

INSTRUCTION MANUAL



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Version 1.2

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Limited Lifetime Warranty

Global Special Effects™ provides a limited lifetime warranty for the Flogo-lite from any manufacturing defects. Any misuse, abuse, or negligence automatically voids our warranty. Running any other liquids/materials other than the Global Special Effects™ solutions through the pump automatically voids our warranty. Global Special Effects™ is not responsible for loss of income, labor, or business as a result of a Flogo-lite's malfunction. Global Special Effects™ is not responsible for physical damage, scratching or tube damage after shipping from Global Special Effects™ Manufacturing facility. For safety reasons, Global Special Effects™ will repair damaged electrical wires per the warranty. There is a lifetime warranty on the circuit board and other electronics to the fan or pump. Direct all questions and claims to the Global Special Effects™ customer service at 256-229-5551.



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Positioning your Flogos-lite Machine



Position the Flogos-lite in the desired place for the event. Although the Flogos-lite will still need to be manually leveled, it is to your advantage to begin with a place as level as possible.

Opening your Flogos-lite Machine

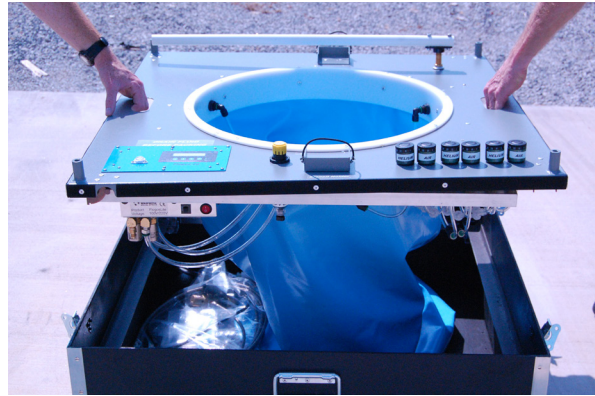
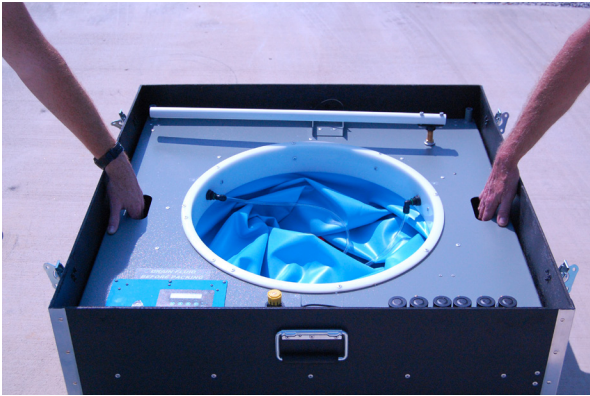


Unlatch the 4 latches which secure the top of the case. Remove the top and set aside noticing that the Skirt and Windscreen are secured to the lower side of the Case Top.



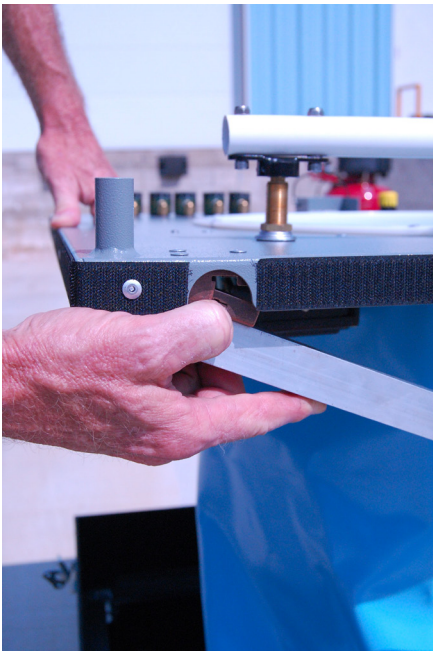
Lifting the Inner Top

Flogos-lite™



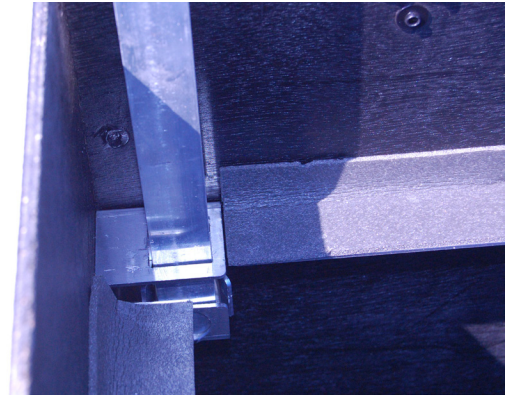
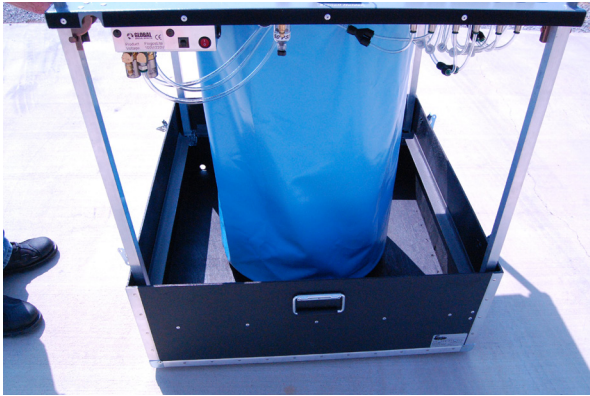
Each of the two persons should be standing on the sides of the Flogos-lite machine where the oval shaped hand holds are located on the Inner Top. Each person should grasp the Inner Top by placing their hand through the oval shaped hole. Lift the Inner Top keeping it relatively level as it is being lifted.

Unfolding the Legs



Each person then unfolds one of the legs by depressing the leg locking button located in the gap near the hinge point of the leg. The leg is folded downward until it locks into position with an audible "click." Each person then holds the Inner Top with the opposite hand and repeats the leg unfolding with the remaining leg making sure there is an audible "click" indicating the leg is locked into position.

Set Legs Into the Leg Locks



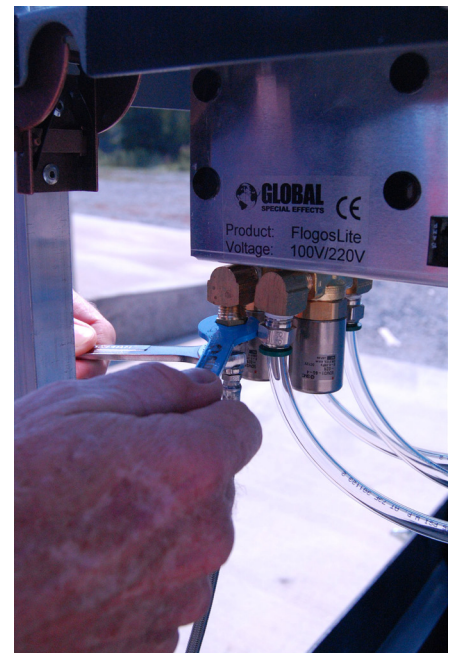
Flogos-lite™

Lower the Inner Top until the legs rest on the Leg Locks located in each of the four corners of the Lower Case. Guide each leg into the square hole in its Leg Lock. There are no locking mechanisms to hold the legs into the Leg Locks. Each leg, though, must rest in the bottom of its' respective Leg Lock in order for the Inner Top to be properly leveled and for proper operation of the Flogos-lite.

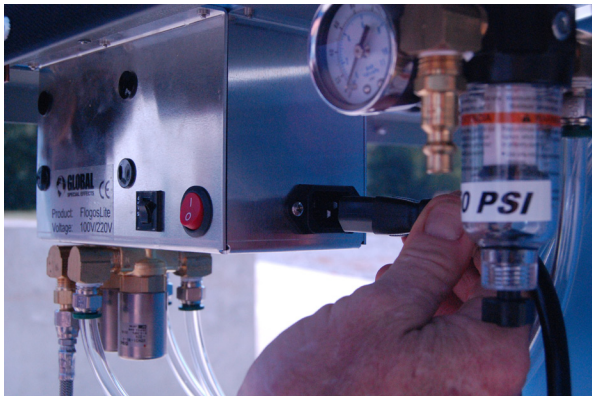
Attaching the Helium Hose

Attach the helium hose to the fitting on the gas control solenoid located on the lower side of the Controller Enclosure. Using two 9/16" open end wrenches (included) hold the fitting on the solenoid valve with one and tighten the gas hose fitting with the other. This prevents undue stress being placed on the solenoid valve which could damage it.

The supplied regulator is a U.S. standard CGA-580 inert gas gas fitting. If the supplied regulator cannot be used, and a different regulator is used, make sure it is capable of a steady 50 PSI output. *Do not adjust fitting.*

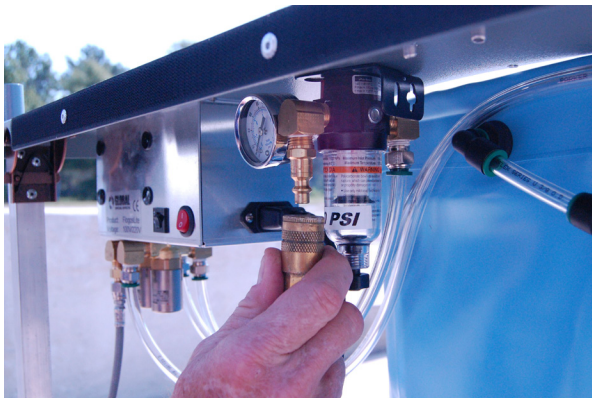


Attaching the Power Cord and Air Hose



Insert the female end of the power cord into the receptacle in the end of the lower right side of the Controller Enclosure. Attach the female quick coupling of the air hose to the male air fitting on the air filter regulator.

Global Special Effects technicians use a 33-Gallon 1.6-hp Craftsman air compressor capable of approximately 5.5 SCFM (155.76 Liter/Min) flow rate at 70 PSA (4.82 Bar).

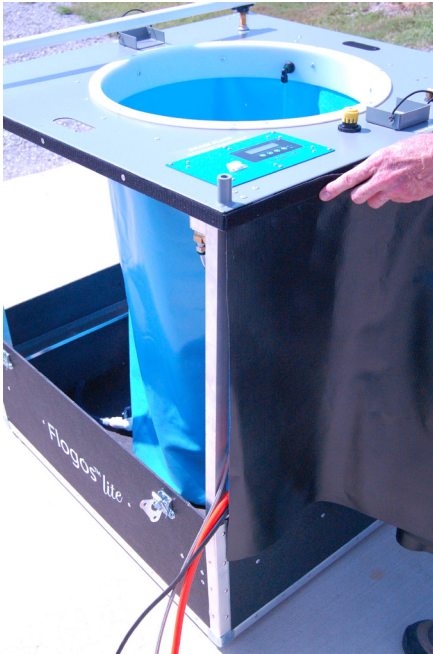


Levelling your Flogos-iite

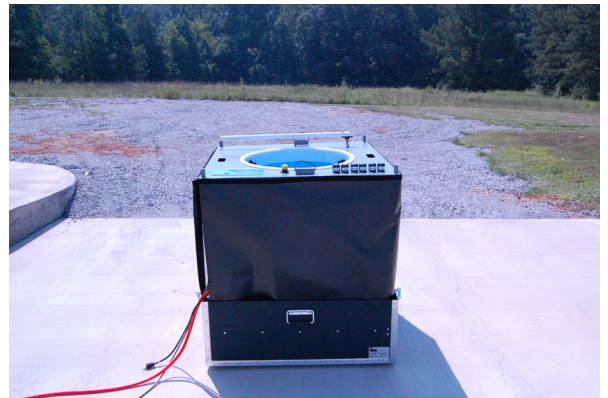


Use a carpenter's level to adjust the Flogos-lite as level as possible in both horizontal directions.

Attaching the Skirt

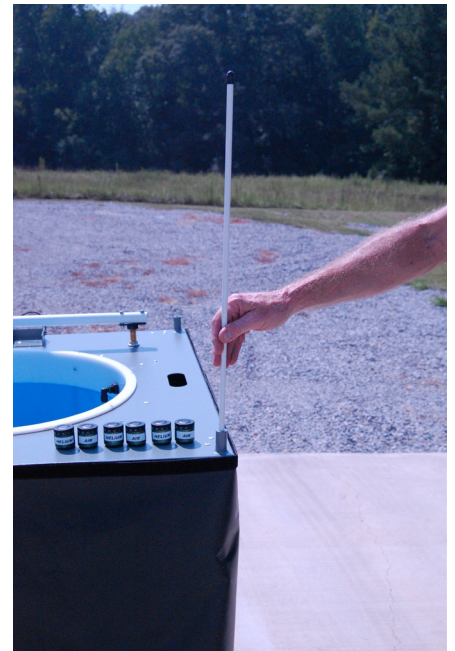


Remove the Skirt from the lower side of the Case Top. The Skirt is attached by pressing the hook and loop fastener attached to the Skirt to the hooks which are attached around the outer perimeter of the Inner Top beginning on the left hand side of the rear of the Inner Top. Continue attaching the Skirt around the Inner Top tucking the lower edge of the Skirt into the Lower Case as you proceed. The small gap left at the junction of the ends of the Skirt is where the hoses and power cord pass through.



Attaching the Windscreen

Remove the Windscreen from the Case Top where the Skirt was stored. Begin installing the Windscreen by inserting the upright supports, which have black caps, into the Windscreen support sockets.



Attaching the Windscreen

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At the inside of each of the four corners of the Windscreen, you will find a sewn “pocket.” While draping the Windscreen over the Flogos-lite, place each rod into one of these pockets.

Attaching the Windscreen

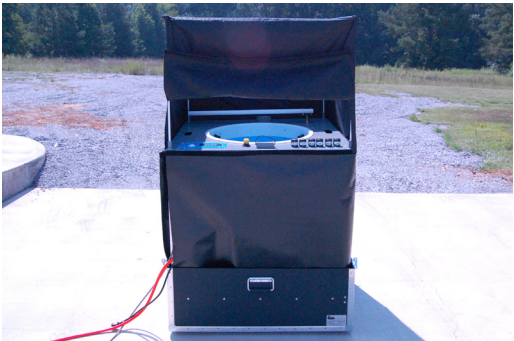


Pull the bottom edge of the Windscreen down and press the hook and loop fastener onto the loops on the top edge of the Skirt.

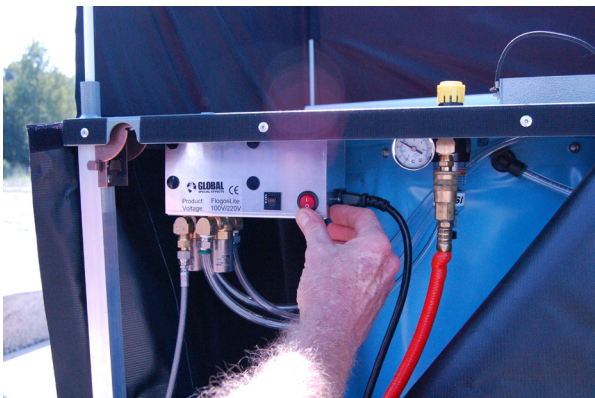
The Windscreen Opening



There is an opening at the rear of the Windscreen which should be oriented to the rear of the Flogos-lite in order to gain access to the controls. The flap covering the controls can be unzipped, raised upward, and secured by the small tabs of hook and look fasteners located above the flap. Access to the controls is then possible. During operation of the Flogos-lite, this flap should be lowered and secured by the hook and loop fasteners along its' lower edge.



Adjusting the Air and Helium

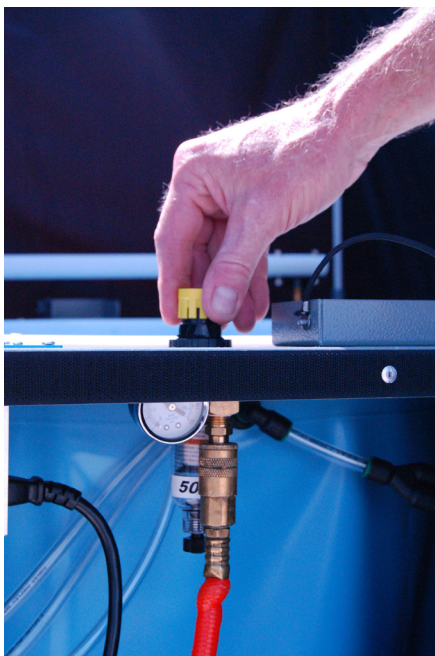


With power switch OFF, adjust the air and helium valves as required.

24"	Helium	2
	Air	6
36"	Helium	2
	Air	15

Adjusting the Air Regulator

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Make sure the air regulator is at 50 PSI. Adjust the air regulator as required.

Filling Water



Fill the Flogos-lite with the correct amount of de-ionized water so that the water level is 1.5 - 2 inches above the top of the bubbler heads. The fill height bobber indicator should flip over at correct fill height.

Adding Flogo Juice

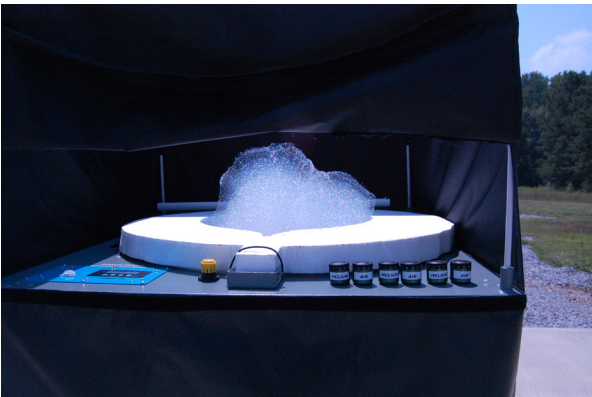
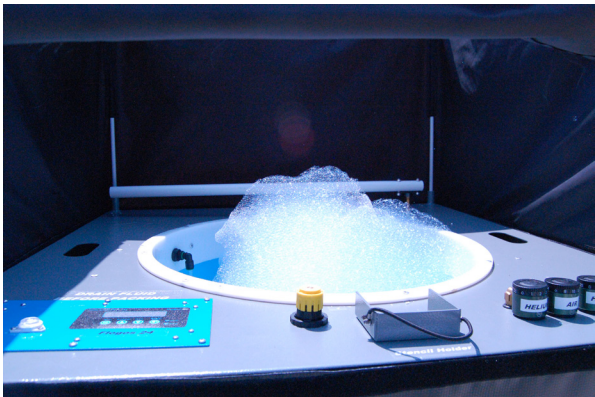


Mixture Quantities

24"	9 gal	42 oz
36"	25 gal	1 gal

In a seperate container, prepare the mixture of de-ionized water and Flogo Juice, 25:1. See the chart above to review approximate mixture quantities for each machine.

Priming the Flogo-lite



After adding the Flogo Juice to your tank, wait approximately 7 minutes for the Flogo-light to prime or until foam beings to rise slightly above the Inner Top. Place the stencil into place and begin your cycle. After innitial swipe, the Flogo-lite is fully primed and ready to run the desired cycle.

Draining the Flogo-lite

Flogos-lite™ At the end of the event, shut down the machine:

- Turn the power switch off
- Close the helium valve
- Turn off the air source
- Disconnect the helium and air
- Unplug the power chord

The Flogo-lite machine must be drained before breaking down and boxing up.

Additional Instructions

To change the Flogo thickness

- Press the red stop button.
- Change the time as directed above.
- (As a possible alternative, you may want to adjust the helium and air settings).
- Press the green start button.

To change the stencil

- Press the red stop button.
- Turn the red gas switch off (O).
- Remove the old stencil, replace with new one and secure.
- Turn the red gas switch on (I).
- Press the green start button.

Adding fluid

If desired, additional premix of Flogo fluid and water may be added at anytime to the refill reservoir at the lower right.

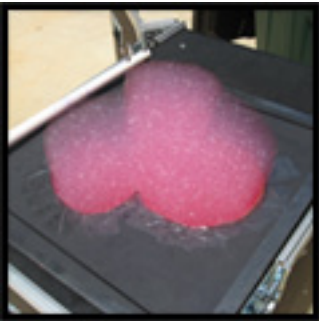
Adding Color

Flogos-lite™

- 1. Prepare the Flogo Juice mixture
- 2. Measure out 2 1/2 percent Flogos Juice Color Concentrate to the volume of Flogo Juice mixture used:
Ex: 3.2 ounces of Flogo Juice Color Concentrate per 1 gallon of Flogo Juice mixture. (25 ml of Flogos Juice Color Concentrate per 1 liter of Flogo Juice mixture).

Flogo Machine	Tank Reservoir	Color Concentrate to be Added
24"	8 gal	50-100 ml
36"	25 gal	125-175 ml

- 3. Before the machine is turned on and the foam begins to form, pour the Color Concentrate into the fluid reservoir tank. Be careful to pour slowly, and avoid splashing concentrate onto the walls of the tank.



- 4. The Color Concentrate can be modified to deepen or lighten the color. The concentrate can be adjusted by either increasing or decreasing the liquid color concentrate by increments of 1 percent. Please contact tech support for further questions.

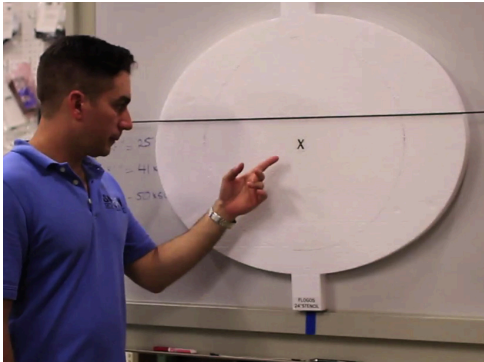
- 5. Flogo Juice Color Concentrate is 100% safe and environmentally friendly. It is made from the same active ingredients used in children's washable paints. Colored Flogo Juice mixture will temporarily stain skin and clothing, but washes out with soap and warm water. Care should be exercised not to spill excess colored Flogos mixture onto the concrete.



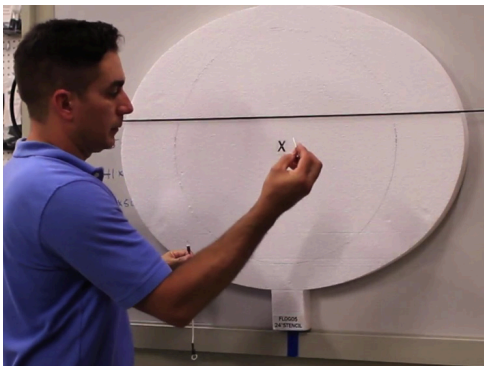
- 6. To fully remove the color from the reservoir tank, drain the fluid and spray the inside of the tank with water, and continue to drain the fluid. Repeat as necessary.

Stencil Cutting

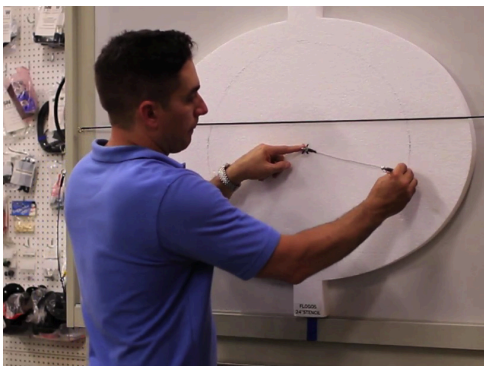
Flogos-lite™



Place your blank stencil on a wall.



Find the center of the stencil and mark it.



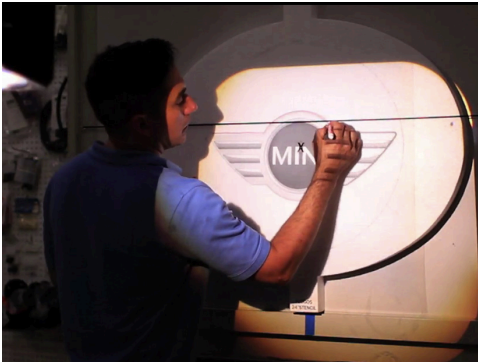
Using your guide wire, trace your circle.



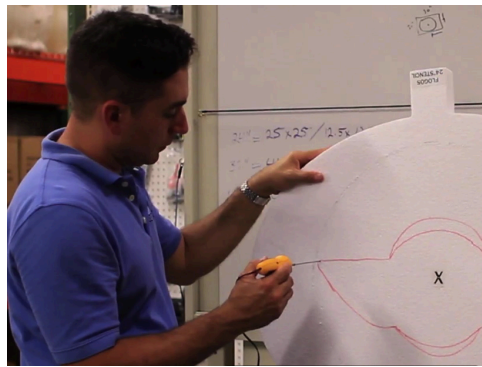
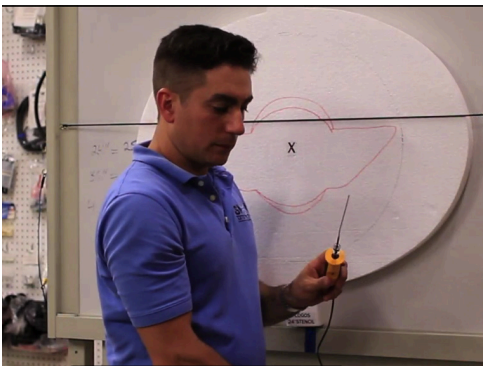
Project your image onto the stencil, making sure it fits inside your circle.

Stencil Cutting

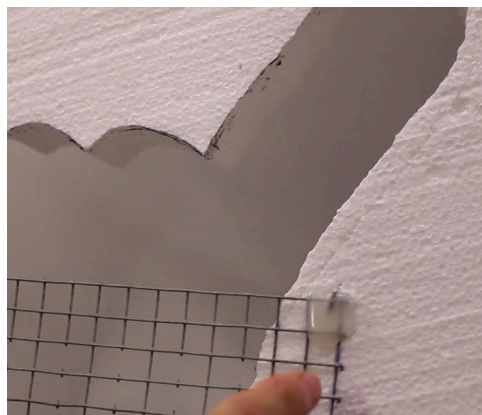
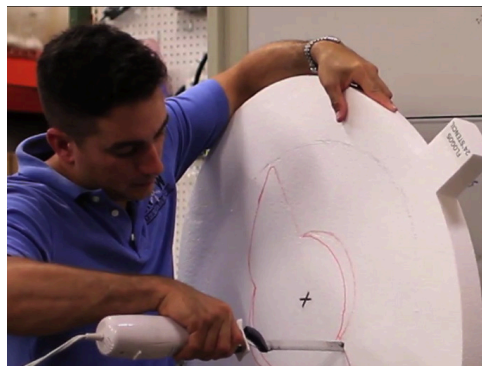
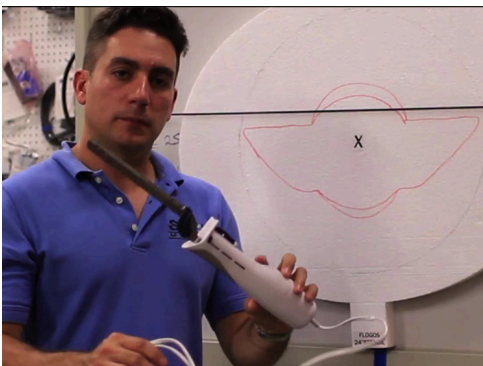
Flogos-lite™



Trace your image, making sure to exaggerate some lines so that your Flogo is created properly.



Cut out your stencil using a hot knife or electric knife. Remove the negative from the stencil. Always save your negative for creating new stencils.



You may need to attached wire mesh so that your Flogo comes out evenly.

Operation

Flogos-lite™

After the Set-Up steps have been completed, the Flogos-lite can be operated in either of the two modes: "Manual Override" or "Event Timer." Although there are similarities between the two modes of operation, each mode will be addressed separately as there are a few differences in the programming of the controller.

Press the rocker switch to turn the controller on. The switch is located on the front of the controller enclosure below the rear of the inner top. When the controller is powered the "Power" light on the face of the controller will illuminate. The screen of the controller will also illuminate but will dim after approximately three and a half minutes if now buttons on the controller are pressed. The controller is still powered if the "Power" indicator is illuminated. The screen will illuminate again when any buttons are pressed.

After power is applied and before any buttons are pressed, the screen will scroll indicating the states of the controller.

Manual Override Mode

To begin Manual Override Mode, press "Enter" once. The screen will then read, "Manual Override Priming, Press Enter." The helium and aire solenoids are now open and there should be an audible indication of bubbling in the tank. When in Manual Override mode there is no automatic transition to the Running Cycle. The Priming Cycle should be allowed to continue for approximately 7 minutes or until foam begins to slightly lift your stencil. Be certain that the tabs on the opposite sides of the stencil are located in the stencil holders.

Press "Enter" once and the Running Cycle begins. The screen should now read, "Manual Override Running, wait___s," specifying the number of seconds for the cycle, or cutting time. To change the cycle time press either the "Up" or "Down" arrow buttons to choose the time ranging from 5 seconds to 180 seconds. The "Manual/Enter" button must be pressed once to initiate the time change which will take effect after the current cycle completes.

To end the Manual Override cycle, press "Menu." The screen will now read "Status Idle" and will scroll through the different functions. During "Status Idle," the helium and aire solenoids will close and there should be no audible indication of bubbling in the tank.

Event Timer Mode

To set the Event Timer Mode, press "Menu." The screen will now read, "Time Events." Press "Manual/Enter" once. The screen should now display, "Timer Event:1." "Event:2" can be selected using the "Up" or "Down" arrow buttons. As both Event Timers are set by the same method only one will be covered here.

When the desired Event Timer is displayed, press "Manual/Enter" once. The start ("On") and stop ("Off") times for the event are displayed and the hour setting for the start time should be blinking. Using the "Up" or "Down" arrow buttons, select the hour for the event start time. AM or PM can be selected. To choose the hour setting, press "Manual/Enter." The hour setting is thus entered into the memory and the minutes for the start time are now blinking. Using the "Up" or "Down" arrow buttons, choose the start time in minutes. Press "Manual/Enter" once. The start time minutes are entered into the memory and the hours for the stop time are now blinking. The hours and minutes for the stop time is chosen exactly like the start time. When the correct stop time is chosen press "Manual/Enter" once. The screen now displays the On days and Off days for the event and Sunday is blinking. All the days of the week are set to Off by default. To choose which days are timer controlled (On) use the "Up" or "Down" arrow buttons to move the desired day to the "On" position. To lock a day in the "On" position, or to select a different day, press "Manual/Enter." After all the days have been selected or scrolled through, press "Manual/Enter." The screen will display the start and stop time and the days selected. If changes need to be made, press "Manual/Enter" and Edit and Deleter are displayed on the screen. With the arrow beside Edit, press "Manual/Enter" and the process of setting the On and Off hours, minutes, and seconds begins again with the On hours blinking. Scroll through when no changes are desired by pressing the "Manual/Enter" button. The On and Off days are displayed and if no changes are required, scroll through by pressing the "Manual/Enter" button until the screen, once again, displays "Edit Delete." If all hour, minutes, and days are correct, press the "Menu" button and those settings for that event are recorded in the memory. The second Event Timer is set using the same method.

Setting the Pass Code

If it is desired to lock the controller in order to prevent tampering when the operator must be absent from the Flogos-lite machine, the pass code must first be set. With the controller powered on, and while the screen scrolls through the different functions, press "Menu" once. This displays the Sub-Menu Level. Scroll through the Sub-Menu level using the Up or Down arrow buttons until "Set Passcode" is displayed. Press "Manual/Enter." The screen now displays "Set" and "Clear." With the arrow beside "Set" press "Manual/Enter." "Enter Passcode" is now displayed. Using the Up or Down arrow buttons, set the first digit and press "Manual/Enter." The number will change to an "X" for security and the next digit in the Pass Code is chosen like the first. After all of the digits have been chosen, press "Manual/Enter" to record the Pass Code into the memory. Although the Pass Code is now set, the controller is not "Locked" or secured by the Pass Code.

Locking the Controller

After the Pass Code is set, with the controller powered on and while the screen scrolls through the different functions, press "Menu" once. This displays the Sub-Menu Level. Scroll through the Sub-Menu Level using the Up or Down arrow buttons until "Lock" is displayed. Press "Manual/Enter." The controller is now locked and requires the Pass Code to be inputted to change any settings. The Pass Code is inputted the same way that it was originally set. When "Manual/Enter" is pressed after the last correct digit is entered, the screen returns to the Sub-Menu Level. To return to the Splash Screen, press "Menu."

Troubleshooting

Problem	Soution
Random characters appear on the time display.	Reset the Machine. To do so, turn it off, wait 10 seconds, and turn it back on.
The cutting arm fails to cut.	Reset the machine. To do so, turn it off, wait 10 seconds, and turn it back on. If that does not work, to get through the event, manually cut the Flogo using a piece of pipe. After the event, call tech support.
The clear, plastic cylinder below the air regulator has moisture in it.	Unscrew the black stopper at the bottom by turning it counter clockwise. After releasing the moisture, refasten the stopper.
The unitl will not turn on.	Check the power source.
One section of the Floge has large bubbles.	A hose hase come off of an aeration head. Turn off the machine, drain the fluid from the tank, reattach the hose to the head, and secure it with the tie strap.
The whole Flogo has large bubbles.	Either the fluid level is low or the fluid needs to be refreshed. Drain the tank and refill it with a fresh mixture.
The Flogo no longer achieves lift off.	Check the helium level in the tank.
The Flogo sticks to the foam column after being cut.	The foam is too wet. Decrease the air volume settings.

While it is possible for one person to set up and operate the Flogos Lite it has been found to be much easier if two persons set it up.

Set-up

- 1.** Position the Flogos Lite in the desired place for the event. Although the Flogos Lite will still need to be manually leveled, it is to your advantage to begin with a place as level as possible.
- 2.** Unlatch the 4 latches which secure the top of the case. Remove the top and set aside noticing that the Skirt and Windscreen are secured to the lower side of the case top.
- 3.** Remove the tank cover and set aside. Each of the two persons should be standing on the sides of the Flogos Lite where the oval shaped hand holds are located on the Inner Top. Each person grasps the inner top by placing their hand through the oval shaped hole. Lift the Inner Top keeping it relatively level as it is lifted. Each person then unfolds one of the legs by depressing the leg locking button located in the gap near the hinge point of the leg. The leg is folded downward until it locks into position with an audible "click". Each person then holds the Inner Top with the opposite hand and repeats the leg unfolding with the remaining leg making sure there is an audible "click" indicating the leg is locked into position.
- 4.** Lower the Inner Top until the legs rest on the Leg Locks located in each of the four corners of the lower case. Guide each leg into the square hole in its Leg Lock. There are no locking mechanisms to hold the legs into the Leg Locks. Each leg, though, must rest in the bottom of its' respective Leg Lock in order for the Inner Top to be properly leveled and for proper operation of the Flogos Lite.
- 5.** Attach the helium hose to the fitting on the gas control solenoid located on the lower side of the Controller Enclosure. Using two 9/16" open end wrenches (included) hold the fitting on the solenoid valve with one and tighten the gas hose fitting with the other. This prevents undue stress being placed on the solenoid valve which could damage it. Insert the female end of the power cord into the receptacle in the end of the lower right side of the Controller Enclosure. Attach the female quick coupling of the air hose to the male air fitting on the air filter/regulator.
- 6.** Use the bulls-eye level on the control panel or a carpenter's level to adjust the Flogos Lite as level as is possible in both horizontal directions.
- 7.** Remove the Skirt from the lower side of the case top. The Skirt is attached by pressing the hook and loop fastener attached to the skirt to the hooks which are attached around the outer perimeter of the Inner Top beginning on the left hand side of the rear of the Inner Top¹. Continue attaching the skirt around the Inner Top tucking the lower edge of the skirt into the lower case as you proceed. The small gap left at the junction of the ends of the skirt is where the hoses and power cord pass through.

(continued on next page)

Instruction Checklist

Flogos-lite™

8. Remove the Windscreen from the lower case top where the skirt was stored. Begin installing the Windscreen by inserting the upright supports which have black caps into the Windscreen support sockets. There is an opening at the rear of the Windscreen which should be oriented to the rear of the Flogos Lite in order to gain access to the controls. At the inside of each of the four corners² of the Windscreen you will find a sewn "pocket". While draping the Windscreen over the Flogos Lite place each rod into one of these pockets. Pull the bottom edge of the Windscreen down and press the hook and loop fastener onto the loops on the top edge of the Skirt. The flap covering the controls can be "unzipped", raised upward, and secured by the small tabs of hook and loop fasteners located above the flap. Access to the controls is then possible. During operation of the Flogos Lite this flap should be lowered and secured by the hook and loop fastener along its' lower edge.
9. Fill the Flogos Lite with the correct amount of de-ionized water³ so that the water level is 1.5 - 2 inches (3.8 – 5 cm) above the top of the bubbler heads. Add the correct amount of Flogos Juice Concentrate⁴.
10. Place the tank cover onto the tank which is required for proper priming.
11. With power switch OFF adjust air and helium valves as required⁵.

¹ Left and right on the Flogos Lite is determined when facing the controls from the operating position. This is also referred to as the "rear".

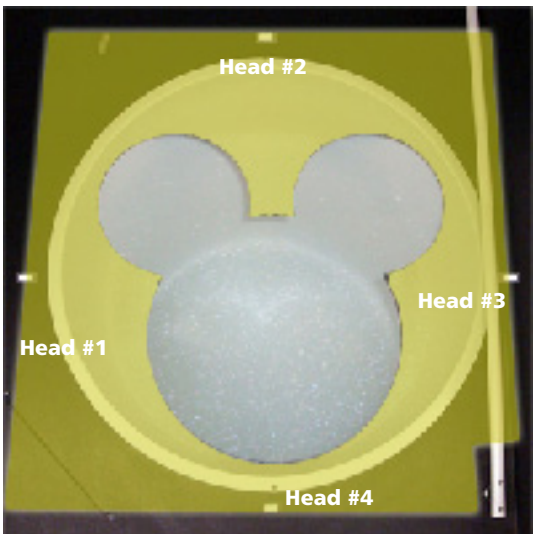
² 24" model has a total of 4 Windscreen support "pockets", 36" model has a total of 8

³ 9 gallons- 24" model, 25 gallons- 36" model

⁴ 42 ounces (1.24L) 24" model, 1 US gallon (3.78L)- 36" model

⁵ Helium setting-2, Air setting- 10 for optimum operation. Other settings will be used for special operations and effects or for maximum efficiency.

Orienting Flogos to Fly Upright



It may be desirable for some Flogos to be oriented a certain way while they fly. For example, we might want the Mickey Mouse Flogo to fly so the ears are at the top (See example 1. The yellow portions represent the stencil).

To accomplish this, it has been found if the helium settings are adjusted so the bottom head, is set lower than the top head, then the Flogo will stand up as it exits the machine.

Try the following settings for the Flogo 36 Machine.
(It has been found that these settings conserve helium usage.)

Head #1 Left Side	Helium 1	Air 15
Head #2 Top	Helium 3	Air 15
Head #3 Right Side	Helium 1	Air 15
Head #4 Bottom	Helium 0*	Air 15



Some Notes:

Your heads may not be oriented at the exact top, bottom, left, & right, so you made need to cut your stencil accordingly. (See example 2). From now on, newly-produced Flogos machines will have the heads located at the top, bottom, left, & right positions.

Also, you may need to tweak the suggested settings to accomodate your particular Flogo’s design and/or weather conditions.

Event Set-Up

Some standards need to be followed by all Flogo distributors regarding the proper, safe, and professional set-up of any Flogo event. We're all in this project together to promote Flogos in a standardized and coordinated method. Following are some guidelines for set-up:

- 1)** Be sure to set up stanchions around all of the Flogo machines being used. This will keep spectators away from the machines so they do not try to touch the Flogos as they come out of the machine. It will also serve to prevent people from changing the control dials. In addition, the stanchions give a very professional look.
- 2)** Make sure the helium and compressor settings are set in such a way that the Flogos travel UP, and do not come down and land on the ground for people to play with.
- 3)** Strap the helium tanks to the handles of the Flogo machines in an upright position.
- 4)** Set up the generators in a secure area (with barricades) away from the machines.
- 5)** Display the "sandwich signs" as shown in the figure. (Adjust as necessary for your event situation.)

