

# RACE AMERICA

INNOVATION. TECHNOLOGY. RELIABILITY.

## *Model 6728AW/AZ*

### *Wireless Hand Controller*

### *for Track Safety Lights*



## *Owner's Manual*

Rev C

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## PRODUCT INFORMATION LINKS

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RaceAmerica Website	<a href="http://www.raceamerica.com">www.raceamerica.com</a>
RaceAmerica Online Store	<a href="http://store.raceamerica.com">store.raceamerica.com</a>
Raceamerica Online Forum	<a href="http://www.raceamerica.com/forum">www.raceamerica.com/forum</a>
Product Warranty	<a href="http://www.raceamerica.com/legal.html">www.raceamerica.com/legal.html</a>
Service & Repairs	<a href="http://www.raceamerica.com/service.html">www.raceamerica.com/service.html</a>
Technical Assistance	<a href="http://www.raceamerica.com/techcall.html">www.raceamerica.com/techcall.html</a>
Owner's Manuals	<a href="http://www.raceamerica.com/prodpdf.html">www.raceamerica.com/prodpdf.html</a>
Mounting Diagrams	<a href="http://www.raceamerica.com/mountpdf.html">www.raceamerica.com/mountpdf.html</a>
Product Catalog	<a href="http://www.raceamerica.com/catalog.html">www.raceamerica.com/catalog.html</a>

## THEORY OF OPERATION

Model 6728 Wireless Hand Controller is designed to send a set of preconfigured flag patterns to RaceAmerica Track Safety Lights positioned around a race track. Up to 16 Track Safety Lights can operate from a single hand controller. Multiple hand controllers can be used at the same race event with the understanding each hand controller operates independently of the other. RaceAmerica Track Safety Lights can be controlled from the standard TrackSafety PC software and from this hand controller but not at the same time.

To maximize the communications between hand controller and safety light, the Wireless Hand Controller uses a Multiple Transmission Succession method to overcome random RF interference. This method greatly increases range and performance of the hand controller. Elevated positions around the track are ideal from maximizing the overall range of the hand controller.

Model 6728 Wireless Hand Controller is a sealed unit designed to operate outdoors in varying weather conditions. All pushbuttons are sealed to prevent moisture and dirt from effecting operation.



Figure 1 - Antenna for handheld operation

A metal ring located at the bottom of the hand controller can be used to attach a lanyard to hand the hand controller from your neck.

## PACKAGE CONTENTS

- 1 - 6728 Wireless Hand Controller  
AW suffix - 900MHz  
AZ suffix - 2.4GHz
- 1 - USB A to USB micro charge cable
- 1 - High gain rubber duckie antenna
- 1 - Owners Manual

## PRODUCT SPECIFICATIONS

The following listing provides the designed performance specifications for the 6728 Wireless Hand Controller. Range and battery life are dependent upon elevation, distance, surrounding building structures and frequency of use during a race event:

Range	2000ft / 600m
Battery Life	up to 185 hours per charge
Recharge	under 2 hours via USB
Battery Level	shown on safety lights
	green 100% to 20%
	yellow 20% to 10%
	red less than 10%
Dimming	three brightness levels:
	high 100%
	medium 50%
	low 13%



Figure 2 - Antenna for table top operation

## PRODUCT SETUP

Install the articulating Rubber Duckie style antenna onto the hand controller. Antenna position for handheld operation is shown in Figure 1. Antenna position for operation from a flat surface is shown in Figure 2.

*NOTE: Best performance and range is accomplished when operated outside in open areas away from metal objects.*

When first received, connect the USB cable to the charge port then connect to any computer USB port or USB charger. This hand controller will automatically power down to conserve battery power when not in use. It is suggested to charge the hand controller before each new race event.

The Wireless Hand Controller will be fully charged in under 2 hours and ready for use.

*NOTE: It is suggested to charge the hand controller once a week when not in use for extended timeframes to maximize the Lithium Ion battery lifetime.*

## HAND CONTROLLER OPERATION

### Flashing Colors:

A set of preconfigured flashing colors (top row of the hand controller buttons) can be sent to the safety lights by press and release of the green, yellow or red buttons. Safety lights will display the selected color.

### Solid Colors:

Each of the flashing colors above can also be solid non-flashing. To select the solid color, press and continue to hold the BLACK button, then press and release the desired color (green, yellow or red). Then release the BLACK button to send to the safety lights. The safety lights will display the selected solid color.

### Specialty Flags:

Buttons located on either side of the BLACK button are preconfigured with a checkered flag pattern and a white flag. Press and release either of these buttons to display the flag pattern on the safety lights.

### Safety Light Brightness:

The brightness level of the safety lights can be changed using the hand controller. There are three levels of brightness available for evening and night race events. To change the brightness level, press and continue to hold the BLACK button, then press and release the button to the left of the BLACK button (normally preconfigured as the checkered flag), then release the BLACK button. White will be displayed in the lower half of each safety light at the current brightness level.

Brightness level will change from High to Medium, or Medium to Low, or Low to High each time this button sequence is performed. The white display will demonstrate the current active level of safety light brightness.

### Hand Controller Battery Level:

The remaining battery capacity of the Lithium Ion battery in the hand controller can be displayed on the safety lights at any time. To display battery level, press and continue to hold the BLACK button, then press and release the button to the right of the BLACK button (normally preconfigured as a white flag), then release the BLACK button. The upper half of the safety lights will display the amount of charge capacity of the hand controller.

Battery level is indicated on the safety lights as follows:

GREEN	100% to 20%
YELLOW	20% to 10%
RED	10% to 0%

## MAINTENANCE & CHARGING

The 6728 Wireless Hand Controller does not require any maintenance other than charging. When not being charged, install the USB port dust cover as shown in Figure 5.

To insure uninterrupted operation on raceday, it is suggested to charge the hand controller before the start of the raceday. Allow 2 hours to fully charge the hand controller, then disconnect the charger. Do not leave the hand controller charging for extended periods of time. A full charge will provide up to 185 hours of operation. When the hand controller battery level indicated on the safety lights turns yellow, no need to panic. There is still plenty of charge to run a full day event.

An external USB power bank can be connected to the USB charge port to provide additional battery capacity. This is a good solution when there is no time to charge the hand controller before an event.

## SPARE PARTS

Further to minimize race program interruptions, RaceAmerica recommends some spare parts. A spare antenna should be available in the event of an unfortunate accident during a race event. Contact RaceAmerica for availability and pricing of spares items.



Figure 3 - USB cable installed for charging



Figure 4 - USB charge port



Figure 5 - USB dust cover installed