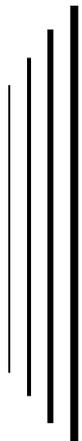


**FarmTek**

Sport Timing Specialists



# ***Polaris***

Fast CAT Timer

Operating  
Instructions

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# POLARIS TIMER CONSOLE

## **Batteries**

The *Polaris* timer console is powered by four AA alkaline batteries. The timer runs 50 to 60 hours on a new set of batteries. Always turn the timer off before changing the batteries and always replace all four batteries at the same time – do not mix old and new batteries.

To check the battery level, follow these steps:

- 1) Press SETUP to access setup functions.
- 2) Press NEXT CHOICE until Check Battery is displayed (just one or two presses).
- 3) Press ENTER to show remaining battery life.
- 4) Press SETUP to return to normal operation.

Keep in mind that when the console is first turned on after being off for a while (e.g., overnight), the reported battery level is artificially high for the first half-hour or so of use.

When storing the timer for an extended period of time, always remove the batteries.

## **Low Battery Warning**

A low battery icon is flashed in the upper right corner of the **Status Display** when about 2 hours of console battery life are left. Note that the battery icon is also displayed whenever an electric eye has a low battery. Check the console's battery level as described to see whether the console or the electric eyes are the reason the icon is flashing.

## **Power On/Off**

Turn the *Polaris* timer on and off using the slide switch located at the upper right corner of the timer console.

## **Connections**

The **Input** jack is for connection of input devices such as an optional bar code reader or numeric keypad. *Do not plug an AC adapter from an older model timer into the Input jack on this timer – it can cause serious damage!*

The **Output** jack is for connection of output devices such as an optional scoreboard, printer or computer interface cable.

The **Horn** jack provides audio output of the horn sound to a PA system and control of the optional external horn.

## Light Curtain

## LIGHT CURTAIN (1)

### Battery

The light curtain for Fast CAT operates over 20 hours from a 9 volt alkaline battery. To install a battery, remove the two thumbscrews from the bottom of the light curtain and pull out the bottom cover. Install a new battery as labeled (small "+" terminal towards the outside edge of the light curtain). Lay the battery into the holder, then push the battery in slightly and then down to latch the battery into place.

To remove the battery, push in slightly, then up to pop the battery out of the holder.

### Power On/Off

Push the power button at the bottom of the unit to turn on power. The red and green lights on the rear of the curtain alternately flash a few times upon power on. Push the button again to turn off power. Once the curtain is on, if either light is steadily flashing, the battery is low and should be replaced soon.

### Alignment

The light curtain should be as vertical as possible and squarely facing the photo-transmitter across the lane.

Aim the photo-transmitter at the middle of the light curtain by sighting down either line on top of the unit (left to right alignment), and by sighting down the crack on the side of the unit (up and down alignment). A green light on the light curtain indicates a good alignment, a red light indicates a bad alignment or broken beam.

### Care

The light curtains are water resistant, however, after using them in the rain, wipe off excess water before laying them in the carrying case or removing the batteries. Once home, remove the light curtains from the carrying case and let them sit out a few days in an air conditioned or heated environment.

## Photo-Transmitter

### Battery

The photo-transmitter operates over 70 hours from a 9 volt alkaline battery. The **Power** lamp on the unit glows steadily while the battery is good and flashes when the battery is low.

The photo-transmitter operates at least two hours after the *first* indication of low battery. **Note:** The two hour period is from the *first time* the low battery light begins flashing. If a unit with a low battery is turned off and then later turned back on, the lamp may glow steadily for some time before it starts flashing again. This does not mean there are two more hours of operation remaining at this point.

Once the **Power** lamp begins flashing, it is simplest to just replace the battery during the next break in your event – don't worry about trying to use the last few hours of the battery.

When storing the photo-transmitter for an extended period of time, always remove the batteries.

### Care

The photo-transmitter is not waterproof. If you plan to run in the rain, slip a thin sandwich bag over the unit. 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 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.

Each light curtain is permanently programmed with a unique electronic identification code. The ID code is transmitted whenever the beam is broken. For a set of light curtains to work with a particular timer console, the timer console must know the ID code of the light curtains being used.

If your timer ever loses its settings, or if you use a different light curtain or a different timer console than usual, you must have the timer console learn the ID code of the light curtain(s):

**Learning a New ID Code**

1) Set up the photo-transmitter and light curtain with at least 15 feet between them. *Make sure no other light curtains are on or could accidentally transmit while programming in the intended light curtain.*

- 2) On the timer console, press the SETUP button to access the timer Setup options.
- 3) Press NEXT CHOICE until you see the appropriate "Set ID" message for the light curtain (electric eye) you are programming (e.g., Set Eye #1 ID, Set Eye #2 ID, etc.).
- 4) When you are ready to break the beam, press ENTER. The timer will tell you to "break beam now."
- 5) Walk through the selected light curtain. As soon as the beam is broken, the timer momentarily displays the ID code for the curtain.

That's it! Repeat the procedure for other light curtains as needed.

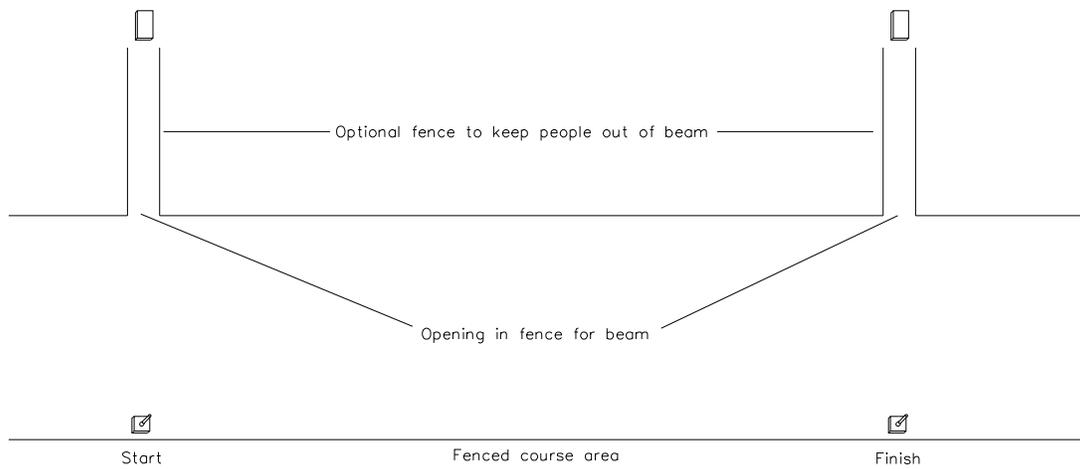
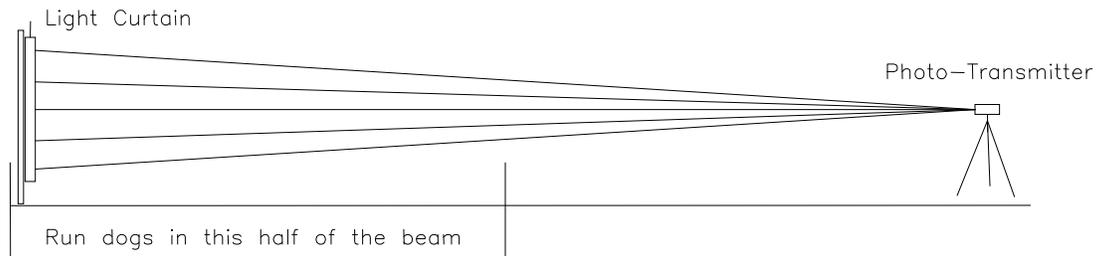
# OPERATION (1)

The Fast CAT light curtain provides a vertical curtain of light across the coursing track. The fences that border the track should keep the dog in just half of the beam as shown in the illustrations below.

The light curtain should be mounted at a height such that the lowest beam is broken by the body of the shortest dogs that are running.

The curtain can be mounted to a pole, T-post, etc., in a variety of ways including tie-wraps, 1/4-20 screws, or our adjustable Quick-Mounts (not included).

The tripod for the Photo-Transmitter should be set as low as possible. If the tripod does not allow the bottom beam to be low enough, it can be attached to a shorter table-pod or similar camera accessory.



Fast CAT is timed using the “Sprint/General” event in the Polaris timer console. The event is configured to start with curtain #1 and stop with curtain #2.

With the standard antenna on the light curtain, radio range from either curtain to the Polaris console is typically 250-350 feet. If starts or stops are sometimes missed from the more distant light curtain, moving the Polaris console in between the start and finish lines (e.g., half way down the track) reduces the radio range to as little 150 feet each way. External antennas are available to provide 700-900 feet of range if needed. Contact us for more information.

- 1) Position and mount the photo-transmitters and light curtains as shown on the previous page.
- 2) Turn ON each sensor. The power indicator on each unit should glow steadily. If the indicator is

blinking, the battery is low and should be replaced.

- 3) Align the photo-transmitter by sighting down either line on its top (left to right alignment), and sighting down the crack on its side (up and down alignment). Point the photo-transmitter at the middle of the light curtain.
- 4) Light curtain alignment is not critical, but it should be mounted as vertical as possible and facing the photo-transmitter as squarely as possible.
- 5) Turn on the timer console at the timer’s table. The power switch is located at the upper right corner of the timer.
- 6) Walk through each beam to force the curtains to send a message to the timer console. This makes the timer console update its alignment indicators (see below).

**Checking Light Curtain Alignment**

The bottom right corner of the Status display shows the alignment status of the light curtains. When the sensors are aligned, its number is displayed (1 or 2). If not aligned, or if the beam is broken, “x” is shown.

Alignment	Display Shows
Aligned	Eye #1 ≡
Curtain 2 not aligned (or beam broken)	Eye #1 ✕

**Important!** When setting up the sensors, always take time to align them as outlined above – *even if the timer indicates the sensors are aligned*. This ensures a strong alignment instead of a possibly marginal alignment.

**Timer Operation**

- 1) When the beam across the start line is broken, the timer automatically begins timing from zero – there is no need to reset the timer. Additional breaks of the start beam are ignored once the timer is running.

- 2) When the beam across the finish line is broken, the timer stops timing and shows the final time. Additional breaks of the finish beam are ignored until the timer is started again by the start beam. That’s it – the timer is ready for the next run.

**Manual Start/Stop**

The START/STOP button starts and stops the timer just as if the light curtain had been broken.

**Accidental Beam Break**

If the timer stops accidentally stops during the middle of a run, *the dog can still be accurately timed*. Pressing the RESTART button resumes timing as if the timer had never been stopped. As long as RESTART is pressed before the run is completed, the time is not lost. (Note: The Polaris timer console beeps whenever the beam is broken to alert you if the timer happens to stop during the middle of a run.)

**Locking Out the Light Curtains**

The light curtains can be temporarily disabled by pressing the EYES OFF button. "Off" is flashed over the alignment display while the curtains are disabled. To re-enable the light curtains, press the EYES ON button.

**Previous Time Recall**

Use the PREV and NEXT keys to scan back and forth through previous times. The previous time display is removed after about ten seconds, or by pressing any other key. You may view a previous time even while the timer is running.

**Additional Start/Stop Options**

In addition to starting the timer with Curtain #1 and stopping the timer with Curtain #2, the timer provides several other "electric eye" combinations as shown to the right.

**To select a different electric eye combination:**

- 1) Press SETUP to access Setup options.
- 2) Press NEXT CHOICE once so Set Eye Usage is displayed, then press ENTER.
- 3) Press NEXT CHOICE to scan through the available eye combinations as shown to the right. Press ENTER when the desired eye combination is displayed.

Note: An asterisk (\*) is displayed next to the currently active eye combination.

Timer Display	Timer Action
Start #1, Stop #2	Start with Eye #1, Stop with Eye #2
Start #2, Stop #1	Start with Eye #2, Stop with Eye #1
Strt1/2 Stop2/1	Start with either eye, stop with the opposite eye
Any Start/Stop	Start with either eye, stop with either eye
Breakout Timer	Time difference between steer and rider for roping.
Speed Gate	Speed between Eye #1 and Eye #2
Winning Lane	Start with either eye, stop with the opposite eye, indicate which eye started the timer (winning lane)

## Split Times

## OPERATION (4)

In addition to the various combinations of Eye #1 and Eye #2 for starting and stopping the timer detailed on the previous page, the timer can also work with up to two more eyes for providing split times. As split times occur, they are displayed on the bottom display while the main time display continues to run. If a scoreboard is connected, the split time is displayed for an interval you can specify before the display returns to showing the running time.

The split-time eyes are designated Eye #3 and Eye #4. Options for controlling split time functions are in the Split Times menu. To access the Split Times menu, follow these steps:

- 1) Press SETUP to access Setup options.
- 2) Press PREV CHOICE until Split Times is displayed, then press ENTER.

You can then scroll through the Split Times options by pressing the NEXT CHOICE key:

Timer Display	Function
Set Eye #3 ID	Program Eye #3 into timer
Set Eye #4 ID	Program Eye #4 into timer
Print Times ON/OFF	Controls whether split times are printed on the printer
Save Times ON/OFF	Controls whether split times are saved in memory
1 or 1+ Splits/Eye	Allow just one or allow multiple splits per eye per run
Hold for 1/3/5/10s	Choose the amount of time a split time is displayed on the scoreboard

## **FCC and Industry Canada Information**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by one or more of the following measures: (1) Reorient or relocate the receiving antenna. (2) Increase the separation between the equipment and the receiver. (3) Consult the dealer or radio/TV technician for help.

**CAUTION:** Changes made or modifications not expressly approved by the party responsible for FCC compliance of this equipment could void the user's authority to operate the equipment.

### **Industry Canada**

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communications.

This radio transmitter (IC: 3845A-MI043) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

¼ wave whip, max gain 2 dBi, 50 ohm

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

### **d'Industrie Canada**

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent émetteur radio (IC: 3845A-MI043) de modèle s'il fait partie du matériel de catégorie I) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

¼ whip d'onde, le gain max 2 dBi, 50 ohm

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



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