charged. Do not attempt to discharge the battery packs as this will result in battery failure.
## SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model Numbers**</th>
<th>6751</th>
<th>6750</th>
<th>6752</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of LEDs</td>
<td>384</td>
<td>768</td>
<td>1536</td>
</tr>
<tr>
<td>Segments/LED Colors</td>
<td>4 segment/4 color</td>
<td>------8 segment/4 color -------</td>
<td></td>
</tr>
<tr>
<td>Dimensions:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LED Display Panel</td>
<td>13in x 5.1in</td>
<td>26in x 5.1in</td>
<td>26in x 10.2in</td>
</tr>
<tr>
<td></td>
<td>33cm x 13cm</td>
<td>66cm x 13cm</td>
<td>66cm x 26cm</td>
</tr>
<tr>
<td>Enclosure</td>
<td>15.25in x 9.25in</td>
<td>28in x 9.25in</td>
<td>28in x 16in</td>
</tr>
<tr>
<td></td>
<td>39cm x 23.5cm</td>
<td>71cm x 23.5cm</td>
<td>71cm x 41cm</td>
</tr>
<tr>
<td>Mounting</td>
<td>----------------------10-32 PEM nuts on rear panel----------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-------------------Horizontal and Vertical orientation-------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td>-------------------Sealed Powder Coated Aluminum-------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Lens</td>
<td>-------------------Clear Polycarbonate-------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical Viewing on Track</td>
<td>up to 500ft</td>
<td>up to 1,000ft</td>
<td>up to 2,000ft</td>
</tr>
<tr>
<td></td>
<td>up to 153m</td>
<td>up to 305m</td>
<td>up to 610m</td>
</tr>
<tr>
<td>Data Transmission</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wireless</td>
<td>-------------------Encoded Multi-Channel-------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wired</td>
<td>---Ethernet or RS485 Drops from fiber network or equivalent------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery Life per Charge</td>
<td>20 hours</td>
<td>10 hours</td>
<td>5 hours</td>
</tr>
<tr>
<td></td>
<td>All segments continuously illuminated at full brightness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Models available for wireless or hard wire installations:
- 675XA - Hard wired
- 675XAW - 900 Mhz
- 675XAX - 2.4 Ghz