

Rokit

“Brings Science Alive”



ABOUT ROCKETS

- A squid propels itself by filling its body with water and ejecting it backwards in order to move forwards. This is the principle used by rocket engineers.
- Space rockets use fuels which are burned in a chamber shaped rather like a bottle with a neck pointing backwards. The combustion produces a large volume of gas expanded by heat and this is ejected at high velocity forcing the rocket in the opposite direction.
- Your Rokit, like the squid, uses water as the driving agent and compressed air to provide the energy instead of heat.
- The pressure in the Rokit body at launch is about $18 \times 10^4 \text{ N/m}^2$ (25 P.S.I.) and the area of the jet through which the water is forced is 1cm^2 . This produces a theoretical thrust of 18 N (3.9lbs) at launch. As water is ejected the Rokit gets lighter producing increased acceleration and ‘g’ force. This increase in ‘g’ force as fuel is used up is one of many discomforts astronauts have to endure.
- In this case, of course, the acceleration is maintained for several minutes rather than about one second for your Rokit. Don’t worry it is not likely to go into orbit!

To order spares for your **Rokit**
please visit our website

www.waterrokit.com

Rokit

Registered Designs and
Patents pending in
various countries

Hinterland Ltd., Clamcleats House, Watchmead, Welwyn Garden City, Hertfordshire, AL7 1AP, United Kingdom



Instructions

(Please retain these instructions for future use)

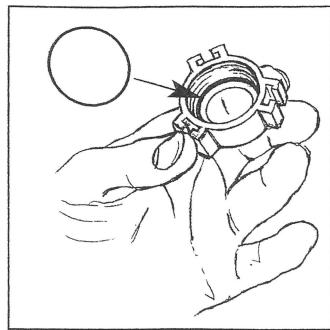


Fig.1

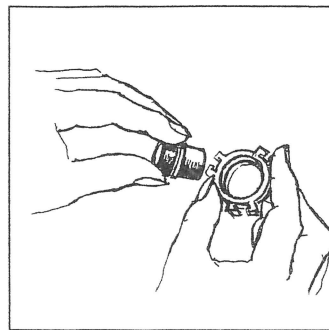


Fig.2

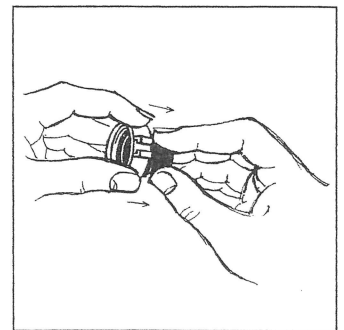


Fig.3

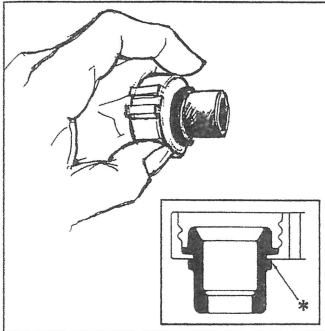


Fig.4

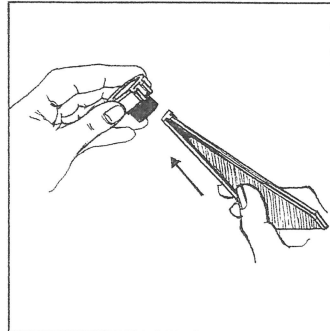


Fig.5

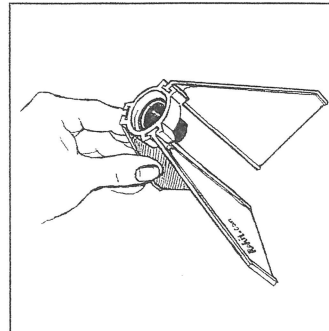


Fig.6

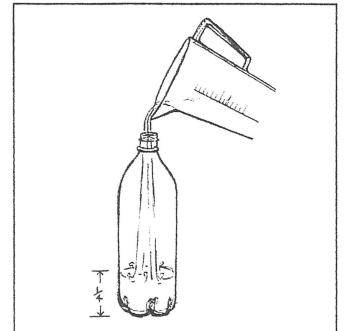


Fig.7

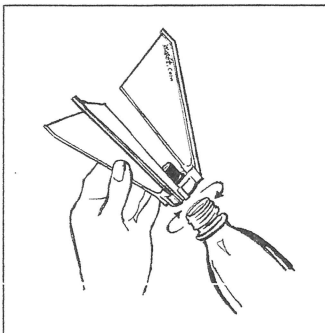


Fig.8

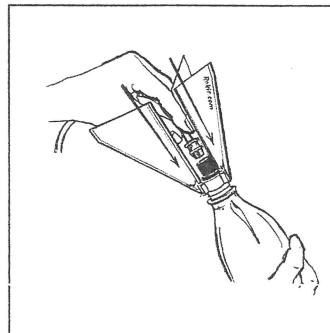


Fig.9

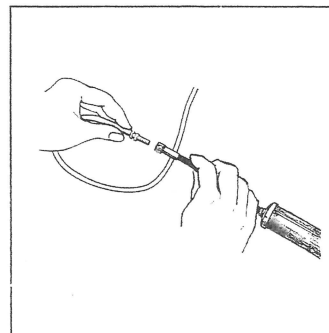


Fig.10

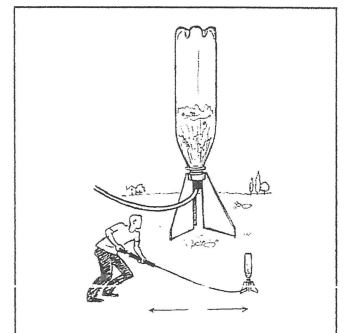


Fig.11

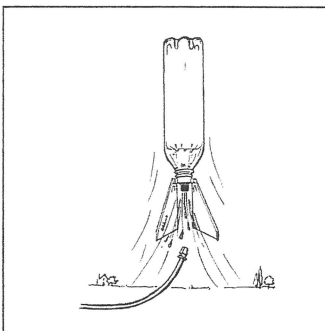


Fig.12

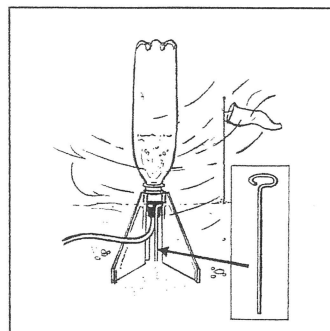


Fig.13

Use a standard empty 1ltr or 1.5ltr plastic fizzy pop bottle (not supplied). Use a standard cycle or foot pump (not supplied).

1. Insert black 'O' ring into white screw cap (Fig.1).
2. Push thin end of rubber nozzle through threaded part of white screw cap as shown in Fig.2 and Fig.3 Important: Ensure the black rubber nozzle is retained by groove correctly, as shown in Fig.4*
3. Attach red fins to white screw cap as shown in Fig.5 and Fig.6 to make the Rokit tail unit.
4. Fill plastic fizzy pop bottle with water, approximately 1/4 full (Fig.7)
5. Screw the Rokit tail unit to the fizzy pop bottle, **fingertight ONLY** (Fig.8). Important: Overtightening may cause damage to the white screw cap.
6. Insert the brass plug end of the yellow pressure tube into the black rubber nozzle (Fig.9). Ensure the brass plug fits securely into the black rubber nozzle. You may need to remove the red fins temporarily.
7. Attach the valve end of the yellow pressure tube to a cycle pump as shown in Fig.10.

WARNING NOT A TOY.
TO BE USED UNDER DIRECT SUPERVISION OF AN ADULT.

- Do not stand over Rokit.
- Do not use inside or in confined spaces.
- Use on grass for softer landings.
- Should the Rokit fail to launch, carefully unscrew bottle from tail unit to release pressure.

Ready for Take-off!

8. Place the Rokit on the ground in an open and safe area e.g. a grass field. Pressurise the Rokit by pumping the cycle pump (Fig.11).

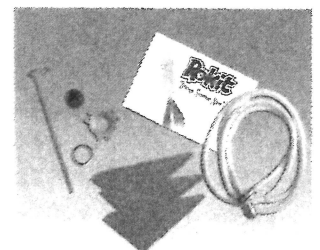
The Rokit will launch automatically when the correct pressure is reached (Fig.12).

If the ground is uneven or wind is strong, use the launch support wire as shown in Fig.13.

Warning: Not a toy. Please observe the safety notice above.

Contents:

- 1 x Rokit instructions (ROK099)
- 1 x Black 'O'ring (ROK008)
- 1 x White screw cap (ROK009)
- 1 x Black rubber nozzle (ROK011)
- 3 x Red fins (ROK010)
- 1 x Yellow pressure tube (ROK005)
- 1 x Launch support wire (ROK012)



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