DEEP WATER CULTURE CONTROLLER (120V 60Hz)

INSTRUCTIONS

DWC CONTROLLER BUCKET SYSTEM

Thank you for purchasing the okayhydro DWC buckets system Controller, the most efficient ebb and flow system on the market. Through this customizable growing system, you can set up an indoor garden that fits your needs and space requirements, as well as modify it at any time by adding or removing buckets. The reservoir with fail-safe overflow protection, meaning that if your float valves ever stop functioning, the emergency failsafe upper float switch will immediately power down the system. No more worry about flooding or damage to your plants and grow area.

WHAT'S IN THE BOX

1 – 6 Gallon/25 Liter Controller Bucket
1 – 7⁄8" Barbed Tee Connector
1 – 24Hours Machine Timer
2 – 1000L/h Pumps
2 – 1⁄2" Barbed Straight Connectors
6 – 7⁄8" Barbed Straight Connectors
2 – 1⁄2" Rubber Grommets
6 – 7⁄8" Rubber Grommets
1 – 20' length of 1⁄2" tubing
Depend on place style, you should need particular Barbed Tee Connectors or Barbed Straight Connectors.
Please contact us in advance.

USING THE GROW FLOW CONTROLLER

1. Plan the layout for buckets, controller, and reservoir. Choose an area where the controller can be within 10 feet of the reservoir. Make sure that controller bucket and grow sites are all on a flat, level surface.

2. Install two grommets in the reservoir lid. Depending on your reservoir, you may need to drill holes for the grommets.

3. Install six grommets in the holes on the side of the controller bucket. Install two grommets in the controller lid. Compress and twist the rubber to fit each grommet into place.

Install straight connectors symmetrically around container and lid

4. Place one of the submersible pumps into the reservoir. Secure the pump to bottom of the reservoir with the pump's attached suction cups. *NOTE: An extension cord may be needed if reservoir isn't close to controller bucket.*

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5. Connect the pump inside the reservoir to the interior end of the vacuum break elbow fitting with a length of the included 1⁄2" tubing. For this and all subsequent lengths, cut the tubing as appropriate.

6. Connect the exterior end of the vacuum break to either of the barbed straight connectors on the lid of the controller bucket with a length of 1⁄2" tubing.

Two Unused outlets connected with tubing

7. Place the other submersible pump in the controller bucket directly under the remaining barbed straight connector in the cover. The pump should be on the side opposing the lower float switches, so that it doesn't interfere with their operation. Connect the pump to the remaining barbed straight connector inside the controller bucket lid. The recommended length of 1⁄2" tubing for the connection is 10 1⁄2".

8. Connect the exterior side of the remaining grommet to the grommet on the lid of the reservoir with a length of 1⁄2" tubing.

9. Optional: Reduce drain cycle related noise from reservoir by connecting the interior side of the grommet to a length of 1⁄2" tubing long enough to end just above the bottom of the reservoir.

Three unused outlets connected with tee connector and tubing

INSTRUCTIONS

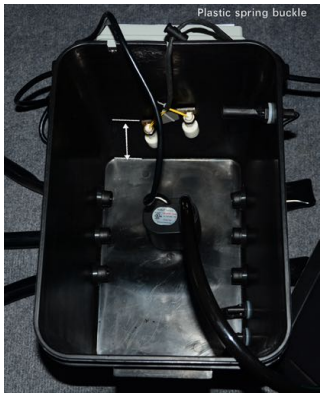
10. Attach 6 to 48 buckets with tubing to the outlets near the bottom of the controller bucket. Note: If some of outlets is left unused, connect them to each other with a piece of tubing. For a lone outlet left unused, put a short piece of tubing on it and crimp it shut, preferably with a zip tie. An even distribution of buckets per outlet decreases fill/drain time and increases the system's efficiency.

11. Adjust the water sensor heigh according to planting water level. Compress the plastic spring buckle, adjust the sensor set height, in order to adjust the water level.

12. Plug the system's power cord into a power source. The green LED on the front right marked "Drain Cycle" should come on. The timer is set to drain by default (all timer increments are pushed away from center of clock).

13. Test the system by filling the reservoir with regular water (no nutrients or media). Set the timer to the desired fill/ drain cycle. To set fill times, pull out the increments – which are 15 minutes each – with a pen or fingernail.
Let the system complete one fill and drain cycle for a duration of 30 minutes.

14. Place transplants no less than 5" from the top of the bucket, to allow water to feed the roots.



Compress the plastic spring buckle, adjust the sensor set height, in order to adjust the water level.

OPERATE SWITCH ON THE TIMER

1. To set the time, remove the clear front cover from the timer and rotate the minute hand until you are the correct time of day. Please ensure that the front cover is refitted correctly.

2. The timer has a three position override switch:
In position 'I' the output sockets will be turned on at all times regardless of the timer settings.
In position 'O' the output sockets will be turned off at all times regardless of the timer settings.
When the clock is in position, the output sockets will be turned on or off in harmony with the timer settings.

3. The time that sockets are required to be switched 'ON' when in the clock position is set by moving the tappets to the outer position for the required period.

TIPS

- The Okayhydro controller is for indoor use only.
- Setup buckets, controller, and reservoir all on the same flat, level surface. Make sure all tubing going to the grow sites is flat along the same level surface.
- Don't move the buckets while they are filling/draining, as this may cause flooding.
- Don't fill reservoir while the buckets are filling/draining. Add to the reservoir only after drain cycle has finished (controller and buckets are empty).
- Use a 110-120V, 60Hz power source with this system.
- Change nutrient solution in reservoir every seven to10days.
- Clean out pump filters and the vacuum break elbow fitting hole, as well as check float switches for obstructions as needed.

INSTRUCTIONS

- Many plants require3–4 cycles per day for optimal growth. Excessive cycling will cause premature pump failure.
- Regularly in spect all tubing for kink sand cracks.
- Move pump around while submerged to remove air bubbles at the impeller.
- The Okayhydro Bucket System is equipped with an over flow safety float/emergency switch on the inside of the top of the bucket. If one of the upper adjustable float switches were to fail, this switch will act as the first failsafe upper float switch.
  NOTE: *This switch will only prevent flooding with buckets 12" or taller.*

ROUBLESHOOTING	
PROBLEM	**SOLUTION**
The buckets are overflowing	Make sure all buckets, controller bucket, and reservoir are on the same flat level surface. Make sure the vacuum break is installed correctly. You can tell it is working if water drips back into the reservoir during the fill cycle.
The Error light is flashing	Make sure the adjustable float valves are not positioned too high. Test the functionality of the adjustable float switches. When both are raised manually, does the fill pump stop? It should. Make sure Overflow Switch is oriented properly 
The bucket fittings are leaking	Make sure rubber washers are installed correctly, and fittings are tightened down adequately. If the fitting hole in the bottom of the outer bucket isn't smooth, clean up with a deburring tool.
The buckets won't fill	Check fill pump for proper operation. Check screens inside buckets. Check for blockages, replace tubing if necessary
Drain pump stays on	Move drain pump away from lower floats, make sure it isn't preventing them from fully engaging.

Warrantee and Liability

Timer Relay units carry a 2-year warrantee (valid to our terms and conditions) with exception to faulty fuses and units that have been tampered with. In the unlikely event that you find any fault with your unit, please do not hesitate to get in touch.

The manufacturer shall not be responsible for any damage caused by operation of the unit, be it incidental or consequential; or of any type; including, without limitation, damage or injury, caused to other products, machinery, or buildings. Nor will responsibility be accepted for loss of time or profit, loss of finished product, or for any inconvenience caused in any way whatsoever.