Dual Lane
Race Timer

User Guide

Dual Lane Race Timer   Reset

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Cautionary and Warning Statements

- This equipment is designed and intended for educational purposes only.
- Use only under the direct supervision of an adult who has read and understood the instructions provided in this user guide.
- Read warnings on packaging and in manual carefully.
- Safety glasses required.

About the Timer

The Dual Lane Race Timer is perfect for use with launchers that either were bought without a finish gate with a timer or don't offer one. Designed for flexible use, it can work with several different two-lane launchers to not only indicate the winner but also show the race times of each vehicle.

The timer goes up to 9.999 seconds and will display "dnf" for "did not finish" if a car cannot cross the finish line in less than 10 seconds.

Materials Included

- Timer gate with attached detectors and emitter
- 2 gate legs and screws
- 3 – 25' extension cables
- Trigger switch
- 2 launch adaptors (for EZ Start Gate and AP Bottle Racer Launcher)

- 9 V power adaptor
- 9 V battery
- 4 FasTrak supports with screws
- .050" hex key (not shown)

Timer shown with gate legs attached

FasTrak supports with screws

9 V battery

9 V power adaptor   Launch adaptors

Trigger switch

Extension cables

Items Required (not included)

- Phillips screwdriver
- Racing launcher such as Pitsco's EZ Start Gate, AP Dragster Launcher, or AP Bottle Racer Launcher (unless setting up a race that doesn't require a launcher)
- Pitsco FasTrak or floor track setup (monofilament line and floor plates – or provide your own floor track setup)
- Masking or duct tape (for floor track only)

Setting Up the Timer

1) Assemble the timer's gate by attaching a leg on each side with two screws, using the Phillips screwdriver to secure them (Figures 1a and b). **Caution:** Do not overtighten the screws.

2) Plug in the two detectors and the emitter on the back of the timer in the appropriately labeled jacks (Figure 2).

3) Note the positions of the emitter bulbs on either side of the emitter tube, which is the tube that hangs down from the center of the timer. Insert the detector for Lane 1 in the upper socket and insert the Lane 2 detector in the lower socket, corresponding to the position of the emitter bulbs (Figure 3). The detectors should be aligned with the emitter bulbs.

4) Plug one end of an extension cable where it is labeled Start Switch on the back of the timer (Figure 4). Based on the length of your track, either use one extension cable or connect two or three cables as needed for the length of your track.

Figure 1a

Figure 1b

Figure 2

Figure 3

Figure 4

5) Plug the other end of the extension cable into the trigger switch (Figure 5).

6) If powering the timer with a wall outlet, plug in the 9 V power adaptor into the outlet and plug the other end into the 9 VDC jack on the back of the timer (Figure 6). If using the 9 V battery, pop it into the battery holder on the back of the timer (Figure 7).
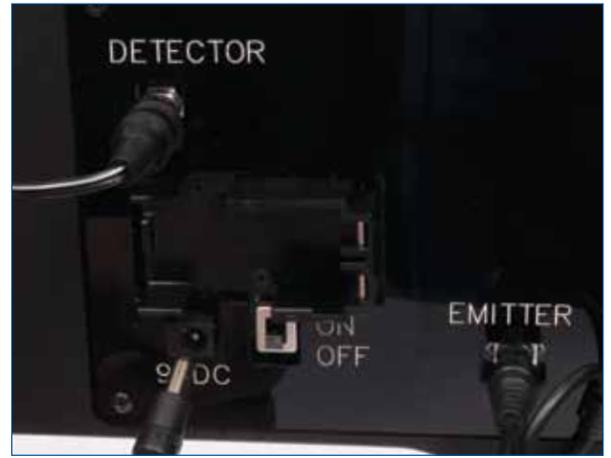
Figure 5

Figure 6

Figure 7

If Using with the FasTrak

7) Set up your launcher and FasTrak according to their user guides.

8) Find the four track supports and remove the screws from them. Then, push a screw into the hole on one of the four timer corners, threading the support onto the screw end (Figure 8). Repeat this with the other three track supports and timer corners.

Figure 8

Figure 9

9) Place the timer over both lanes at the finish end of your FasTrak and run the extension cable in the grooves on the side of the track (Figure 9). Turn on the timer using the on/off switch on the back. **Note:** When using more than one extension cable, the cable plugs will not fit into the track grooves. You can just leave them on the outside of the track side.

If Using with a Floor Track

7) Set up your launcher and floor track according to their user guides.

8) Place the timer over the end of the track just two feet or so in front of the floor plate that is anchoring the race lines (Figure 10). The vehicles need to be able to pass completely through the gate before coming to a stop on the deceleration towels that are used with the launcher.
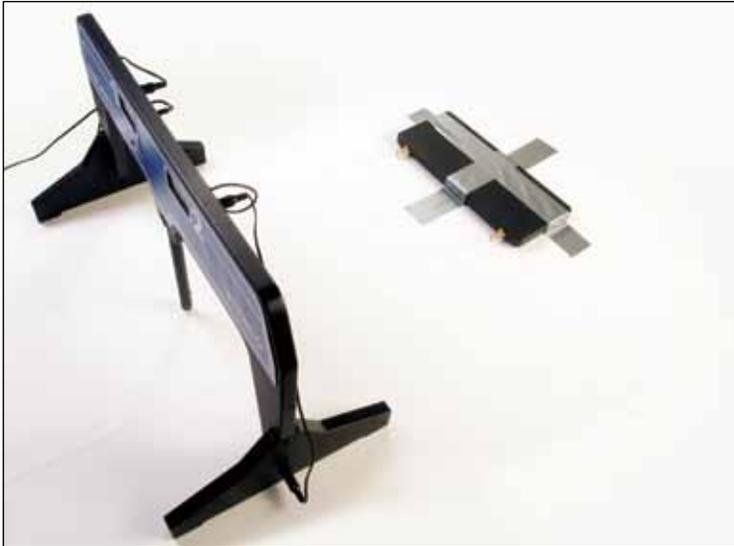

Figure 10

Figure 11

9) Run the extension cables on the outside of the track back toward the launcher. Use tape to hold down the cables and keep them from tripping people (Figure 11). Turn on the timer using the on/off switch on the back.

The following pages help you to use the Dual Lane Race Timer with the launcher you are using. Pick which section applies to you. **Caution:** Follow all safety procedures indicated in your launcher's user guide.

With the EZ Start Gate

Figure 12

1) Set up the EZ Start Gate at the start line as directed in its user guide. On the center post of the trigger bar, press on the launch adaptor that has the curved side so it fits over the post (Figure 12). Prepare a race as directed in the launcher user guide.

2) Hold the trigger switch upside down so the trigger button is almost in contact with the top of the adaptor (Figure 13). When ready to launch, push down on the adaptor with the trigger button – the dragsters will launch and the timer will start at the same time.

Figure 13

3) When the dragsters pass through the gate, it will stop the timer and indicate both dragsters' times (Figure 14). The winner's time will flash. If a dragster times out (takes 10 seconds or longer), that lane will read "dnf" to indicate the dragster didn't finish.

4) To run another race, hit the Reset button on the front of the timer. When finished racing, turn off the timer.

Figure 14 (shown with AP Bottle Racers)

With the AP Dragster Launcher

1) Set up the AP Dragster Launcher at the start line as directed in its user guide. Prepare a race as directed.

2) Hold the trigger switch upside down so the trigger button is almost in contact with the AP Dragster Launcher's launch button (Figure 15). When ready to launch, push down on the launch button with the trigger button – the AP dragsters will launch and the timer will start at the same time.

3) When the AP dragsters pass through the gate, it will stop the timer and indicate both dragsters' times. The winner's time will also flash. If a dragster times out (takes 10 seconds or longer), that lane will read "dnf" to indicate the dragster didn't finish.

4) To run another race, hit the Reset button on the front of the timer. When finished racing, turn off the timer.

Figure 15

With the AP Bottle Racer Launcher

1) Set up the AP Bottle Racer Launcher at the start line as directed in its user guide.

2) Using the hex key, remove the brass cap on the launcher's center button (Figure 16). In its place, firmly push down the flat launch adaptor in the cap's place (Figure 17). Set up a race as directed in the launcher user guide.

Figure 16

Figure 17

3) Hold the trigger switch upside down over the adaptor (Figure 18). When ready to launch, push down on the adaptor – the bottle racers will launch and the timer will start at the same time.

4) When the racers pass through the gate, it will stop the timer and indicate both racers' times. The winner's time will flash. If a racer times out (takes 10 seconds or longer), that lane will read "dnf" to indicate the racer didn't finish.

5) To run another race, hit the Reset button on the front of the timer. When finished racing, turn off the timer.

Figure 18

With the Other Launchers

The Dual Lane Race Timer can be used for almost any racing activity that races vehicles on a string and uses a vehicle small enough to fit under the timer's gate. For example, it could be set up for propeller cars, gravity cars (Pinewood Derby), and some mousetrap vehicles.

Whichever type of race you use the timer for, you can use the basic mode of operation as described in the three sections above. For some activities, you might need to simply press the trigger button as the vehicles are released or launched.

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