

# THE BIG BOY HYDROPONIC SYSTEM

by **HTG SUPPLY**  
GROW LIGHTS • HYDROPONICS • NUTRIENTS



FEATURING THE  
GAME-CHANGING  
**RHIZO  
CORE**  
BUCKET LID

The Big Boy Ebb & Grow Hydroponic System is a wonderful value to any indoor farmer. It's unique setup allows it to easily transform itself from the basic six pot model all the way up to an **18 POT HORTICULTURAL POWERHOUSE**. This system is capable of pumping the essential life giving nutrients directly into any plant without being slowed down by soil.

**PICTURED:** "The Ultimate Big Boy" hydroponic system has two 6 bucket add on's allowing for an 18 plant maximum setup.

## PARTS LIST

	Part Description	Qty.
A	55 Gallon Drum	1
B	10" RhizoCore Bucket Lid	6
C	Bucket lid w/ pour spout	1
D	3.5 Gallon Buckets	6
E	5 Gallon Controller Bucket	1
F	Float Valve	1
G	3/4" Elbow	6
H	3/4" Straight Connector	6
I	1/2" Straight Connector	2
J	3/4" Grommet	12
K	1/2" 25ft Black Tube	1
L	3/4" 25ft Black Tube	1
M	160gph Pump	1
N	400gph Pump	1
O	Digital Timer	2

## 6 BUCKET ADD ON

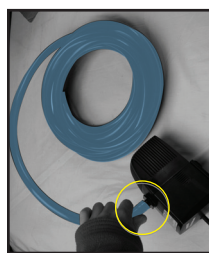
3.5 Gallon Bucket	6
10" Net Pot Bucket Lid	6
3/4" Grommet	6
3/4" Tee	6
3/4" 25ft Black Tube	1



## RESERVOIR ASSEMBLY



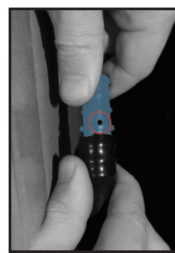
**STEP 1:** Open the large water pump and screw the 1/2" barbed attachment into the top of the pump.



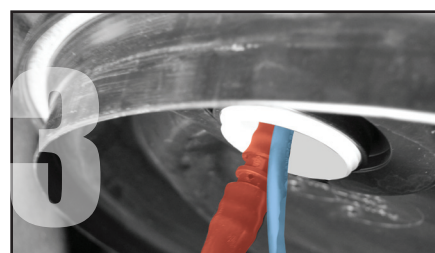
**STEP 1:** Cut a piece of the 1/2" tubing to 37" inches, and attach the 1/2" tubing to the barb on the pump.



**STEP 2:** Set the pump in the bottom of 55 gallon drum.



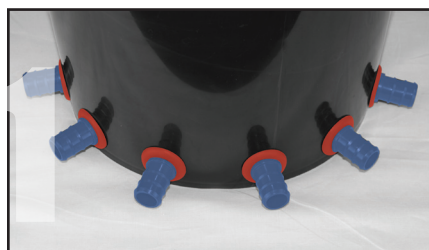
**STEP 2:** Insert one of the 1/2" straight connectors in the other end of the 37" tube that is attached to the pump. **DO NOT COVER THE HOLE** in the connector. This is going to be the "FILL" line which fills your controller bucket.



**STEP 3:** Run the 1/2" tube up through the hole in the white cap on the drum lid.

**STEP 3:** Run the power cord from the pump up through the hole in the white cap on the drum lid as well.

## CONTROLLER BUCKET ASSEMBLY



**STEP 1:** Open the Grommet bag and insert 6 grommets in 6 holes at the bottom of the 5 gallon Controller bucket. These can be a little tricky.

**STEP 1:** Insert the 3/4" straight connectors through the grommets into the 6 holes at the bottom of controller the bucket.



**STEP 2:** Take the 1/2" float valve, unscrew the retainer nut.

**STEP 2:** Insert the threaded end of the valve into the hole at the top of the bucket from the inside of the bucket, so that it sticks out the side of the bucket.

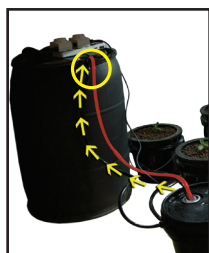


**STEP 3:** Make sure the valve is hanging straight down as you tighten down the retainer nut.

**NOTE:** The valve float arm is adjustable by loosening the wing nut and moving the float arm to the appropriate position then tightening the wing nut to lock into place.



**STEP 4:** Take the smaller pump and make sure the 1/2" connector is attached to the top of the pump. Set the pump in the bottom of the bucket off to one side. Run the power cord out of the pour spout on top of the 5 gallon bucket.



**STEP 4:** Attach a piece of 1/2" inch tubing to the pump. Make sure the tubing is long enough to run back to the 55 gallon drum. Run the tubing from the pump out the of the pour spout on top of the bucket and back to the 55 gallon drum.

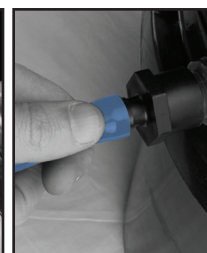


**STEP 5:** Run the tubing coming from the pump in the controller bucket back to the 55 gallon drum and through the white cap on the drum lid. Connect to 1/2 inch connector.

**STEP 5:** Connect the tube to the other 1/2" connector with hole. The other end of the connector should connect to a piece of tubing that will run to the bottom of the 55 gallon drum.

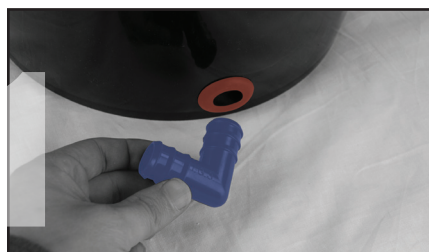


**STEP 6:** Screw the barbed adapter to the threaded end of the valve sticking out the side of the controller bucket.



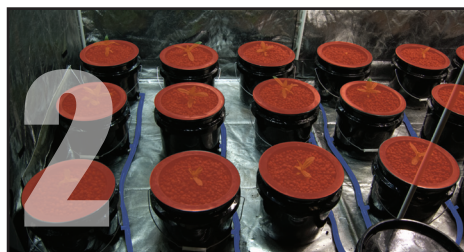
**STEP 6:** Attach your fill line to the barbed attachment you just threaded onto the valve.

## 6 GROW POT ASSEMBLY - \*IMPORTANT MAKE SURE THE SETUP IS PLACED ON A LEVEL FLOOR



**STEP 1:** Insert 1 grommet from the "Grommet Bag" into each of the 3.5 gallon buckets.

**STEP 1:** Insert the elbow connectors from the elbow Bag into each 3.5 gallon bucket. Slide them directly into the grommets.



**STEP 2:** Arrange the buckets in the appropriate pattern pertaining to how many 3.5 gallon buckets are in the particular setup. See the following page for diagrams on how to arrange 6, 12, and 18 pot setups.

**STEP 2:** Tubing will be ran differently depending on the size of the setup. Again... See next page for appropriate setup.

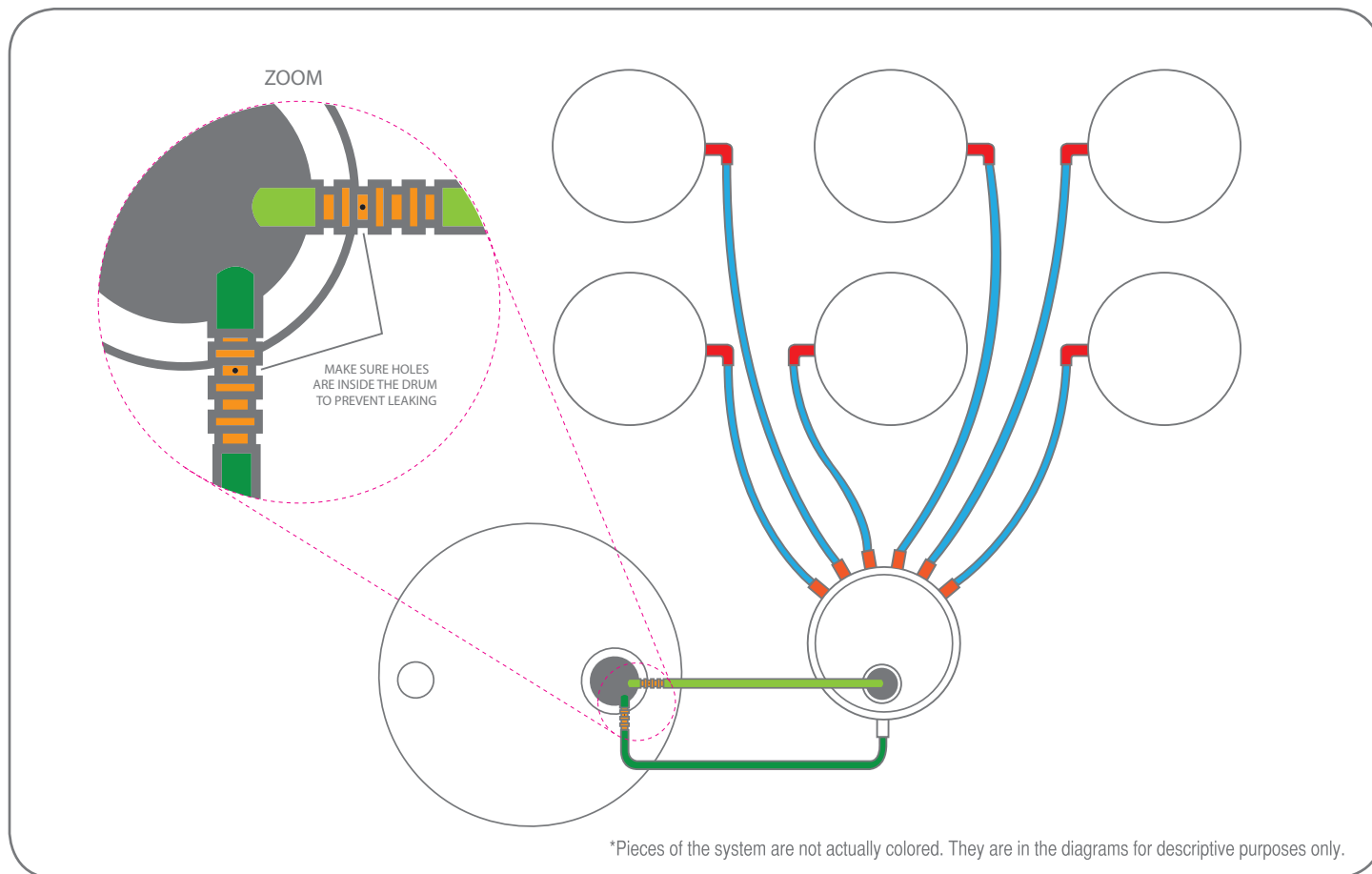


**STEP 3:** Set the 10" bucket lids on each of the 3.5 gallon buckets. These lids will be filled with a hydrostone grow medium.



**STEP 3:** Connect 1 end of the 3/4 inch hose to your controller bucket, and the other end to an elbow connector on a grow bucket. Repeat this for all six grow buckets.

# BIGBOY - 6 POT SYSTEM DIAGRAM



## 1/2 CONNECTORS

The 1/2 inch straight connectors are used to connect the fill line and the drain line. Make sure not to cover the hole on these when connecting your hoses.

## FILL LINE

The fill line runs from the larger pump within the 55 gallon drum up to a straight connector, and from the straight connector it runs to the barbed attachment on the float valve of the controller bucket.

## DRAIN LINE

The drain line runs from the smaller pump within the control bucket to a straight connector and from that straight connector a 37 inch hose runs down into the bottom of the 55 gallon drum.

## ELBOWS & T'S

The elbow connectors connect each 3.5 gallon grow bucket to the feeder lines, which are coming directly from the control bucket.

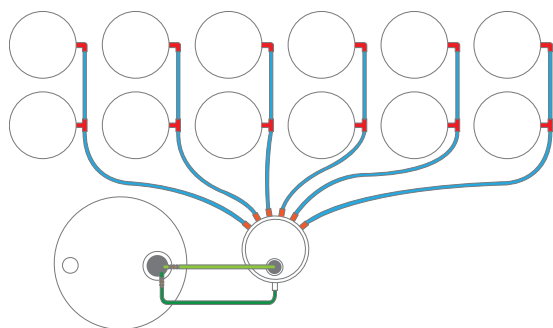
## 3/4 CONNECTORS

The 3/4 connectors attach the feeder lines to the 5 gallon control bucket. They are pushed through the grommets to form a tight seal.

## FEEDER LINES

The feeder lines deliver the plants the vital nutrients needed for rapid hydroponic growth. They come directly from the control bucket and feed each grow bucket in the setup.

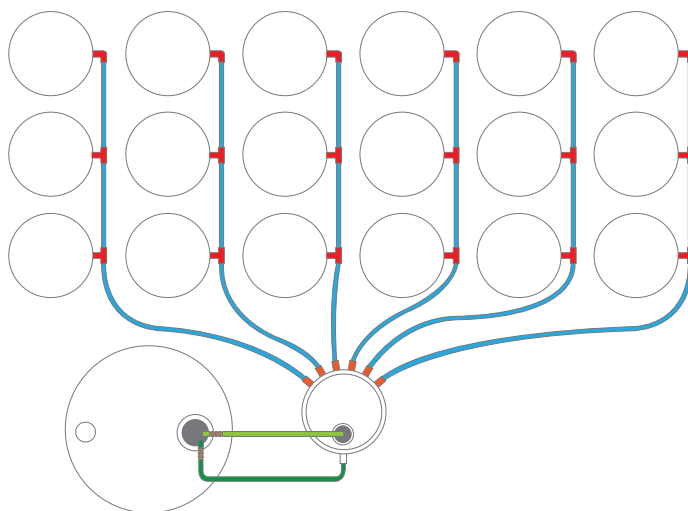
## BIGBOY - 12 POT SETUP



## ADD ON KIT ASSEMBLY

- STEP 1:** Insert the six rubber grommets into each 3.5 gallon bucket.
- STEP 2:** Insert the Tee Connectors through the grommets into the 3.5 gallon buckets.
- STEP 3:** Place these 6 buckets closest to the controller bucket.
- STEP 4:** Set the 10" Bucket lids on each 3.5 gallon bucket
- STEP 5:** Cut 3/4" tubing to connect all remaining barbs. Like the diagram above.

## THE ULTIMATE BIGBOY - 18 POT SETUP





## TIMER SET UP

**STEP 1:** Synchronize the two timers. An example on how to do this: Lets say its 3:30. Set one timer to 3:29. Set the other timer to 3:29. Then press the min button on each timer at the same time to set them both to exactly 3:30.

**STEP 2:** Once timers are in synch select one timer to be your "FILL" timer. Set this timer to run for roughly 20mins each time. Depending on plant size and plant type, frequency of water times may vary. Rule of thumb is every 3-4 hours and only when the lights are on. This could vary depending on how many sites are used.

**EXAMPLE:**

12hr light cycle from 12am to 12pm

ON Time 1: 12:00am

OFF Time 1: 12:20am

ON Time 2: 4:00am

OFF Time 2: 4:20am

ON Time 3: 8:00am

OFF Time 3: 8:20am

Plug the "FILL" pump in to the "FILL" timer.



**STEP 3:** Use the other timer to be your "DRAIN" timer. Set this timer to run for roughly 40mins each time. This timing could vary depending on how many sites are used.

**EXAMPLE:**

12hr light cycle from 12am to 12pm

ON Time 1: 12:20am

OFF Time 1: 1:00am

ON Time 2: 4:20am

OFF Time 2: 5:00am

ON Time 3: 8:20am

OFF Time 3: 9:00am

Plug the "DRAIN" pump in to the "DRAIN" timer.

## WATER LEVELS

Once the system is built you will need to set your water level and test your system for any leaks.

**STEP 1:** Fill your reservoir about 3/4 of the way full and turn on your "FILL" pump.

**STEP 2:** Lift the lid on your controller bucket to see your float valve and to verify you're getting water into the controller bucket.

**STEP 3:** As the system is filling check for any leaks.

**STEP 4:** Turn off the "FILL" pump and turn on the "DRAIN" pump. The water will then drain back in to the reservoir.

## FINAL TEST

**STEP 1:** Add a grow medium and run a test cycle. - HTG's Hydrostone works great -

**STEP 2:** Once the water is approaching the desired level. (About 1-2" below the top of the 10" lids) Locate the wing nut on the float valve, this will allow you to adjust the valve. Once you have set the optimal level then tighten the wing nut down nice and tight.

**STEP 3:** Check for leaks and make sure your flooding to your desired level. Also make sure you're "DRAIN" pump is draining all but about an inch of water in the bottom. If no final adjustments are needed you are ready to add plants and nutrients.

**STEP 4:** Pick up some of your favorite nutrients from HTGSupply.com, add your favorite type of plant to the grow medium, fire up the Big Boy, and watch your plants take off.

## HYDRO TIPS

1. Most hydroponic systems should have a PH kept between 5.2-6.0, check the nutrient companies recommendations for best results.
2. It is a good idea to drain and refill your system at least every 2 weeks.
3. Top off reservoir with plain water in between flushes.
4. If using rockwool as a grow medium, one should presoak the rockwool for 12 hours in a 5.5 PH solution to correct the PH before planting in it.
5. Water temperatures above 75 degrees decreases the amount of oxygen water can hold. This will allow for bad bacteria to grow in the water, leading to potential root rot.
6. In between plant cycles the hydro system should be cleaned and sterilized. This will prevent any pathogens from spreading crop to crop.

Check out  to find many great nutrients to use with the Big Boy Hydroponic System.

