

AquaPort II Launcher

User Guide



60078 V0113

Cautionary and Warning Statements

- This kit 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.
- Do not use an air compressor, an air tank, or CO₂. Failure to follow this rule could result in potentially dangerous bottle ruptures.
- Never place your head or any other body part over a pressurized rocket.
- Everyone in the launch area should wear safety glasses.
- Read and follow the Bottle Rocket Safety Code on page 4.

Disclaimer

Pitsco, Inc. is not responsible for bodily injury or property damage that results from misuse of its products. Follow all directions and standard safety procedures to ensure student safety.

Warranty

Pitsco provides a one-year limited warranty against defects in manufacturing on all items purchased. In a warranty situation, Pitsco will arrange for the return of defective items for evaluation. Qualified Pitsco staff will determine warranty coverage and notify the customer. Items under warranty will be repaired or replaced at Pitsco's discretion. Customers will be billed for all costs associated with non-warranty items.

Materials Included

- AquaPort II with attached air valve, air hose, launch cord, and leg
- 2 additional legs
- 3 stakes
- Super Lube

Items Required (not included)

- Bicycle pump
- Hammer or mallet (for stakes)
- Bottle rocket(s) to launch

Setting Up the AquaPort II

Before setting up the AquaPort II, you need to find a large open area with a surface you can drive the leg stakes into. An open field, a school yard, or a football or soccer field would be a good choice. Do not place the launcher on concrete or asphalt. You will need at least 25 feet of clearance all the way around the launcher.

1. Insert the two additional legs into the openings on the three-way fitting of the launcher unit (Figure 1). There will be marks to show you how far you need to push for them to be fully assembled.
2. Place the launcher on a level place on the ground.
3. Insert the stakes through the holes on the AquaPort II legs where the “Stake Here” labels are. Use the hammer or mallet to hammer the stakes all the way down to secure the launcher (Figure 2).
Note: After a few launches, it is a good idea to check the stakes and make sure they are secure.
4. Unwrap the launcher air hose and straighten it out (Figure 3). If using a standard tire pump, attach the air valve to the air hose (Figure 4).
5. Remove the launch cord and handle and unwind it so the person launching is 25 feet from the launcher (Figure 5).



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

Launching Bottle Rockets

Caution: Only carbonated beverage bottles such as soda bottles can be used with the AquaPort II. Do not use bottles made for non-carbonated beverages such as water.

1. Read the Cautionary and Warning Statements on the front page, as well as the Bottle Rocket Safety Code on the back page. Make sure all students understand and follow these guidelines.
2. Add the desired amount of water to the bottle rocket (Figure 6). **Note:** If you don't know how much to add, try filling the bottle half-full.
3. With the bottle rocket inverted, insert the launcher plug into the mouth of the bottle's neck (Figure 7). If you have difficulty inserting the plug, lubricate the O-rings on the plug with a small amount of Super Lube. **Note:** If using a short-necked bottle, not all of the plug will fit inside it – this is OK and will launch.
4. Set the rocket upright on the launcher (Figure 8). As you do so, pull the hose down through the launcher.
5. Move up and hold the three aluminum release fingers against the bottle so the notches hold onto the bottle flange (Figure 9).
6. If launching a rocket with a loose ball on top, place the ball now (Figure 10). Make any other needed adjustments to the rocket at this time.
7. Clear the launch area by having everyone stand at least 25 feet from the launcher.
8. Walk to the bicycle pump and pump it until the pressure gauge reads the desired pressure (Figure 11). Due to the release valve, you should not be able to exceed 75 psi.

Warning: Never place your head or any other body part over a pressurized rocket.



Figure 6



Figure 7



Figure 8

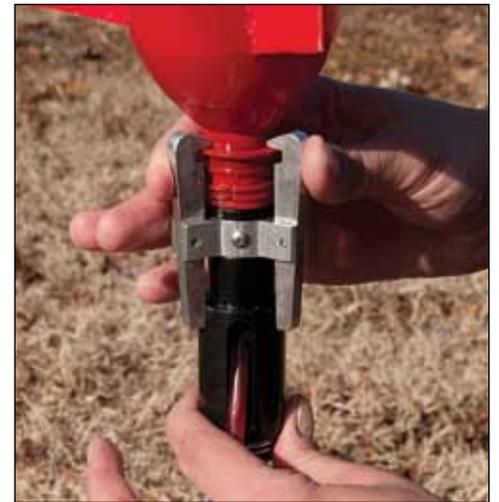


Figure 9



Figure 10



Figure 11

Note: If the launcher leaks air, make sure all the connections are tight. If that doesn't work, contact Customer Service at 800-835-0686 or at pitsco.com/help.

9. After a five-second countdown, gently pull the launch cord. The three release fingers will fall away from the bottle flange, and the bottle's internal pressure will blast it up and away from the launcher.
10. Repeat Steps 2-10 until you have launched all the rockets. When done, disconnect the AquaPort II from the tire pump and store them both properly. **Note:** If for any reason you need to remove or alter a pressurized rocket, first depressurize it by pulling the ring on the pressure relief valve that is located near the end of the air hose (Figure 12).



Figure 12

Bottle Rocket Safety Code

My Responsibilities:

1. Materials: I will make my bottle rockets of lightweight materials such as paper, wood, rubber, and plastic that are suitable for the power used and the performance of the bottle rocket. I will not use any metal for the nose cone, body, or fins of my bottle rocket.
2. Bottle Pressure: I will not pressurize my bottle rocket to more than 90 pounds per square inch.
3. Stability: I will check the stability of my bottle rocket before its first flight except when launching a bottle rocket of already-proven stability.
4. Payloads: I will never use my bottle rocket to carry live animals or a payload that is intended to be flammable, explosive, or harmful.
5. Launch Site: I will launch my bottle rockets only outdoors in a cleared area, free of tall trees, power lines, and buildings.
6. Launcher: I will launch my bottle rocket only from a stable launch device.
7. Launch Safety: I will make sure that all persons are at least 25 feet from the bottle rocket during launch and behind the person who is launching the rocket. I understand that it is my responsibility to ensure that people in the launch area are aware of the pending bottle rocket launch and can see the bottle's liftoff site before beginning the audible five-second countdown. I will not allow anyone to put his or her head or any other body part above the rocket during or after pressurization. I will not launch my bottle rocket so that its flight path will carry it against a target.
8. Flying Conditions: I will never launch my bottle rocket in a manner that is hazardous to people or property.
9. Prelaunch Test: When conducting research activities with unproven bottle rocket designs or methods, I will determine the reliability of my bottle rocket by conducting a prelaunch test. I will conduct the launching of an unproven design in complete isolation from any person not participating in the actual launching.
10. Launch Angle: I will only point the launch device straight up (perpendicular to the ground). I will never use the bottle rocket launcher to propel any device horizontally.
11. Recovery: If a bottle rocket becomes entangled in a power line or other dangerous places, I will not attempt to retrieve it.



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