

AP Dragster Launcher

User Guide



Materials Included

- AP Dragster Launcher
- Finish plate
- String
- Tension spring
- 2 paper clips
- 2 brass replacement tubes

Items Required (not included)

- Air pump
- Scissors
- Tape measure
- Masking tape (optional)
- Safety glasses
- Heavy items such as books (optional)
- AP dragsters to race
- Glue (optional)

Assembling the Spring Tensioner

1) Cut two pieces of string eight to 10 inches long. Tie one string firmly to one end of the spring. Tie the other end of the string firmly to the paperclip as shown (a dab of glue can help hold the knots more securely). Slightly bend out the end of the paper clip (Figure 1).

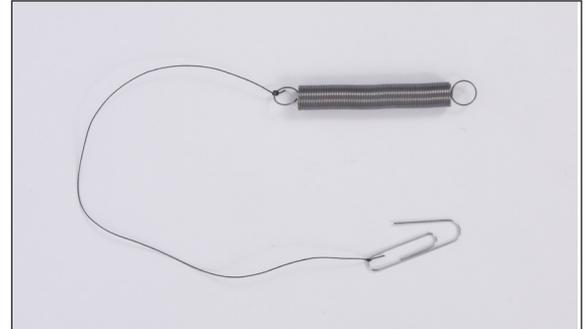


Figure 1

2) Repeat Step 1 on the other side of the spring.

3) Place the spring in the middle of the double posts on the finish plate. Thread one paper clip through a double post on one side (Figure 2). Do the same on the other side with the other paper clip.

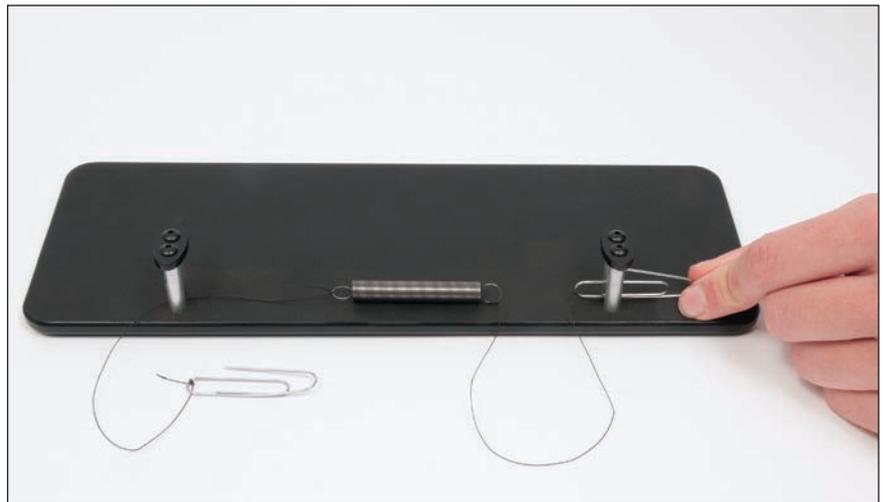


Figure 2

The finish plate is ready to be used.

Setting up the Track

1) Find a level surface. Smooth tile, linoleum, or a gym floor are ideal for the track – the dragsters will not run as well on carpet.

2) Place the AP Dragster Launcher where you want the start of the race to be. The brass tubes should be pointing down the race track. Measure the length of track you want – it should be between 20 and 40 feet long (40 is preferred; the shorter the distance, the more you will need to reduce the suggested air pressure). You can mark the track finish line with masking tape.

3) At the finish line, place the finish plate with the post side closer to the track (Figure 3 on the next page).



Figure 3 – the above image demonstrates the placement of the finish plate (at right) – it is not a proper length track

4) Using string from the roll, tie a loop in the end of the string. Hook it onto the bent-out part of one of the paper clips on the finish plate. Unroll the string and move toward the launcher. Cut the string just an inch or two past the post at the back of the launcher. Tie a loop in the end and hook it over the post (Figure 4).



Figure 4

5) Repeat Step 4 on the other side of the track to lay down the second line of track string. When finished, adjust the finish plate to make sure the line is taut – the spring tensioner will even out the tension between the two lines. If the finish plate moves, you can put a book on it to hold it in place.

Running a Race

1) Attach the air tube on the launcher to the air pump. **Caution:** Do not pump at this time.

2) Remove the loop from one of the posts on the launcher. Thread the loop through a dragster's front string guide and then its back string guide (Figure 5). Replace the loop over the post.



Figure 5

3) Repeat this on the second track string with the other dragster.

- 4) Slide the dragsters' launch tubes over the brass tubes on the launcher (Figure 6).
- 5) Make sure everyone is clear of the track. You can have one or two people wearing safety glasses near the finish to determine the winner of the race. Anyone running or assisting with the race should wear safety glasses.

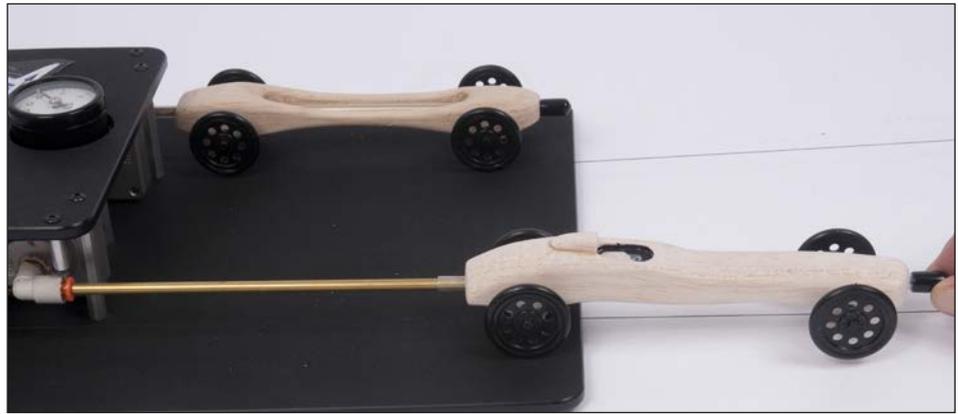


Figure 6

- 6) When everything is ready, use the air pump to pressurize the launcher to 40 psi (pounds per square inch) for a 40-foot track – the launcher's gauge will show the air pressure. The launcher will not pressurize any higher than 40 psi. For a shorter track, you should use a lower pressure, though you may have to experiment to see what will propel the cars to the end without being too forceful.
- 7) Press the Launch button to launch the dragsters down the track. You can remove the vehicles on either end of the track – either unhook the string loop from the paper clip at the finish plate or unhook the loop over the post on the launcher.

Replacing the Brass Tubes

If the brass tubes on your AP Dragster Launcher become bent, they can be removed and replaced with the two brass replacement tubes that came with the launcher.

- 1) At the base of each brass tube is a plastic collar that sits in the valve that goes into the mechanism of the launcher. Press this in while pulling out the bent brass tube (Figure 7).
- 2) Insert the straight brass tube into the collar. Push and twist the tube until it is set into the collar.



Figure 7

Safety

- Anyone running or assisting with the race should wear safety glasses.
- Everyone else should be several feet back from the track when it is in use.
- No one should put a hand or foot in the path of the track.
- Do not allow anyone to use the launcher to launch anything other than air-powered dragsters.
- Never aim the launcher at a person.