The quick setup

This is the quick and dirty setup procedure which never fails:

First of all, put your camera to one side (we don't need it yet) and put the VersaTrigger control unit with it. We will concentrate on the Splash only. Set up a drip bowl, fill with water and place on a table, now suspend the reservoir/solenoid assembly above the drip bowl such that the brass nozzle is about 500-700mm above the level of water in the drip bowl, fill the reservoir with water and place the lid back on.
Plug the blue connector of the reservoir/solenoid assembly into the blue socket of the Splash controller and switch on (note. make sure that you have a fresh battery fitted), now press and hold the Start button until water starts to fall into the drip bowl.
Turn the Interval control fully clockwise and turn the Size control anti-clockwise (but do not switch it off). Now momentarily press the Start button and look for a column of water from the drip bowl, adjust the Size control for a good column (if in doubt set the Size control such that the knob is pointing left at 9 o'clock), do not adjust this control again unless you change the water. Now slightly adjust the Interval control then press the Start button and look for a collision, if no collision happens then turn the Interval control again then press the Start button again, do not press the start button while adjusting the Interval control. It is incremental and you should only adjust one control at a time. A collision should happen when both controls are set to about the 9 o'clock position give or take. Once you can see a collision we can now connect the camera.

Using the interconnect cable connect to the VersaTrigger and switch on, turn the Delay fully anti-clockwise. Connect your camera (set to manual focus) and switch on. Press the Start button. The camera is probably triggering too early so adjust the Delay control until an image is captured (note, there is no need to adjust the Size or Interval controls on the Splash, we now just adjust the Delay control).

The important thing to remember is that the Splash is set up by eye, once we have a collision there is no need to adjust either the Size or Interval, we just press the Start. The Delay control is all we need to adjust in order to sychronise the camera with the collision. Once you have some images using water start from the beginning but try using a different Size setting the Interval then Delay, then try varying the height. As you get better you can then try xanthin and guar.

Getting the best from the Splash

The Size control determines the time duration that the solenoid valve is open for and, although this does affect the size of the drop, we must also consider the pressure within the reservoir. This pressure is in effect the driving force behind the water entering the solenoid valve; the greater the pressure, the more liquid will be pushed through while the valve is open. Raising the plastic tube within the reservoir will increase the pressure of the liquid being fed to the solenoid.

Another point to consider is the liquid, although this type of photography is sometimes referred to as "water drop photography" this does not imply that we must always use water. We may find that sometimes the water drops do not hold together well, this is due to the viscosity of the water. If we want to make the liquid "stick together" we need to increase the viscosity, an easy way to approach this is to use milk, other alternatives include thickeners such as guar gum. Also, remember that there are two sources of liquid in the Splash system; the reservoir and the drip bowl, the viscosity of either or both may be modified. However, try not to overdo the viscosity, if it is too great then there will be no drops or splashes.

Increasing the height of the reservoir above the height of the drip bowl will provide an increase in the height of the splash.

Different settings of the Delay will result in images of the collision at different times, each collision can result in a large variety of images.

Try using two different coloured light sources to illuminate the collision, it looks far more natural than Photoshopping post capture. Alternatively, try colouring the water/solution with food dyes.

Finally, don't just take an image from side-on, try taking it from above or beneath the collision.

Cleaning the Solenoid/Reservoir

It is recommended that, after using the *Splash*, the Reservoir and Solenoid be cleaned and dried.

If water has been used, remove the Solenoid/Reservoir from the clamp and tip out any remaining water, now press and hold the Start button to purge any remaining water through the system.

If any liquid other than water has been used, tip out the remaining solution. Now pour about 100ml of clean water into the Reservoir, press and hold the Start button for about 20 seconds to clear out any residue from the Solenoid. Tip out any remaining water and press and hold the Start button to purge any residue through the system. Once the system has been purged of water, dry the Reservoir. Now use the pipe cleaner and gently dry the entry feed to the Solenoid, now dry the water outlet.

5 A note on the Mariotte syphon

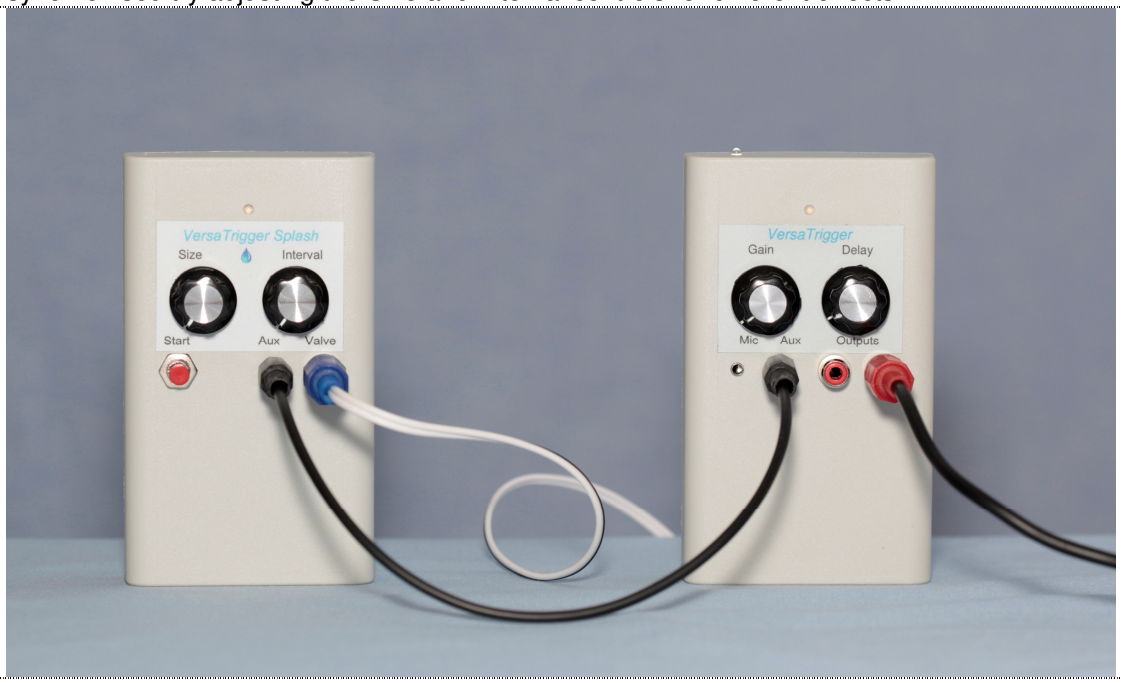
Filling the reservoir with a liquid and replacing the sealed lid creates a device called a Mariotte syphon, the purpose of this is to maintain a constant water pressure to the solenoid valve such that each drop is consistent with the previous one.
Essentially, as long as the water level within the reservoir is above the lower end of the plastic tube the water pressure is dictated by the head of water above the solenoid valve and will remain constant. Raising the plastic tube within the reservoir will increase the pressure (ensure that the gland around the tube is tight after re-positioning the tube).

6 Testing the System

Using the Size control, turn the unit on, adjust both the Size and Interval controls to minimum. Prime the system by pressing and holding the Start button until a steady succession of drops is observed, release the Start button. Momentarily press the Start button, two drops should be released (note, it is not necessary to press and hold the Start button, a short press will suffice). If no collision is observed increase the Size control slightly and try again, continue adjusting the Size and Interval controls until satisfactory collisions occur.

7 Connecting to the *VersaTrigger* and Camera

Set the camera to manual focus and position on a tripod, focus the camera onto the drip bowl at the location of the water collision. Now connect the AUX cable between the AUX connector of the *Splash* and the AUX connector of the *VersaTrigger*, connect the camera cable from an Output connector to the camera. Switch the *VersaTrigger* on, now switch the camera on. Having previously adjusted the Size and Interval controls on the *Splash* it is now time to adjust the delay control of the *VersaTrigger* (note, once collisions are occurring it is only necessary to adjust the Delay). Press the Start button, you should see a collision and the camera should trigger, view the image and, if the camera is triggering too early or too late, adjust the Delay control such that the camera captures the collision. Now that the camera is synchronised try adjusting the Size and Interval controls for different effects.

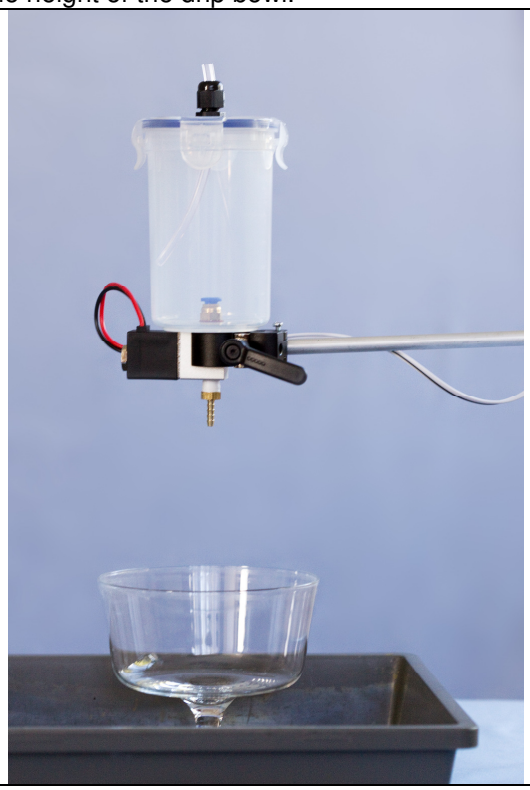


3 Fitting a Battery

1. Place the *Splash* face-down on a flat surface, remove the battery cover by gently pushing the retaining clip.
2. Fit a new PP3 battery by pressing the battery snap on to the battery, replace the cover.

4 Assembling the *Splash*

1. Take a friction clamp and the support tube and push the tube into the larger hole of the clamp, gently tighten the cross-head screw on the friction clamp such that the tube is secured (do not overtighten this screw as it may damage the thread on the clamp). Take the second clamp and push the tube into the larger hole of the clamp and, depending on what the clamp is to be secured to (a tripod or a shelf/table), orientate the clamp such that it is either at 0° or 90° to the first clamp, gently tighten the cross-head screw taking care not to overtighten.
2. Locate and tighten one clamp onto the supporting surface (tripod etc), take the Solenoid/Reservoir and locate in the jaws of the free clamp, tighten the clamp (again, do not overtighten the clamps).
3. Plug the blue connector into the blue Valve socket of the *Splash.*
4. Remove the lid of the Reservoir, half fill the Reservoir with water (the level within the Reservoir may be incresed later). Replace the lid.
5. Place a drip bowl directly beneath the outlet of the Solenoid/Reservoir assembly, fill the drip bowl with water (it is advisable to place the drip bowl in a separate tray in order to catch the excess water). Position the Solenoid/Reservoir such that the brass nozzle is about 500mm above the height of the drip bowl.

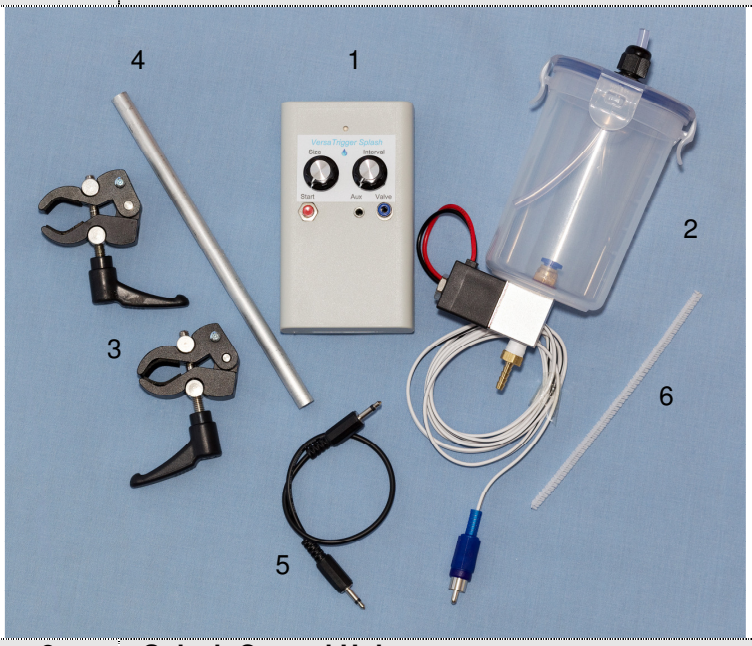


Splash – User Manual

Introduction

The *Splash* is a water collision (water drop) accessory for use with a *VersaTrigger* system, it is easy to use and will reliably produce collisions using either water or solutions of slightly higher viscosities.

1 What's in the Box



1. *Splash* control unit
2. Solenoid/Reservoir
3. Two friction clamps
4. Support tube
5. AUX cable
6. Pipe cleaner

2 Splash Control Unit

1. Start button - this starts the double drop/camera trigger sequence
2. Size control - this controls the size of both water drops
3. Interval control - this controls the timing between the two drops
4. AUX - this connects, via the supplied cable, to the VersaTrigger control unit
5. Valve - the Solenoid cable (blue plug) mates with this connector