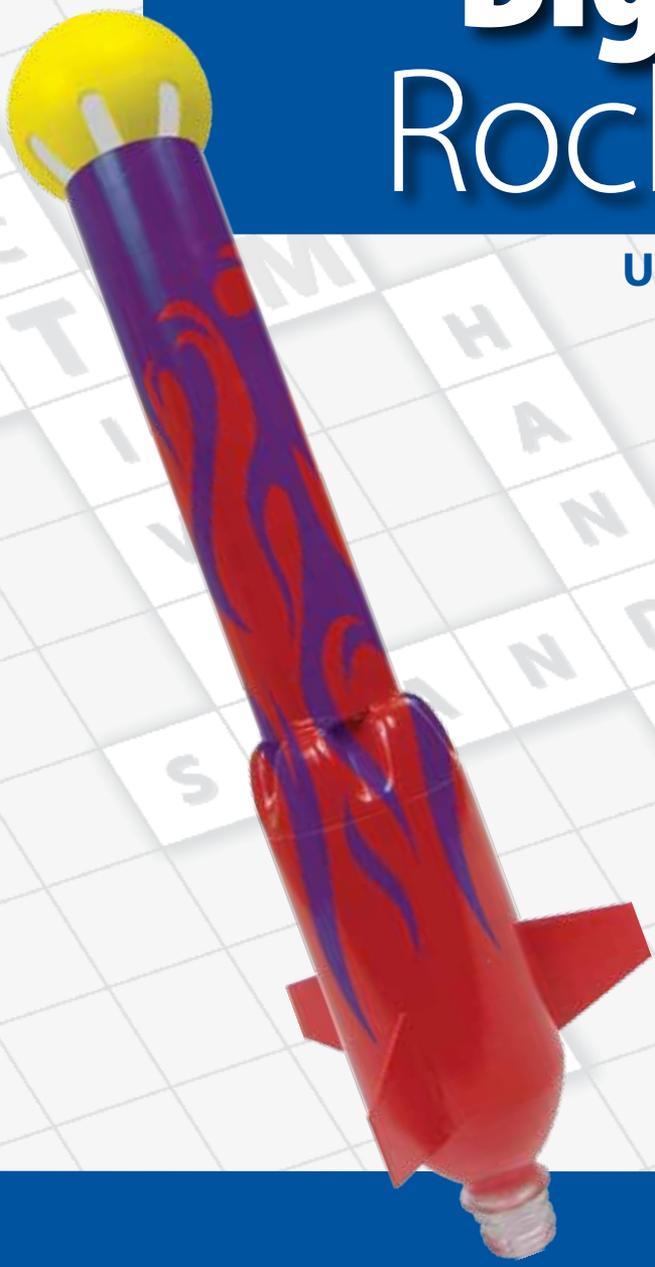


Big Oz Rocket

User Guide



Materials Included

The Big Oz Rocket Kit should include the following materials. If something is missing, contact Customer Service at 800-358-4983.

- 20-ounce plastic bottle
- Rocket tube
- Wiffle ball
- Parachute materials
- Sheet with parachute bulkhead and alignment tools
- Fin material
- String
- Sandpaper

Items Needed (not included)

- Cool-melt glue gun and slugs
- HD Bond or similar white glue
- Glue stick
- Transparent tape
- Permanent marker
- CA glue (optional)
- AquaPort Launcher (55499), Backyard Blaster (31976), or a similar water rocket launcher
- The Pumper (51995) or a Fizz-Keeper (optional)
- Stratoblaster Fin Holder (31728) (optional)
- Scissors
- Hole punch (optional)
- Paint (optional)
- Decals (optional)
- Baby powder
- Ruler

Preparing the Bottle

1. If you have a bottle pressurizer, screw it on the bottle and pump it several times. This will make the bottle firm and easier to work with.

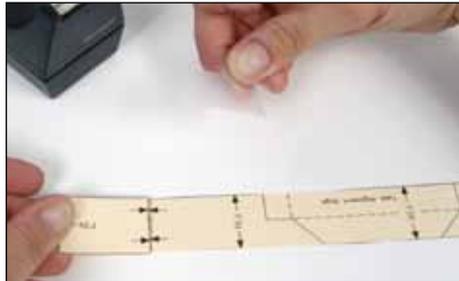


Figure 1

2. Cut out the three rectangular alignment tool pieces printed on the sheet with the parachute bulkhead. Tape or white glue these pieces together where the pieces indicate (Figure 1).
3. Wrap the alignment tool around the bottle, just below the neck of the bottle. This is about 2-1/2" from the bottle's opening. Secure the alignment tool with transparent tape.

4. With a permanent marker, mark the location for each fin with a 1/4" horizontal mark on the bottle where the fin placement arrows point (Figure 2). Remove the alignment tool.



Figure 2

5. To make straight, vertical lines for fin placement, align the ruler against the marks on the bottle. Draw a 1-3/4" line straight down from each mark (Figure 3). Lightly sand the marked areas.



Figure 3

6. Cut out the Tube Alignment Gauge from the alignment tool. Fold it lengthwise where it has the long dotted line to create a 90-degree angle. In the opposite direction, fold it where it has a short dotted line to create a 90-degree angle (Figure 4).



Figure 4

7. Holding it against the length of the bottle with the short piece bent over the bottle's bottom edge, use the Tube Alignment Gauge to mark each bottle foot (Figure 5). This is where the tube will be glued to the bottle.

Making and Attaching the Fins

Note: If you wish to use the Stratoblaster Fin Holder (31728) that works with both sizes of rocket tubes, follow the steps in the “Preparing and Attaching the Tube.” Then, attach the fins.

1. Go to page 8 of this guide and cut out the Fin Pattern. Take the white fin material and trace the pattern so you have three fins drawn on the material. Cut them out.
2. Using a cool-melt glue gun, place a couple dabs of glue on the wide end of the fin where it will attach to the bottle. Quickly align it to one of the sanded fin marks (Figure 6). Repeat this for the other two fins.
3. Apply a thin bead of cool-melt glue to one side of a fin – do not apply it to the other side yet. Do this for the other fins (Figure 7). Then, apply glue to the other side of all fins. (If glue is applied to both sides at the same time, it can be too hot and cause the fin to move a bit.) If there are any strings of glue, you can wipe those off at this time.



Figure 5

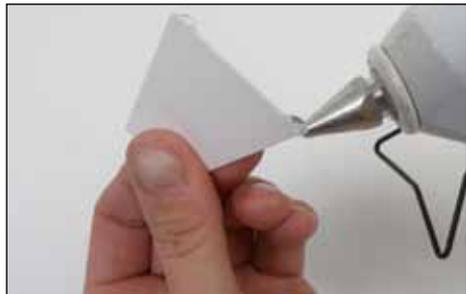


Figure 6



Figure 7

Preparing and Attaching the Tube

1. Cut six 14" lengths of string; set these aside.
2. Cut out the two parts labeled A and B on the parachute bulkhead and alignment tools sheet. These are used to make the parachute bulkhead.
3. Lay Part B flat on a work surface with the marked side facing up. Turn Part A so its marked side is face down and evenly apply glue stick to it. Place this glue-side down on top of B, aligning the circle of A to the dotted line circle on B as shown (Figure 8). Press firmly.
4. Cut or punch a small hole in the center. Push a half inch of the remaining string through the marked side of the bulkhead. Using cool-melt glue, attach the short end of the string to the back (Figure 9).
5. With Circle A on top, bend up the bulkhead legs at a 90-degree angle. Insert this into one end of the rocket tube until the legs are even with the top of the tube. Make sure the string is hanging free.

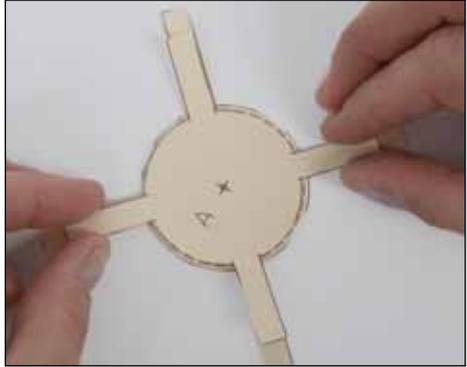


Figure 8

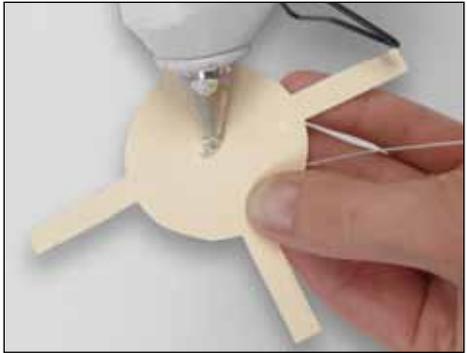


Figure 9



Figure 10

6. Pull each leg away from the inside of the tube and use white glue on the other side of the leg (Figure 10 on previous page). Push the leg firmly against the inside of the tube for a few seconds. Repeat with the other legs and let them dry.
7. Apply a thin bead of glue where the circle of the bulkhead touches the tube. Let it dry.
8. Now, lightly sand the bottom of the bottle. Align the end of the rocket tube without the bulkhead to the circle marked on the bottle's feet. Holding the tube in place, cool-melt glue the tube to the bottle at each foot (Figure 11). Remove the pressurizer.
9. At this time, apply paint or decals to the rocket, if desired.



Figure 11

Making the Parachute

1. Gather the parachute materials: parachute material, shroud line, and hole reinforcements. Using scissors, carefully cut along the dotted lines on the parachute material.
2. Using a hole punch or scissors, carefully punch a hole in the center of the small circle in each corner of the parachute. Peel the hole reinforcements from the backing paper and center them onto each of the holes.
3. Using the 14" lengths of string, double knot a shroud line in each of the six reinforced holes (Figure 12). If available, dab some CA glue on knot. Tie the ends of the shroud lines together (Figure 13 on next page).



Figure 12

Adding the Parachute and Ball

1. Firmly tie the end of the parachute shroud lines to the rocket string about four inches from the bulkhead. Firmly tie the Wiffle ball at the end of the string (Figure 14).
2. Dust the parachute and shroud lines with baby powder. This will keep the parachute from sticking together when it comes out.
3. To fold the parachute, lay it on a flat surface and smooth it out. Fold it into fourths lengthwise and then fold it again so it is very narrow.



Figure 13



Figure 14

(Instructions continued on next page.)

4. Roll it up in small sections (Figure 15). In the same direction as the parachute fold, continue to wrap the shroud lines around the parachute.
5. Drop the parachute into the rocket tube – it should fit loosely in the tube.



Figure 15

Launching the Rocket

1. You are ready to launch the rocket. Fill it with four to 10 ounces of water – you can experiment with different water volumes to see the results.
2. Place the rocket on the launcher according to the launcher's instructions. Place the Wiffle ball on top of the tube. Be sure the open slots of the ball are facing toward the rocket tube.
3. Do not use more than 80 pounds of air pressure when launching the rocket. Be sure to follow all the launcher's safety rules. Now, launch your rocket!

Fin Pattern

