

Helpful Hints (for Barrel Racing, Pole Bending and other Speed Events)

Tripod Height

Extend all leg sections fully and raise the center tube a bit as well. The electric eye needs to be well up into the body of every horse.

Alignment

When setting up the electric eyes in the arena, *ignore the person in the announcer's booth* who is telling you "it's working" until *after* you have completed the following steps. Similarly, don't carry the console with you and use it to help you align the eyes until *after* the following steps are performed:

- 1) Place the eyes in the arena at the desired locations.
- 2) Close one of your eyes and sight down the line on the top of the electric eye and down the crack on the side. Try to point the electric eye at that little blur (the other eye) in the distance. Just ten or fifteen seconds of trying per side is plenty. Repeat this for both eyes.
- 3) Now you can break the beam and have the person in the announcer's booth tell you whether the eyes are working or not.

Sunlight Issues

When the electric eyes are setup with a very long distance between them, a low, late afternoon sun shining directly into the face of the photo-receiver (the electric eye with the antenna) can cause problems. A simple remedy is to swap the electric eyes with each other so that the eye with the antenna has its back to the sun.

Care

The electric eyes are not waterproof. If you plan to run in the rain, slip a thin sandwich bag over each electric eye. Snap a rubber band over the bag to hold the bag in place and to keep it taught over the face of the eye where the beam shoots through.

When you arrive home, remove the wet equipment from the carrying case, remove batteries and leave the battery compartment cover off each unit. Allow the equipment to dry out thoroughly *in a heated or air conditioned* environment for several days.

Do not remove the antennas. Even though the antenna can be removed, doing so can cause problems.

Using Two Timers at Once (live backup)

Two complete timers can be used at the same time to provide back-up for each other. It is very important to set them up exactly as described below, otherwise, you will have problems. Also note that the two photo-receivers (the electric eyes with the antenna) must operate on different channels. The channel number is a single digit, between 0 and 3, shown inside the battery compartment of the electric eye.

- 1) Set up one system like you normally would when using just one timer.
- 2) Take the eyes from the second system and stack them directly on top of the same type of eye (i.e., the two without antennas stack on top of each other, the two with antennas stack on top of each other). Snap a rubber band around the eyes to hold them square on top of each other. The eye with the antenna will have to stair-step back an inch or so because of the antenna.
- 3) Turn on both eyes with antennas, but *turn on only one of the eyes without antennas*. This is very important!
- 4) Turn on both consoles in the announcer's booth. Separate the two consoles by a foot or so.

Times from the two systems will generally be very close to each other, but not necessarily identical. A thousandth of a second is typically less than ¼ inch of movement and the electric eyes are measuring two different spots on the horse since they are separated by about an inch when stacked.

Troubleshooting (for Barrel Racing, Pole Bending and other Speed Events)

False/Unexpected Beam Triggers

If the timer occasionally starts or stops on its own without something breaking the beam, this is typically an optical issue (i.e., a problem affecting the light beam itself). This problem is most often remedied by carefully following the steps under "Alignment" on the previous page. Though less likely, the sun could also cause these symptoms – see "Sunlight Issues" on the previous page. If the problem persists, move the eyes closer to each other and repeat the alignment steps.

Timer Starts Reliably, but Doesn't Always Stop

This symptom is caused by one of two issues: First, make sure the tripods are fully extended as detailed in the "Tripod Height" section on the previous page. If that does not solve the problem, then this symptom can be caused by a wireless microphone used in announcer's booth. Switch to a wired mic in the announcer's booth or make sure the announcer does not key the microphone until *after* the rider passes through the finish beam.

Timer Randomly Misses Starts and Stops

This symptom indicates the radio signal is not reliably getting from the electric eye in the arena to the timer console in the announcer's booth. Here are some common items to consider:

- Ensure the line-of-sight (the straight line) between the electric eye with the antenna and the timer console is not obstructed by any large metal objects. Typical problem sources include metal siding on the announcer's booth, chain link fence, a protective metal cover over the electric eye, etc.
- Verify line-of-sight from down at the antenna's level – not just from your standing eye level. Often the console will be down below a window ledge and even though you can clearly see the electric eye, the timer console cannot.
- Position the timer console at least 2-3 feet from major electronic equipment such as computers, monitors, and the PA system.

Timer Never Starts or Stops from the Electric Eyes

This can occur when the timer console loses its settings and no longer knows which electric eyes to listen for. Follow these steps to program the eyes back into the timer console:

- 1) Set up the electric eyes and the timer console as normal.
- 2) On the timer console, press the SETUP button to access the timer Setup options.
- 3) Press NEXT CHOICE until "Set Eye#1 ID" is displayed.
- 4) When you are ready to break the beam, press ENTER. The timer will display "Break Eye Beam Now."
- 5) Walk through the electric eye beam. As soon as the beam is broken, the timer displays the ID code for the eye, then restores the normal barrel racing display after a few seconds.

If the "Break Eye Beam Now" message remains on the display, the timer did not receive a transmission from the electric eye. Make sure the eyes are on and aligned, then walk through the beam again. If the timer still fails to receive an ID code, move the eyes closer to each other and closer to the timer console (try less than 100 feet).