



Eco Garden House Assembly Guide

88" x 72" x 48" (1.8m x 1.2m x 2.2m)



Thank you for purchasing the Eco Garden House indoor greenhouse. Please read these instructions thoroughly before assembling or using the Unit. The terms and conditions contained in this Assembly Instruction Guide are the only terms which govern the sale of the unit by The Plastics Group, Inc (TPG). and the direct or indirect use of the unit by you, your representative, or any third party. By assembling or otherwise using the unit, you accept and agree to be bound and abide by the terms and conditions contained herein.

The Plastics Group, Inc.
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Check Out Our Site for:

- Video Assembly Guide
- Customer Support
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www.EcoGardenHouse.com

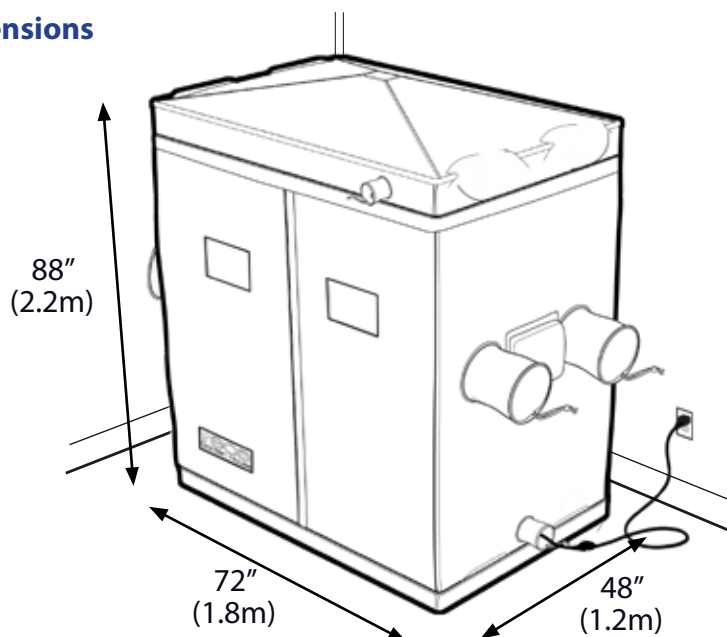
Be sure to remove all items from the box. Verify all pieces before assembly.

Important Eco Garden House information: READ ENTIRE ASSEMBLY GUIDE PRIOR TO ASSEMBLY OR USE. FAILURE TO READ ENTIRE ASSEMBLY GUIDE PRIOR TO ASSEMBLY OR USE MAY RESULT IN INJURY AND PROPERTY DAMAGE!

Determining Your Location

- Make sure that you have measured the final location for your Eco Garden House (length, width, & height).
- A level floor is required for the placement of the tanks due to liquid water contents.

Eco Garden House Dimensions



- ⚠ • Assemble at final location. Unit will be able to slide short distances to final location (Unit cannot be slid once filled with water).
- ⚠ • DO NOT stand on tank during assembly.
- ⚠ • For easier installation and personal safety, it is recommended that two people install this product.
- ⚠ • Verify that Unit is disconnected from all power sources prior to assembly.

Location Needs

- Space to fit 72" x 48" x 88" (1.8m x 1.2m x 2.2m)
- Air Ventilation
- Access to Water Supply
- Control Panel Access
- Back Access
- Power Plug (For 110V)
- Minimum of 48" x 88" (1.2m x 2.2m) flat surface for assembly
- Recommended 2' (.6m) spacing between unit and wall

Tools Required

- #2 Phillips Screwdriver
- Wire Cutter
- Step Stool
- Crescent Wrench
- Level
- Flat Head Screwdriver (Small)

Possible Tools Needed

- Drill with 1/8" bit
- Rubber Mallet

Accessories Needed

- 4' (minimum) Extension Cord for the Controller
- 4' (minimum) Extension Cord for the Water Pump
- Standard 3/4" female fitting Garden Hose with enough length to connect drainage tank to drainage area







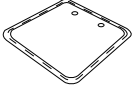
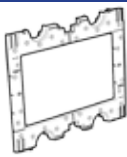





In Case of Missing Parts: Please Do Not Return to Store!










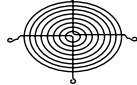
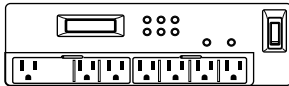




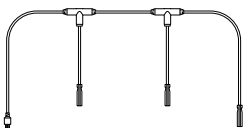

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












Included Components

Kit	Part	Qty.	Part #	Reference	Description
Tent Shroud		(1)	SHR601011		Three layer Fabric, adhesive, Mylar Tent covering with various fittings
	Shroud Top	(1)			
	Left Side Shroud	(1)			
	Right Side Shroud	(1)			
	Control Cover Shroud	(2)			(Components comes attached to Left and Right Shroud with hook and loop fasteners)
	Shroud Tray	(1)			
	4" x 4" Black Shroud Swatch	(1)	SHR601012		(Located in Drip Kit Pack)
Frame Assembly		(1)			Note: There will be small holes in the frame, this is due to the manufacturing process, they will not interfere with the integrity of the structure.
	Side Wall Panel	(4)	Eco-Frame Assembly		
	Roof Truss Male Section	(2)	Eco-Truss C		
	Roof Truss Female Section	(2)	Eco-Truss D		
	Support Beam Male Section	(3)	Eco-Beam B		
	Support Beam Female Section	(3)	Eco-Beam A		
	Metal Stampings	(8)	BRA601043		(Component comes pre-installed on the frame assembly)

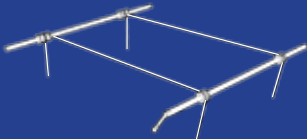










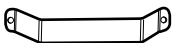













Included Components (Cont.)

Kit	Part	Qty.	Part #	Reference	Description
Fan/Digital Display Kit					
	Thermal Control Unit	(1)			
	USB Power Supply Cord	(1)			24" Power Cord
	Thermal Control L-Bracket	(1)			
	Shim Spacer	(1)			
	Screw	(2)			
	Fan	(2)			High Speed 120mm USB Fans
	Nuts, Bolts	(8 each)			Pre-installed on Fan
	Fan Grills	(4)			Pre-installed to Fan. 120mm
	Control Panel	(1)	CON601010		7, 110 volt outlets on two separate timing circuits with two (2) "always on" USB power ports with digital programming and surge protection.
(4) High output full spectrum T5 vertical side light (4 Bulb)					
	Reflector	(4)			
	Single Bulb Light Unit	(4)			
	46 inch Fluorescent Bulb	(4)			
	Metal clips	(8)			
Power Cord		(1)			
(1 unit) High output full spectrum T5 horizontal side light (8 Bulb)					
		(8) Bulb fixture	LIG601013		T5 fixture 8-Bulb Overhead Light Unit

Included Components

Kit	Part	Qty.	Part #	Reference	Description
Drainage Tank Kit					All parts come pre-installed in the gray water tank
	Gray water Tank	(1)	Eco-Tank F		
	Water Sump Pump	(1)	PUM601018		110 Volt low head (approx. 4 feet) low pressure pump (component already installed in Gray water Tank)
	SS Drain Plate, Drain	(1)	PLA601023		Stainless Steel 18 gauge pump mounting plate laser cut
	SS Screws	(4)	SCR601032		Pre-installed Screws used to mount the SS pump mounting plates to the tank's structure members
	3" Nipple	(1)	FIT601026		3 inch plastic gray nipple
	3/4" MPT Garden Hose fitting	(1)	FIT601022		3/4" MPT Garden Hose fitting
	Fill Cap, Drainage Grey	(1)	CAP601028		Soft plastic water tank caps, Grey for drainage
	Water Level Gauge & Grommet	(1) (1)	CAP601040 P41420		
Freshwater Tank Kit					All parts come pre-installed in the freshwater tank
	Freshwater Tank	(1)	Eco-Tank E		
	Water Pump	(1)	PUM601018		110 Volt low head (approx. 4 feet) low pressure pump (Component comes pre-installed in freshwater tank)
	SS Screws	(4)	SCR601032		Pre-installed Screws used to mount the SS pump mounting plates to the tank's structure members
	SS Drain Plate, Freshwater	(1)	Pla601016		Stainless Steel 18 gauge pump mounting plate, laser cut
	8 Way Manifold	(1)	FIT601025		"8" way swivel end manifold with integral filter, adjustable flow controls
	Fill Cap, Freshwater Blue	(1)	CAP601021		Soft plastic water tank caps, Blue/Purple for freshwater
	Water Level Gauge & Grommet	(1) (1)	CAP601040 P41420		
	3" Nipple	(1)	FIT601026		3 inch plastic gray nipple

Included Components (Cont.)

Kit	Part	Qty.	Part #	Reference	Description
Light Height Adjustment Assembly		(1)	LIG601015		Light raise/lower adjust system of two (2) steel bars, IM handle with integral return spring, pulleys/bobbins, pin, screws, cordage, and "J" hooks assembled and wrapped in cardboard sleeve
	IM handle	(1)			Pre-assembled
	Light Adjustment Bars	(2)			
	Cordage	(1)			
	"J" Hooks	(8)			
Drip Supply Kit		(1)	KIT601020		Pre-bagged kit of; 25 feet of supply tubing, 30 feet of 6" spacing weeper tubing, 10 "Tees", 10 stakes, 10 end plugs
	Black Supply Tubing (25 ft)	(1)			
	Brown Weeper Tubing (30 ft) (6" spacing)	(1)			
	1/4" Barbed Tees	(10)			
	1/4" Transfer Barb	(10)			
	Stakes	(10)			
	1/4" End Plugs	(10)			
Hardware Kits					Packaged in the Drip Supply Kit
	Stainless Steel U-Brackets	(8)	KIT601042		
	Plastic Plates	(2)	Eco-Plate		
	Washers	(24)	KIT601034		
	Cap Nuts	(16)	KIT601034		
	Spacers	(4)	KIT601034		
	Self Tapping Screws	(34)	KIT601034		
	1/4"-20 Bolt 1.75"	(6)	KIT601034		
	1/4"-20 Bolt 5"	(10)	KIT601034		
	Cross Support Wires	(2)	KIT601041		
	Hook / Hook Turnbuckles	(2)	KIT601041		Attached to Cross Support Wires
	S-Hooks	(2)	KIT601041		
	Controller Corner Brackets	(2)	KIT601042		
	Triangular Support Bracket- Gray	(2)	KIT601042		
	Zip Ties	(1)	KIT601034		4 count 21" 50 lb. test



WARNINGS

1. A level floor is required for placement of the tanks due to the liquid water contents. The floor must be able to support loads up to 125 lbs per square foot and 1,000 lbs total load for the entire unit (this includes approximately 500 lbs. of additional load required for planting).
 - a. The Floor Tanks provide approximately 125 lbs per square foot of support for planting.
 - b. The Roof Truss members support a maximum total weight of 40 lbs (no more than 10 lbs maximum per truss of hanging weight).
 - c. A combined 1,000 lbs Maximum Total Unit Load Capacity, including all water/liquid, hanging and stationary loads inside of the unit, and anyone working around the unit.
2. Do Not mix old and new batteries
3. Do Not mix alkaline, standard, or rechargeable batteries
4. **WARNING USE CAUTION.** Edges may be sharp. Improper handling or use may result in personal injury or death. Always wear work gloves, eye protection, and long sleeves when assembling or performing any maintenance on the unit.
5. **Before starting assembly, please read through the assembly instructions.** Remove all of the items from the box and arrange them in an orderly manner. Make sure to use a "Team Lift" with two (2) people when removing the large plastic tanks, the main horizontal light unit, and any other large items from the packaging. Take care that some items include multiple parts/components, all of which are needed for correct assembly.
6. This unit is designed and intended to be an "Indoor Unit" only! This product is not designed for exposure to the outside environment.
7. The included power strip/timer/controller is equipped with a "ground fault" detection system. It will indicate when the unit is not correctly connected to a proper ground. This grounded connection is mandatory and required for safe and proper operation of the unit. Do not bypass these grounded connections! Ensure any circuit not providing the proper ground and voltage supply is repaired or replaced immediately!
8. The included Reflective Shroud/Tent must never be exposed to direct or indirect contact with an open flame, hot/heating electrical devices.
9. This unit is not a playhouse or a toy; it is designed, engineered and manufactured for the purpose of Indoor Greenhouse functions and is not to be used for any other purpose.
10. All of the above and included "warnings" and "limitations" within this Assembly Instruction Manual must be strictly followed. In the event that the terms and conditions contained herein are not strictly followed, any warranty provided herein shall be void and you agree to release TPG from any liability hereunder or otherwise related to the Unit and any claim, demand, suit, settlement, cause of action, judgment, liability, loss, or expense arising out of or related to in whole or in part, the Unit and the use or misuse thereof.

Limited 1 Year Warranty

TPG warrants to you that for a period of one (1) year from the date of purchase of the Unit as evidenced by a dated, non-faded, legible original purchase receipt ("Warranty Period"), that under normal use and service, such Unit will materially conform to the specifications set forth in this Assembly Guide and will be free from material defects in material and workmanship. Without limiting the foregoing, Unit defects or damage caused or arising in whole or in part by or from (i) improper, incorrect, or inappropriate handling, assembly, storage, maintenance, or use, (ii) neglect, (iii) commercial use, or use other than for household purposes, and (iv) alteration, including without limitation painting or coating are excluded from this limited warranty. EXCEPT FOR THE LIMITED WARRANTY SET FORTH IN THIS PARAGRAPH, TPG MAKES NO WARRANTY WHATSOEVER WITH RESPECT TO THE UNIT, INCLUDING ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; OR WARRANTY AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY; WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE. IN THE EVENT WARRANTIES EXIST AT LAW THAT MAY NOT BE DISCLAIMED, YOU AGREE THAT SUCH WARRANTIES SHALL BE LIMITED IN DURATION TO THE WARRANTY PERIOD.

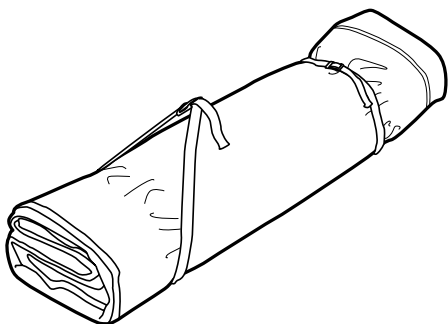


WARNINGS: “Third Party Products” included with the Unit:

Products manufactured by a third party (“Third Party Product”) may constitute, contain, be contained in, incorporated into, attached to or packaged together with, the Unit. Third Party Products are not covered by the TPG limited warranty. For the avoidance of doubt, TPG MAKES NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO ANY THIRD PARTY PRODUCT, INCLUDING ANY WARRANTY OF MERCHANTABILITY; WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; WARRANTY OF TITLE; OR WARRANTY AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY; WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE. TPG shall not be liable for a breach of warranty unless: (i) you give written notice of the defect, reasonably described, to TPG within ten (10) days of the time when you discover or ought to have discovered the defect; (ii) TPG is given a reasonable opportunity after receiving the notice to examine such Unit and you (if requested to do so by TPG) return such Unit to TPG at your cost for the examination to take place there; and (iii) TPG reasonably verifies your claim that the Unit is defective. With respect to any such Unit during the Warranty Period, TPG shall, in its sole discretion, either: (i) repair or replace such Unit (or the defective part) or (ii) credit or refund the price of such Unit at the pro rata rate reflecting applicable depreciation and use provided that, if TPG so requests, you shall, at your expense, return such Unit to TPG. IN NO EVENT SHALL TPG BE LIABLE FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES, LOST PROFITS OR REVENUES OR DIMINUTION IN VALUE, ARISING OUT OF OR RELATING TO ANY BREACH OF THE TERMS OF THIS ASSEMBLY GUIDE, WHETHER OR NOT THE POSSIBILITY OF SUCH DAMAGES HAS BEEN DISCLOSED IN ADVANCE BY YOU OR COULD HAVE BEEN REASONABLY FORESEEN BY YOU, REGARDLESS OF THE LEGAL OR EQUITABLE THEORY (CONTRACT, TORT OR OTHERWISE) UPON WHICH THE CLAIM IS BASED, AND NOTWITHSTANDING THE FAILURE OF ANY AGREED OR OTHER REMEDY OF ITS ESSENTIAL PURPOSE. IN NO EVENT SHALL TPG’S AGGREGATE LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT, WHETHER ARISING OUT OF OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, EXCEED THE TOTAL OF THE AMOUNTS PAID TO TPG FOR THE APPLICABLE UNIT.

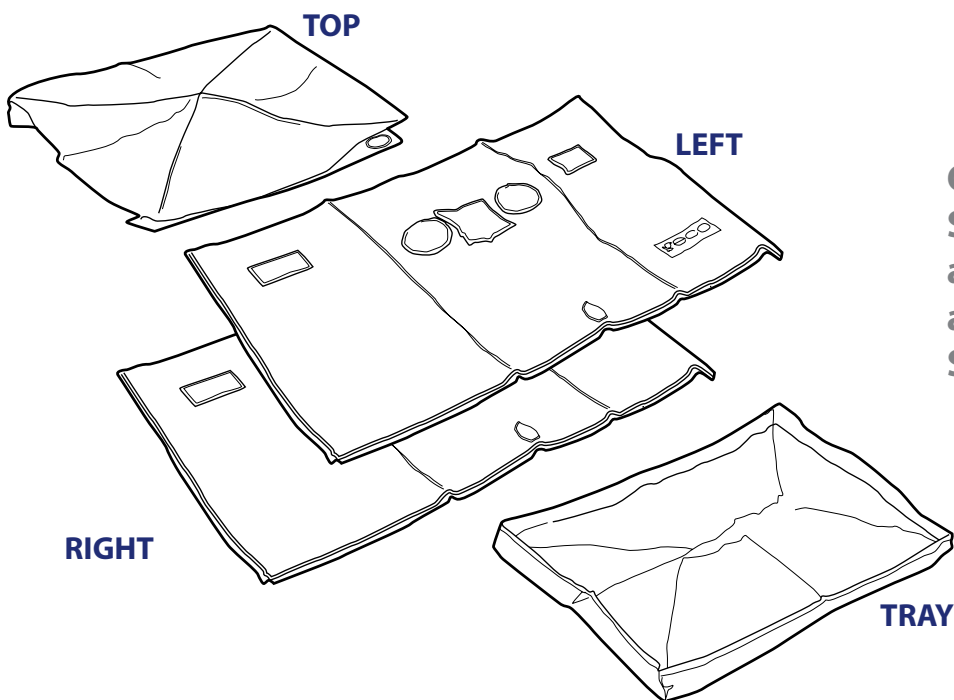
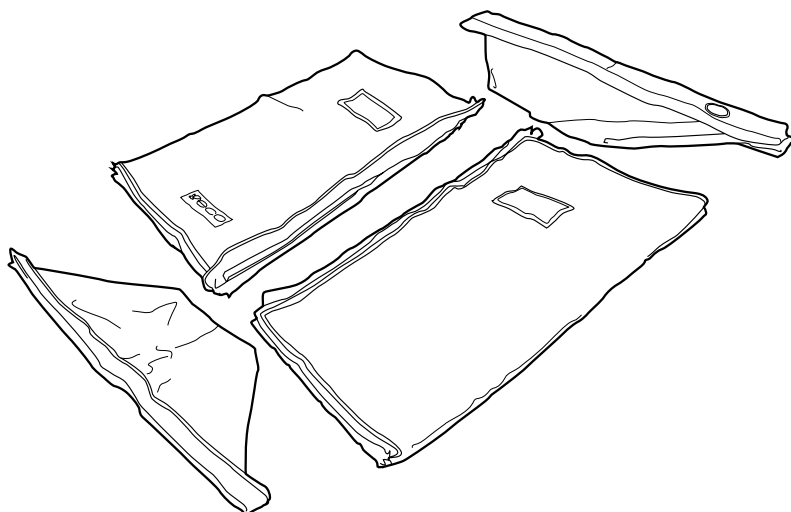
1

Unwrap and Unzip Eco Garden House Shroud



Loosen and remove the straps from the shroud.

Unroll/unfold shroud and unzip into separate pieces.



Contents: Roof/ Top Shroud, two Side Shrouds, and a Shroud Tray. Set aside everything but the Shroud Tray.

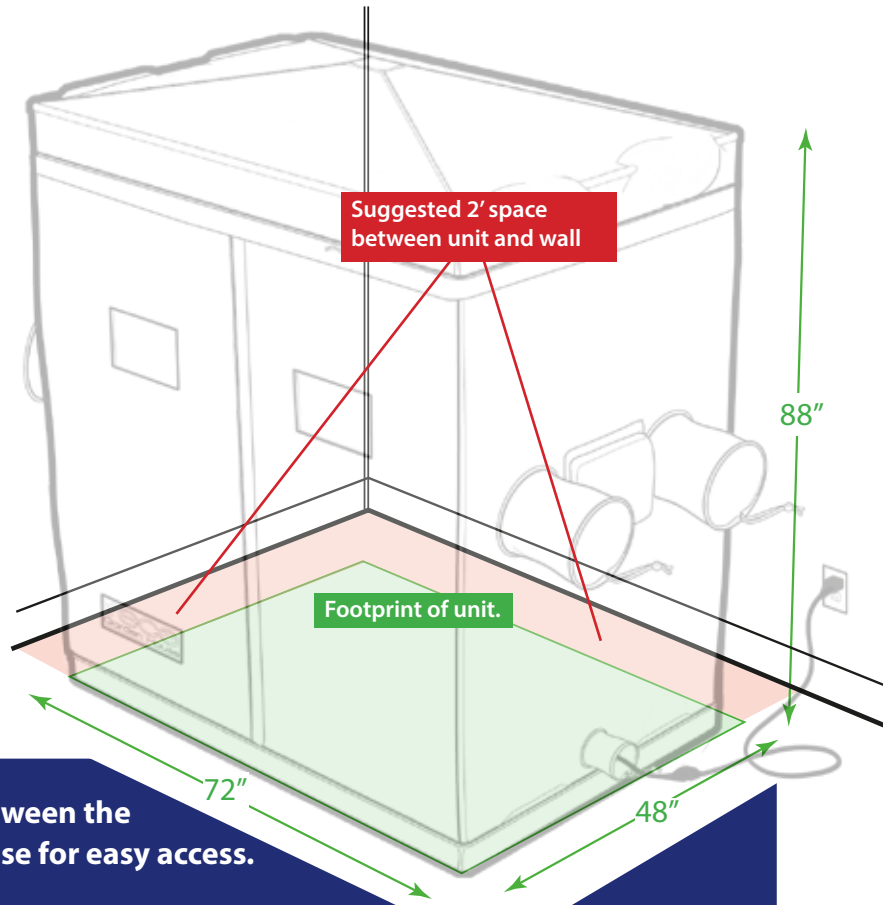
2 Floor and Tank Assembly

Select a location. Location must be larger than (88" x 72" x 48") and within 4' of a 110v outlet.



This will be the final location for the fully assembled unit. Unit will only be able to slide slightly for final positioning. Please consider the following:

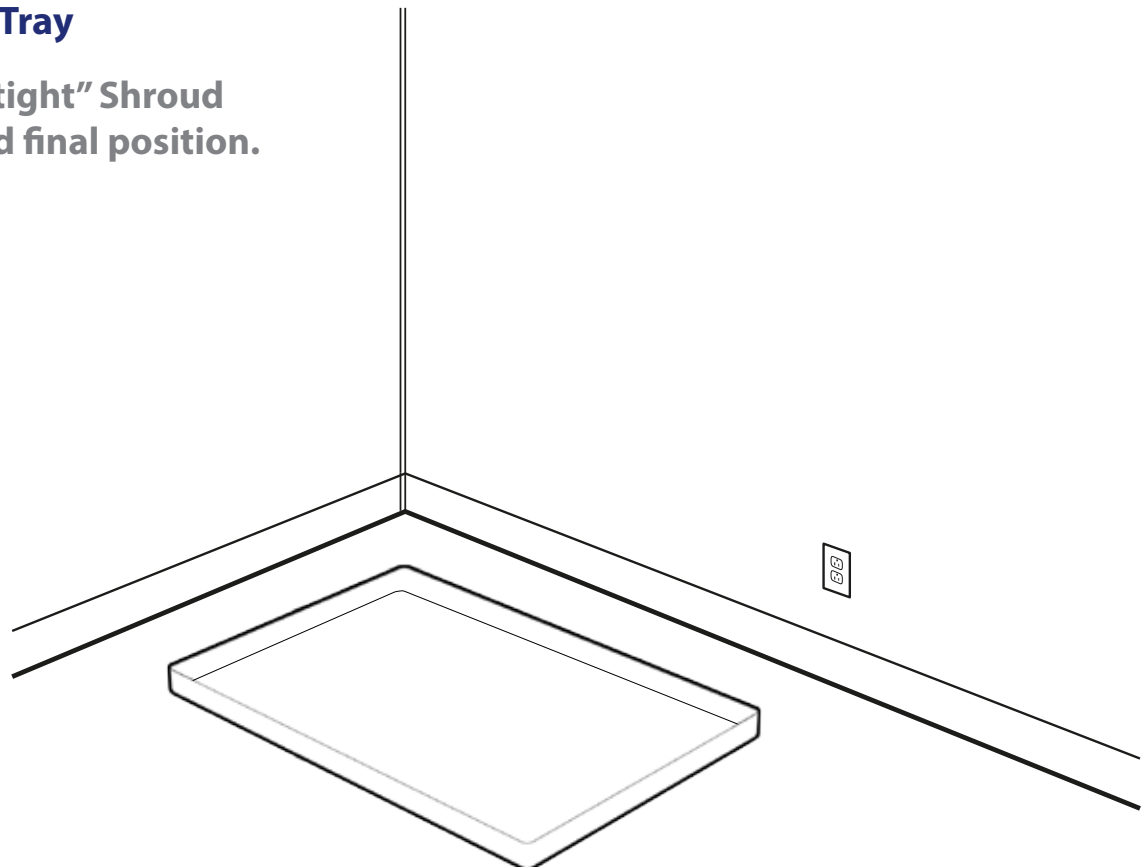
- Electrical Location
- Air Ventilation
- Water Supply and Drain
- Control Panel Access
- Back Access



Leave adequate space between the walls and Eco Garden House for easy access.

3 Place Shroud Tray

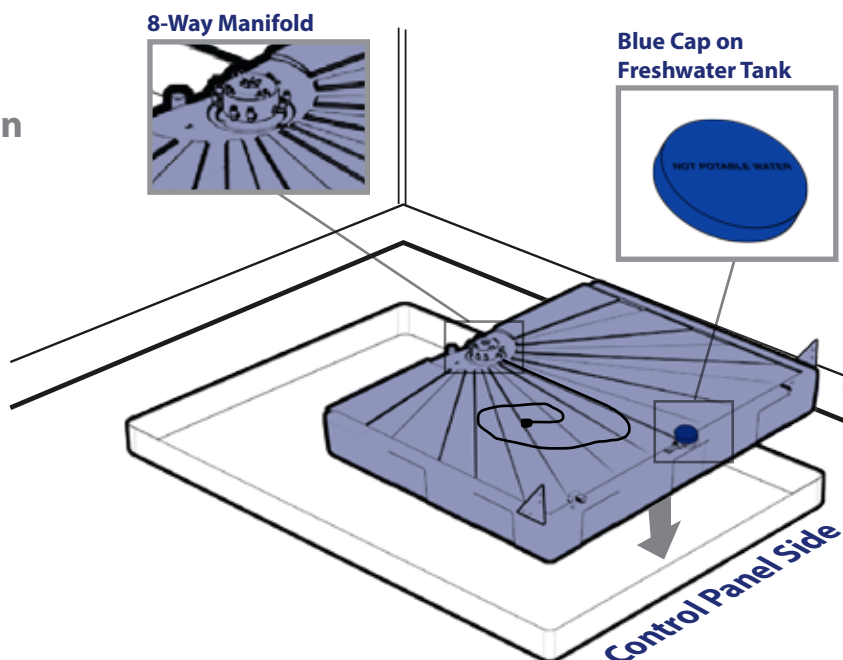
Place "water tight" Shroud Tray in desired final position.



4

Install Freshwater Tank

Place the Freshwater Tank in the Shroud Tray on desired control panel side.

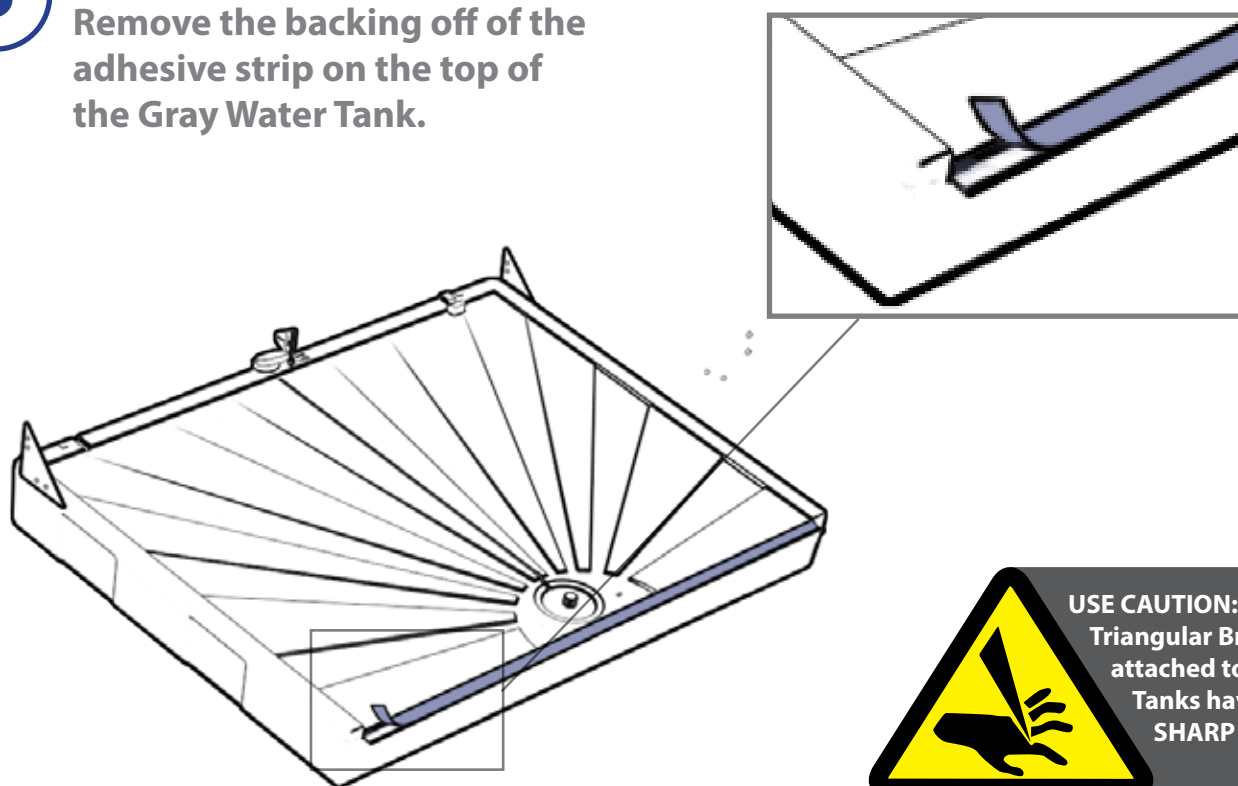


VERY IMPORTANT: The Freshwater Tank will need power supplied to it. Position it on the same side that you plan to install the Control Panel, Fans, & the Thermal Control Unit. You can differentiate the Freshwater Tank by the 8-Way Manifold and the Blue Cap.

5

Peel off Backing to Expose Adhesive on Gray Water Tank

Remove the backing off of the adhesive strip on the top of the Gray Water Tank.



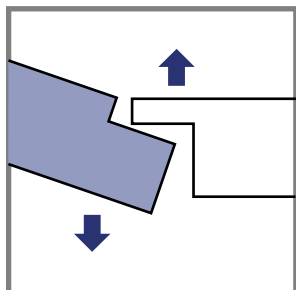
USE CAUTION:
Triangular Brackets
attached to both
Tanks have
SHARP EDGES.

6

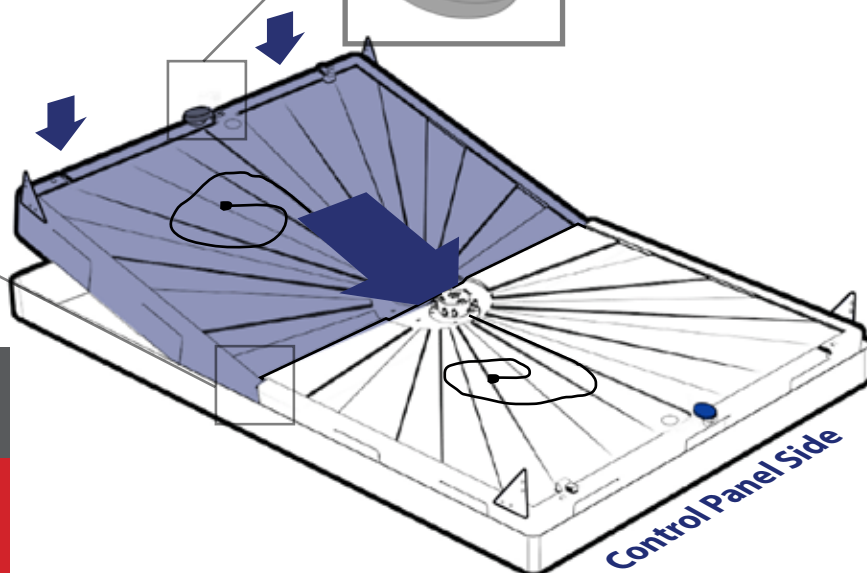
Install Gray Water Tank

Place the Gray water Tank in the Shroud Tray next to the Freshwater Tank.

Tilt and Tip



Gray Cap on Gray Water Tank



Two People are needed to install the Gray Water Tank.



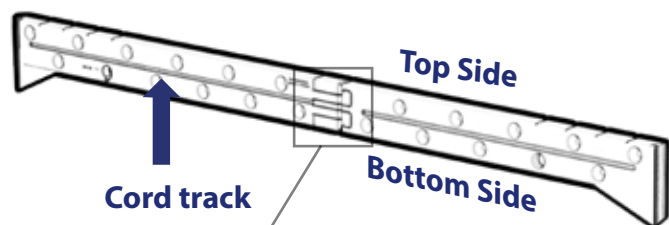
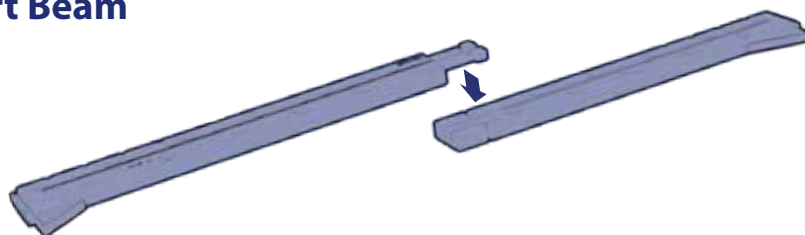
Slip nose/ drain carrier end of Gray Water Tank under freshwater tank during install. DO NOT bunch adhesive.

7

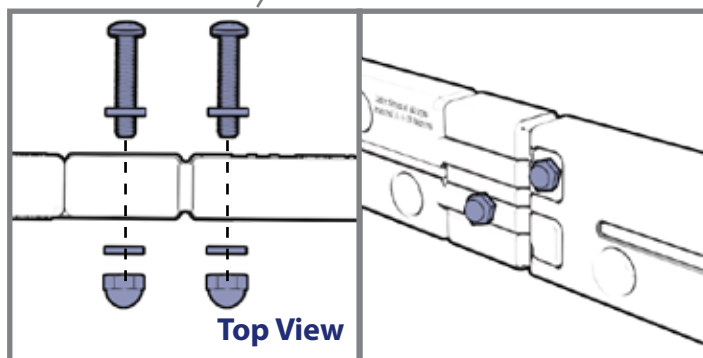
Assemble Upper Rear Support Beam

Connect one (1) Male Support Beam Section to one (1) Female Support Beam Section on a flat surface.

Secure Male and Female Support Beam Sections Together: Gather two (2) 1.75" Bolts, four (4) Washers, and two (2) Cap Nuts. Twist a Bolt with Washer into the top Female Support Beam Foot Section connecting both Support Beams. Attach one Washer and Cap Nut and use a crescent wrench to secure the Bolt on the cord track side of the Beam. Repeat the same steps to secure the center of the bottom Female foot to the Male Support Beam. Set aside for use in Step 16.



DO NOT over-tighten Bolt!



8 Install Fan / Thermal Control Unit

- A** Locate the Fan Kit Box with the “L” Bracket, Thermal Control Unit, and the two (2) Screws. Locate the 4” x 4” Black Shroud Switch (in Drip Kit package).

- B** Mount the “L” Bracket with the 4” x 4” Black Shroud Switch on top (shiny side touching the Side Wall Section) onto one of the Wall Sections. Ensure it is facing the side that says, “This Side Out.” This assembly will designate the Control Panel Side of the unit.

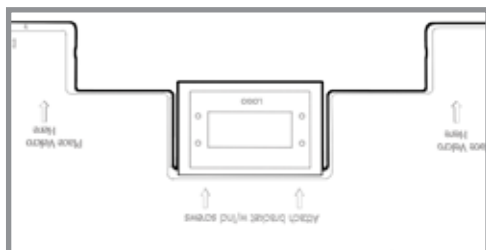


Be sure you mount the Thermal Control on the top section of the cross with logo text properly oriented.

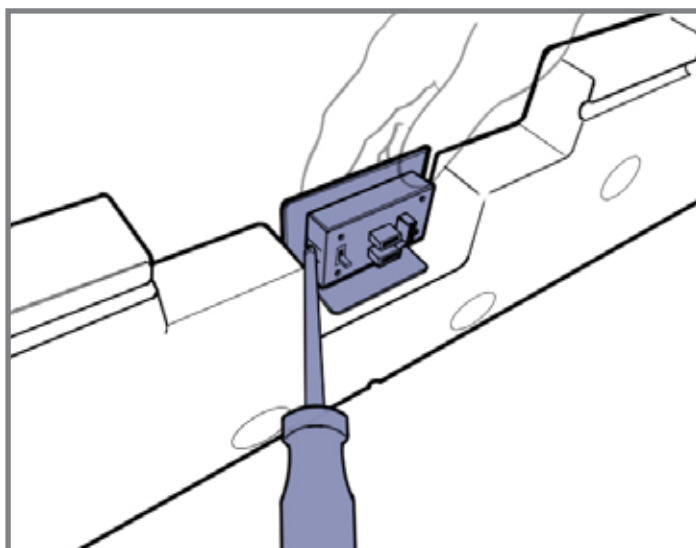
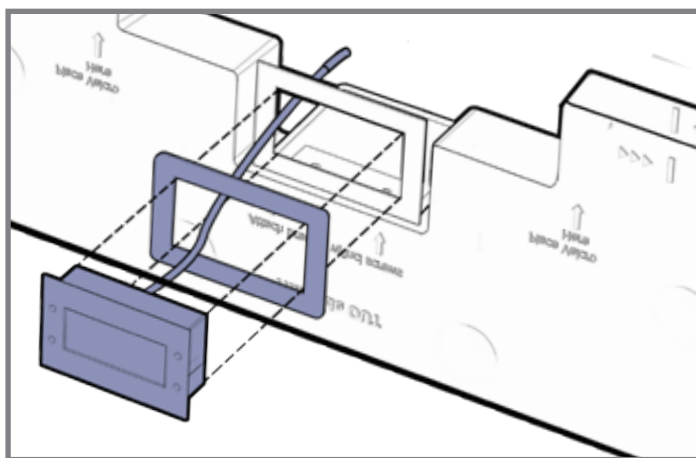
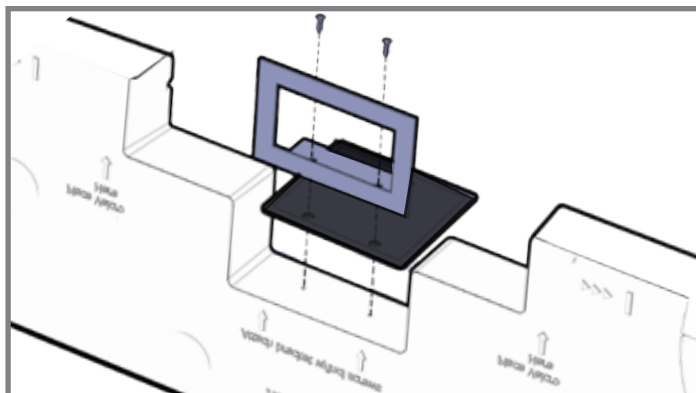
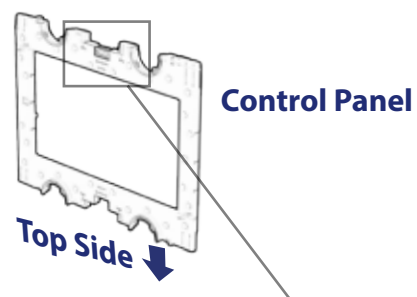
The screws will be installed using the designated dimples.

DO NOT remove plastic from the sensor.

- C** Snap the Shim Spacer and the Thermal Control Unit into the “L” Bracket. When installing, the text on the display should be upside down. A screwdriver may be needed to squeeze the side tabs to lock in place. (Shim Spacer may not be necessary.)



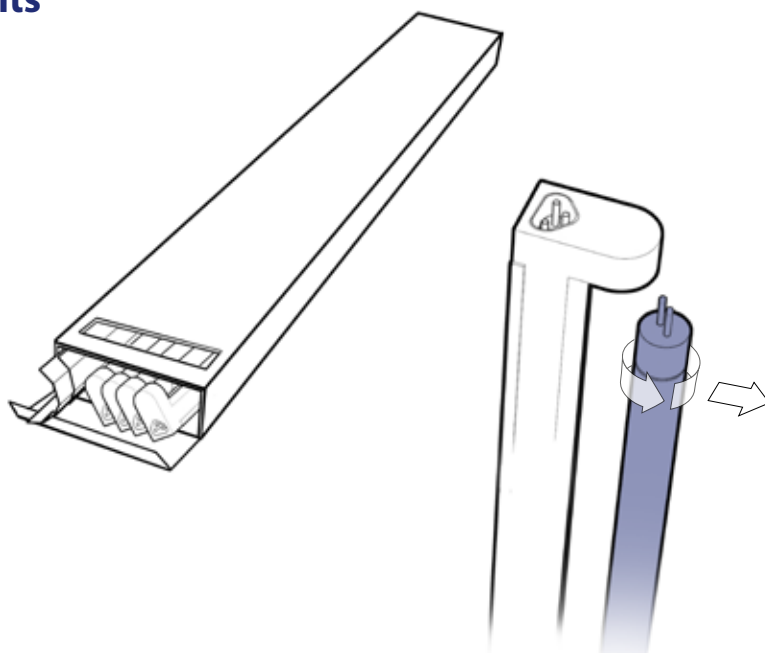
Top Side ↓



9 Unpack Single Light Bulb Units

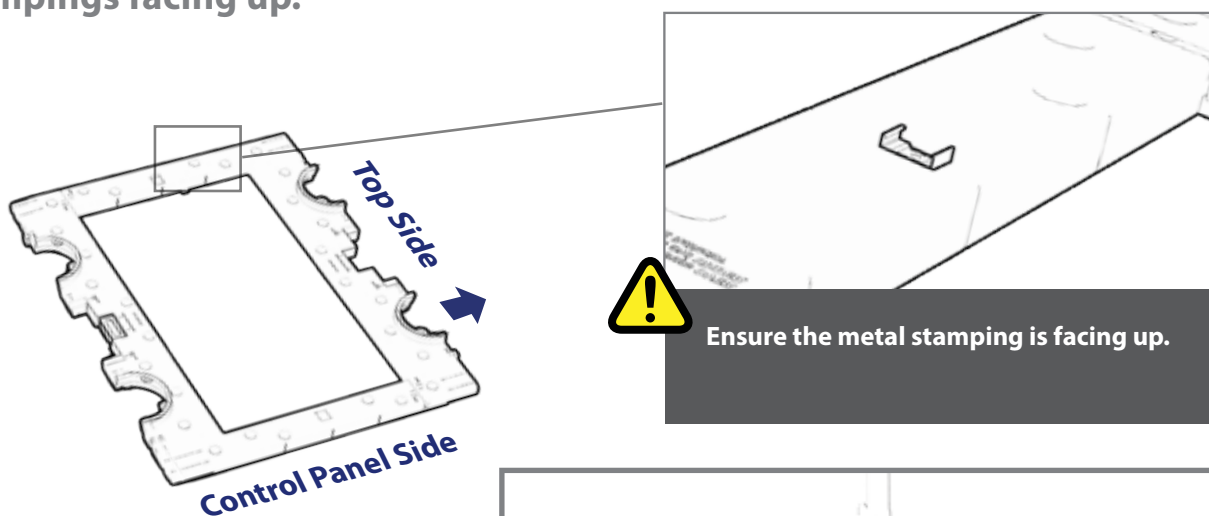
Unpack the four (4) pack of the Single Bulb Light Units.

Remove the bulb from each of the light units by twisting. Keep the foam on the bulbs for protection, and safely set them aside.

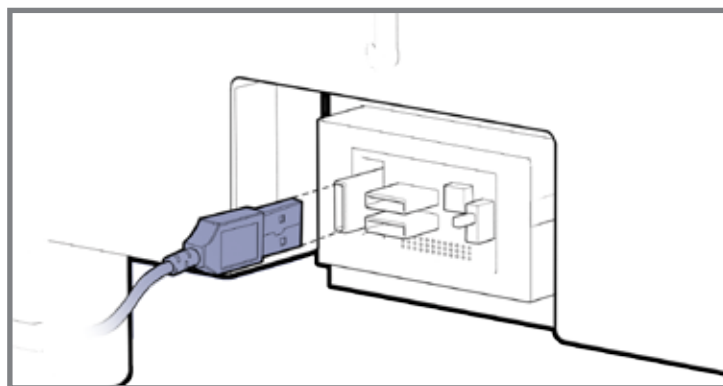


10 Flip Over Control Panel Side Wall Panel & Attach the USB Power Supply Cord

Place the Wall Section with the Thermal Controller down on the floor with the metal stampings facing up.

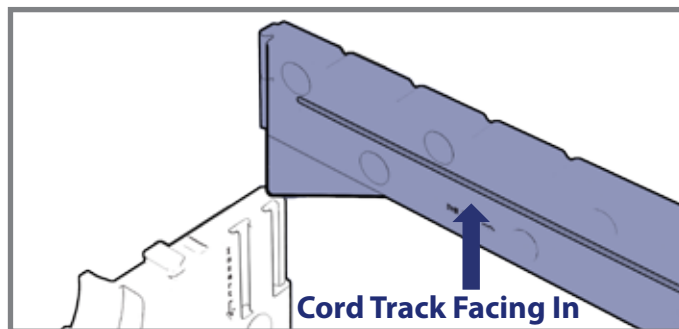


Plug the USB Power Supply Cord into the back of the Thermal Control Unit.



11 Attach Center Support Beams to Wall Sections

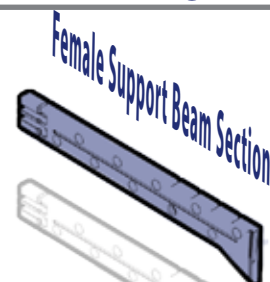
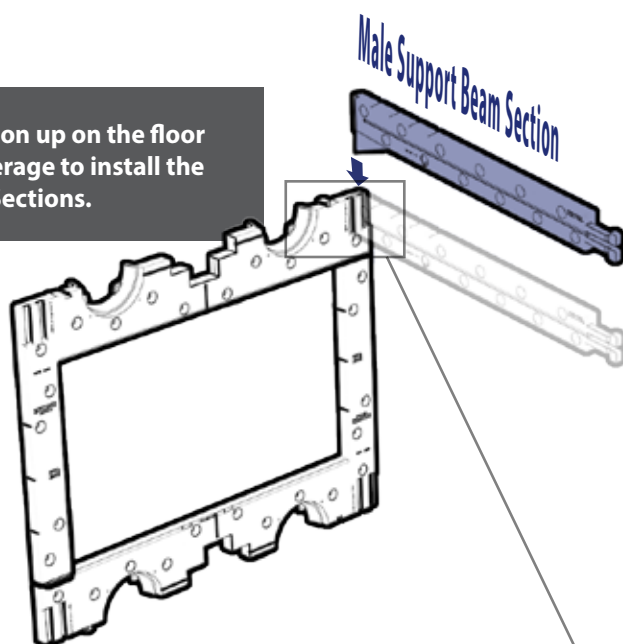
A Gather a Male and Female Support Beam Section and two (2) Wall Sections. **Do not use the Wall Section with the Thermal Control Unit.**



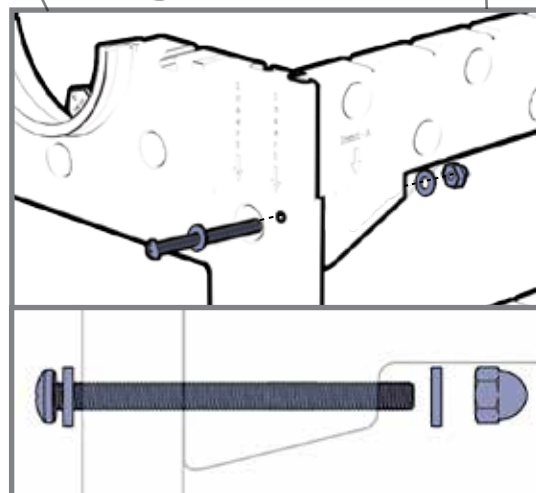
B Attach both the Male and Female Support Beam Sections to separate Wall Sections.



Stand Wall Section up on the floor to get more leverage to install the Support Beam Sections.



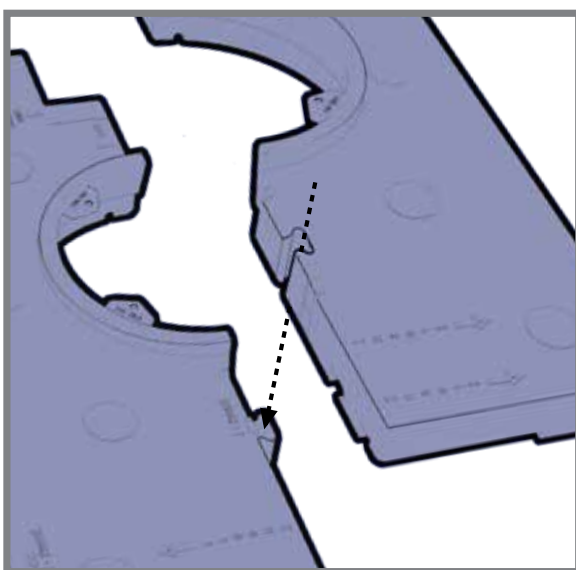
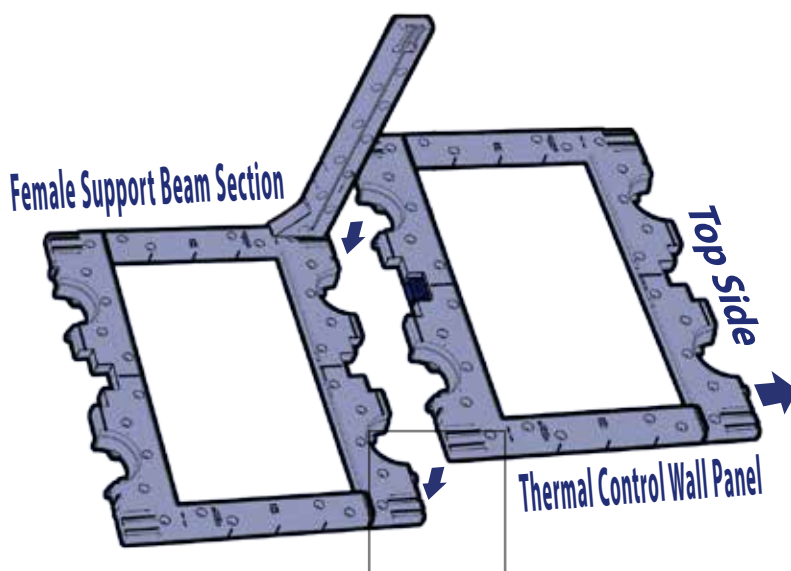
C Gather two (2) 5" Bolts, four (4) Washers, and two (2) Cap Nuts. Slide a Washer onto a Bolt. Install the Bolt through both the Wall Section and the Support Beam. Slide a Washer onto the other side of the Bolt and secure with a Cap Nut. Use a crescent wrench to tighten. Repeat steps to attach the remaining Support Beam to the remaining Wall Section.



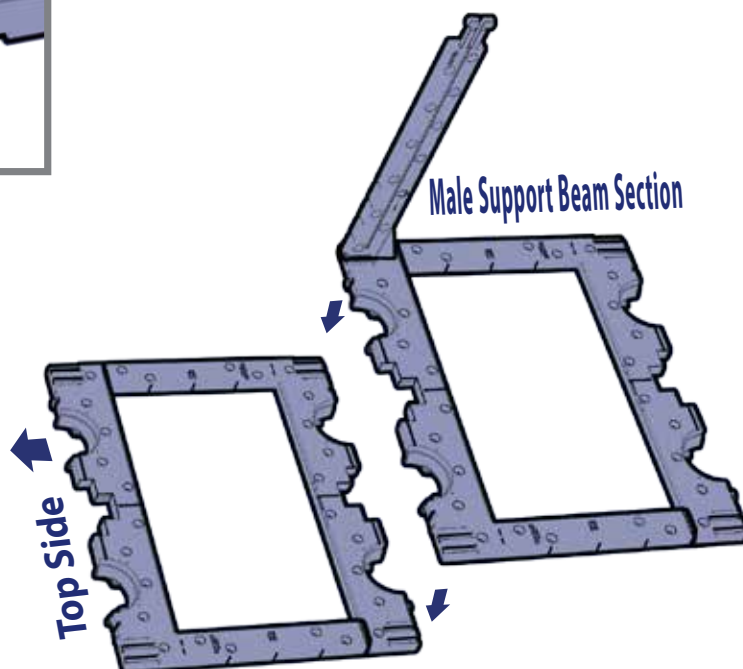
DO NOT Over-tighten Bolts!

12 Assemble Side Wall Panels

- A** Place all four (4) Wall Section pieces with the Metal Stampings face up on a flat surface. Attach the Control Panel Wall Section to the Wall Section with the Female Support Beam Section.

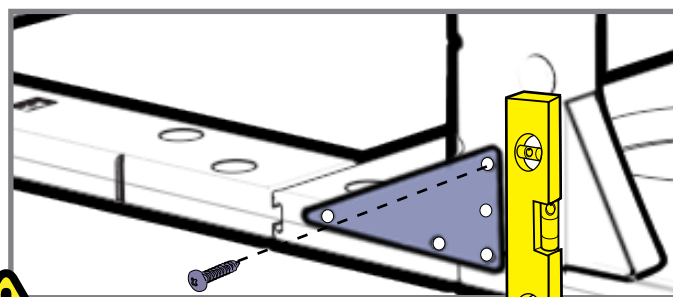


- B** Attach the Wall Panel Section with the Male Support Beam Section to the remaining Wall Section.

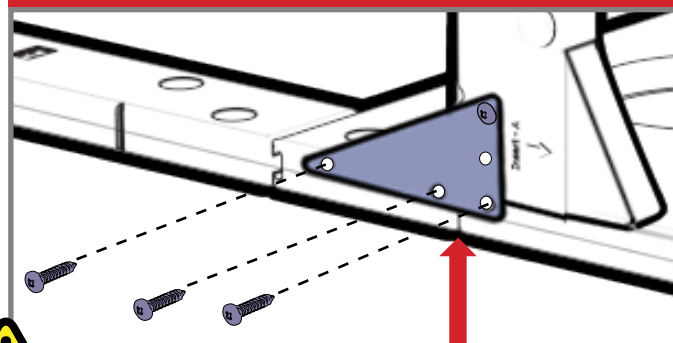


13 Attach Support Brackets to Middle Support Beams and Wall Panels

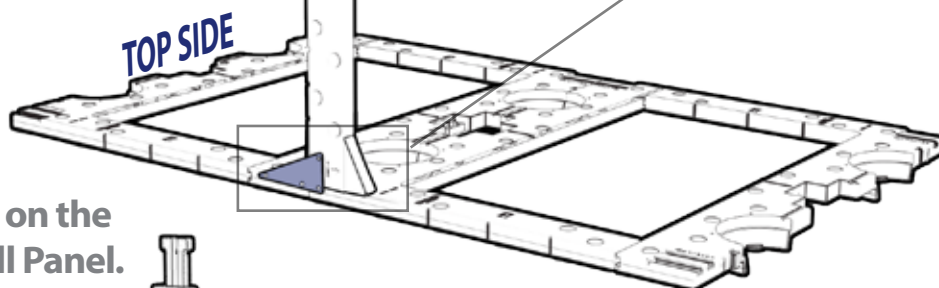
- A** Gather the two (2) Triangular Support Brackets. Position one (1) Bracket with the shortest side of the triangle on the Middle Support Beam and the three holes on the Wall Panel. Line up the longest three hole side of the Bracket to the parting line on the Wall Panel and ensure the two holes closest to each other are straddling the two Wall Panel Sections. Screw into the Middle Support Beam use a level to ensure it is completely vertical before installing the three (3) remaining screws to the Wall Panel. The middle hole on the shortest side will remain open for use in Step 17.



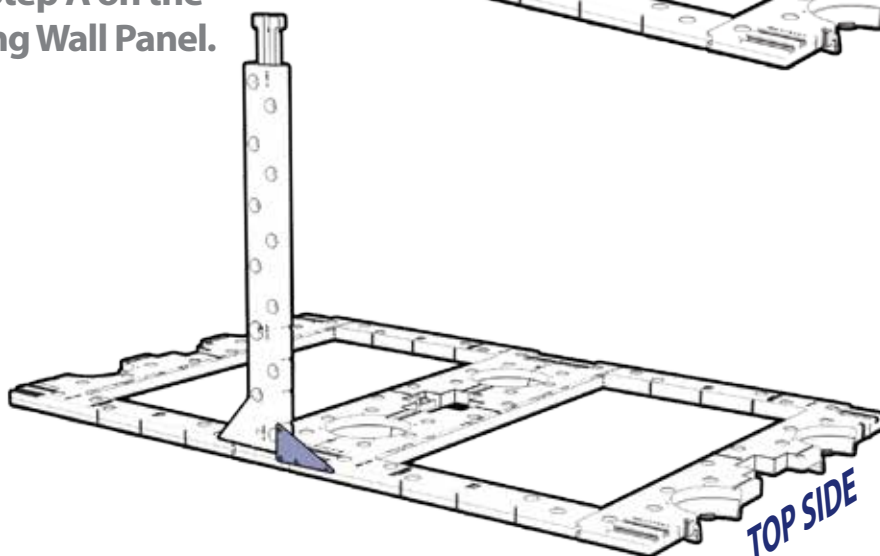
Use a level to ensure the Support Beam and the Triangular Bracket are completely level.



Ensure the two holes straddling the Wall Panel Sections are evenly spaced.

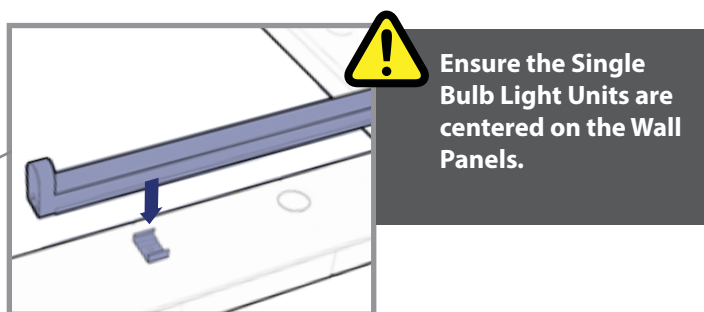
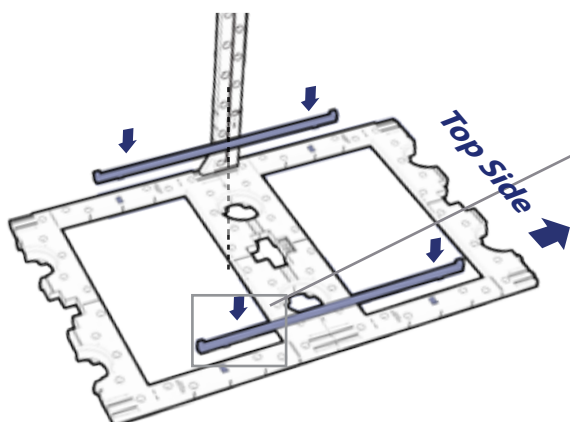
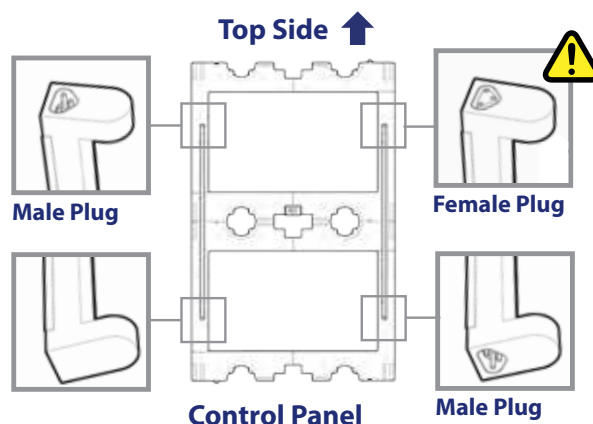


- B** Repeat Step A on the remaining Wall Panel.

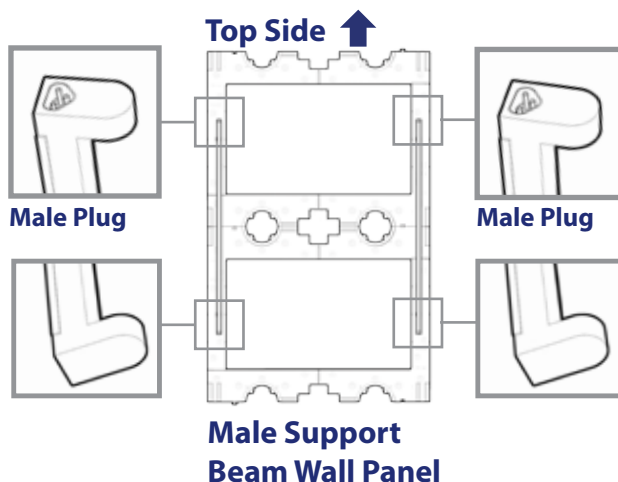


14 Install Single Bulb Light Units

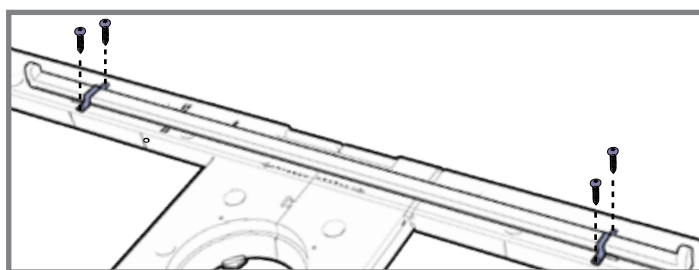
- A** Locate the one (1) Single Bulb Light Unit that has open female and male plugs, and snap female plug side up, into the metal stampings on the right side of the Control Panel Side Wall. Snap another Single Bulb Light Unit onto the metal stampings on the left side of the Control Panel Side Wall, with the open male plug on the top side.



- B** Snap the remaining two (2) Single Bulb Light Units with the open male plugs on the top side into the left and right metal stampings on the Side Wall Panel without the Thermal Control Unit.

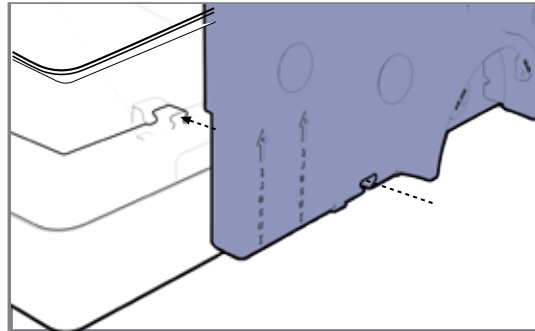


- C** Gather eight (8) U-Brackets. Place two (2) U-Brackets on each Single Bulb Light unit, aligned with the Metal Stampings that the Single Bulb Unit snapped into. Attach each U-Bracket with two (2) screws.



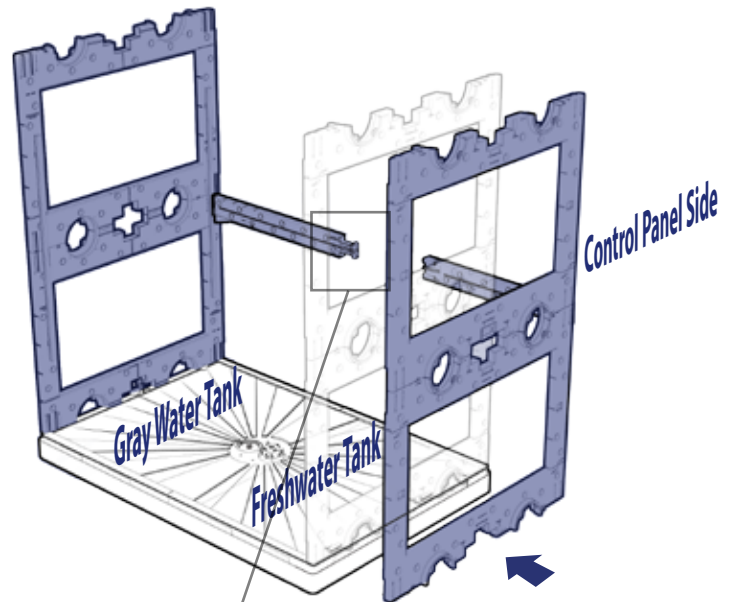
15 Attach Side Wall Panels

- A** Slide both of the Side Wall Panels with their top sides up and the Support Beam Sections at the back of the unit (Refer to diagrams in Step 14) onto the tanks. Ensure the Single Bulb Light Units are facing inside the unit.

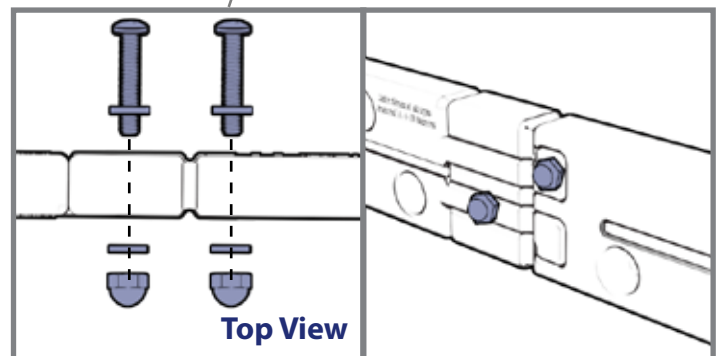


DO NOT stand on the tank during assembly. The Side Wall Panel with the Thermal Control Unit must be attached to the Freshwater Tank.

- B** Attach the Male and Female Support Beam Sections.
- C** **Secure Male and Female Support Beam Sections Together:** Gather two (2) 1.75" Bolts, four (4) Washers, and two (2) Cap Nuts. Twist a Bolt with Washer into the top Female Support Beam Foot Section connecting both Support Beams. Attach one Washer and Cap Nut and use a crescent wrench to secure the Bolt on the cord track side of the Beam. Repeat the same steps to secure the center of the bottom Female foot to the Male Support Beam.



DO NOT over-tighten Bolts!



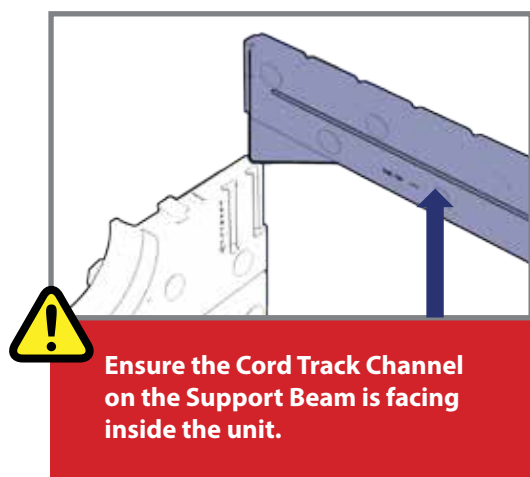
It is recommended that two people are used to connect and hold Side Walls in place while connecting the Center Support Beam.

16 Attach Rear Support Beam

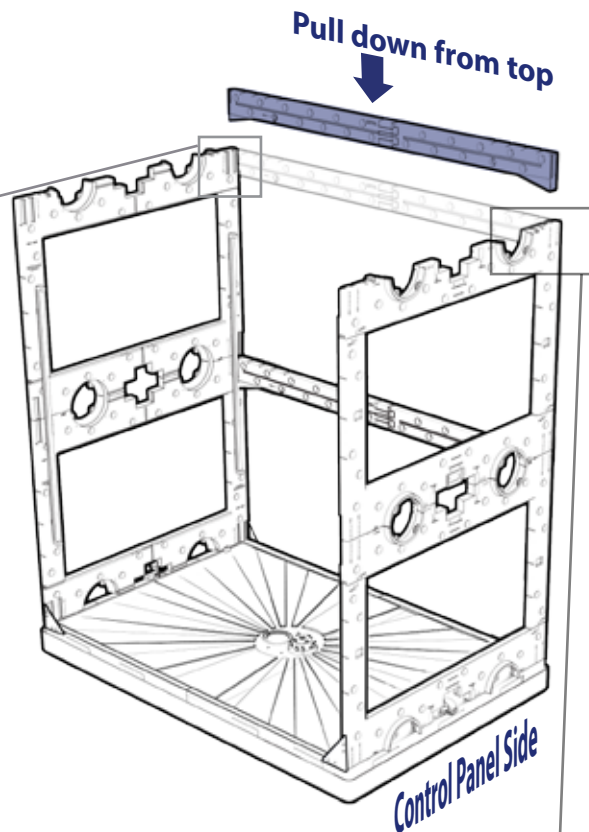
- A** While supporting the Side Wall Panels, connect the Rear Support Beam (assembled in Step 7) to the top of Side Wall Panels. Locate slots and pull down from top to secure.



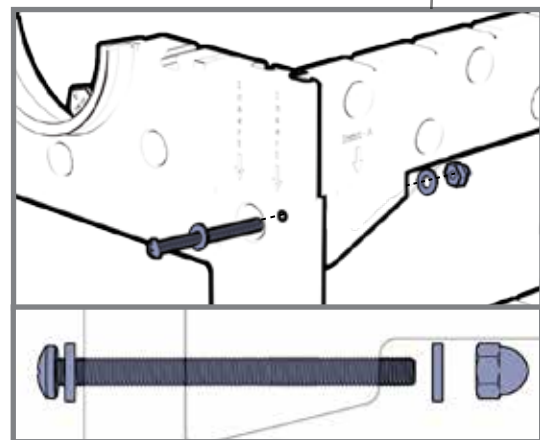
DO NOT stand on the tank during assembly.



Ensure the Cord Track Channel on the Support Beam is facing inside the unit.



- B** Gather two (2) 5" Bolts, four (4) Washers, and two (2) Cap Nuts. Slide a Washer onto a Bolt. Install the Bolt through both the Wall Section and the Support Beam. Slide a Washer onto the other side of the Bolt and secure with a Cap Nut. Use a crescent wrench to tighten. Repeat steps to attach the remaining Support Beam to the remaining Wall Section.

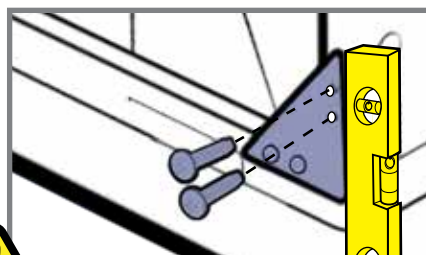


It is recommended that two people are used to connect and hold Side Walls in place while connecting Support Beam.

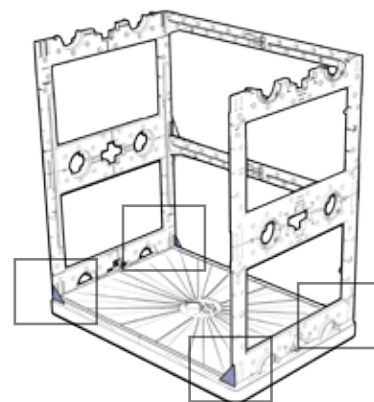
17 Attach Triangular Tank Brackets to Side Walls

- A** Gather eight (8) 3/4" Self Tapping Screws. Locate the four (4) Triangular Brackets attached to the outside four corners of the tank assembly.

Use a level to ensure the brackets are vertical, then screw two (2) of the Self Tapping Screws into each of the four (4) Triangular Brackets, securing the Bracket to the Side Wall Panel.



Use a level to ensure bracket and Wall Panel are vertical. DO NOT over-tighten Screws!



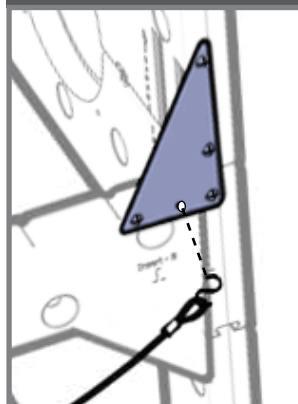
- B** Gather two (2) S-Hooks and two (2) Cross Support Wires with attached Hook Turnbuckles. Attach an S-hook to the looped end of the steel cable. Next, locate a hole on the Triangular Bracket on one side of the Middle Support Beam, and attach the S-hook and cable to the hole on the outside of the unit.

Locate the open hole on the black Triangular Tank Plate on the opposite side of the unit from where the S-Hook was attached. Attach the Turnbuckle end of the cable to the open hole. Repeat steps with the other Cable and to create an "X" support structure on the back of the unit.

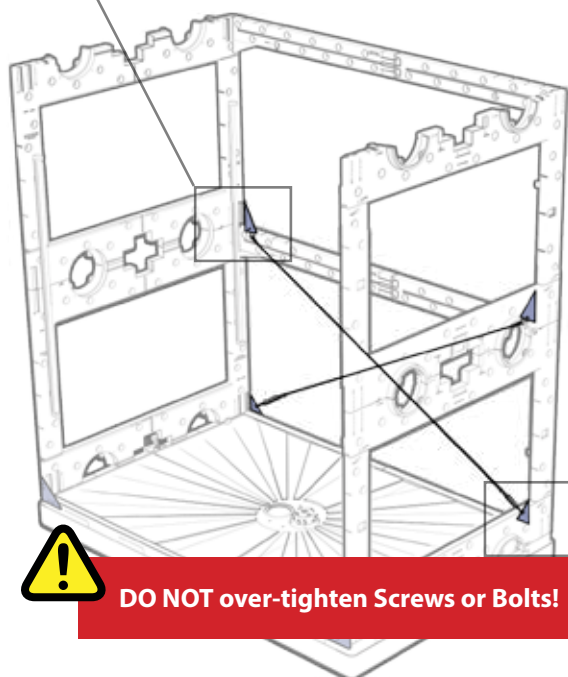
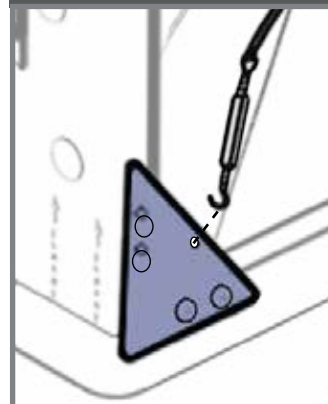
Twist Turnbuckles by hand to tighten cables and ensure the unit is square.



S-Hooks Attach to Middle Support Beam Brackets.



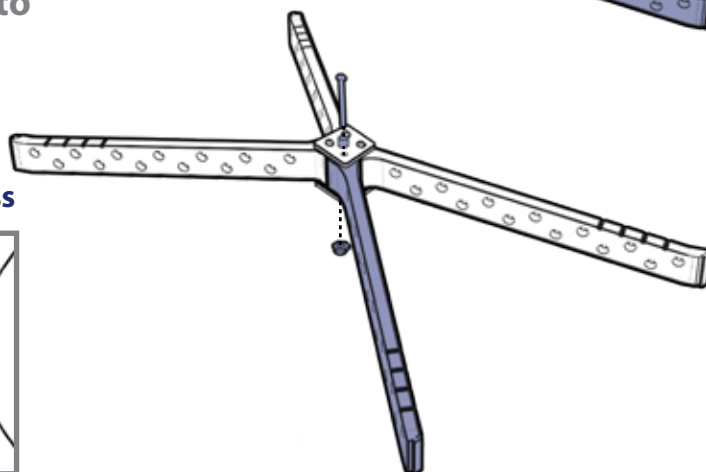
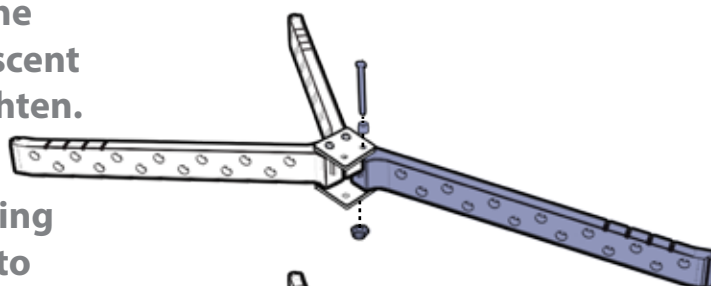
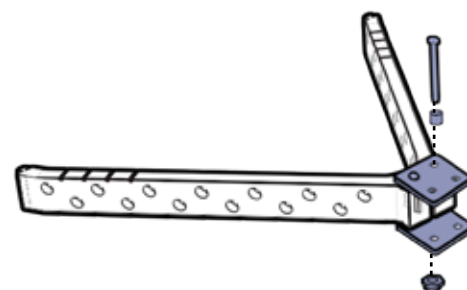
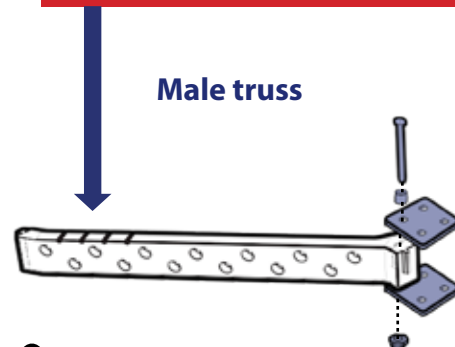
Turnbuckles Attach to Tank Brackets.



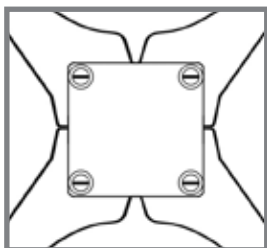
DO NOT over-tighten Screws or Bolts!

18 Assemble Roof Truss Sections

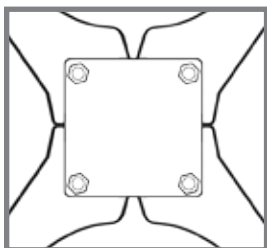
- A** Gather the four (4) Roof Truss Pieces, two (2) Plastic Plates, four (4) 5" Bolts, four (4) Spacers, and four (4) Cap Nuts.
- B** Start with one (1) Male Roof Truss Piece, with the "notches" facing up. Assemble a Plastic Plate on the top and bottom by inserting a Bolt with a Spacer down through the Top Plastic Plate, the truss, and the Bottom Plastic Plate. Secure the Bolt with a and Cap Nut on the Bottom Plastic Plate side. Use a crescent wrench to hold the Cap Nut and tighten. **DO NOT over-tighten.**
- C** Insert one (1) Female Roof Truss Piece, with the "notches" facing up, between the Plastic Plates to connect to the Male Roof Truss Piece. Insert a Bolt with Spacer down through the Top Plastic Plate, the truss, and the Bottom Plastic Plate. Secure the Bolt with a Cap Nut on the Bottom Plastic Plate side. Use a crescent wrench to hold the Cap Nut and tighten. **DO NOT over-tighten.**
- D** Repeat these steps with the remaining Male and Female Roof Truss Pieces to form an "X."



Top Side of Truss



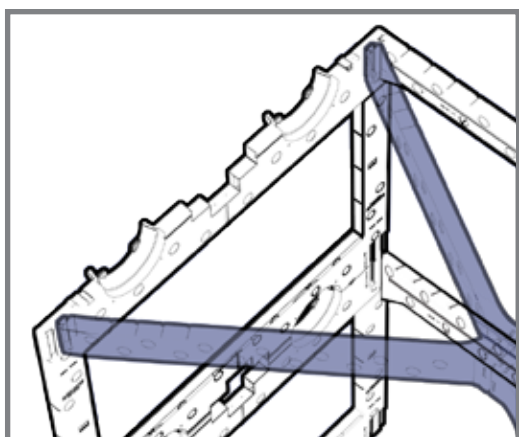
Under Side of Truss



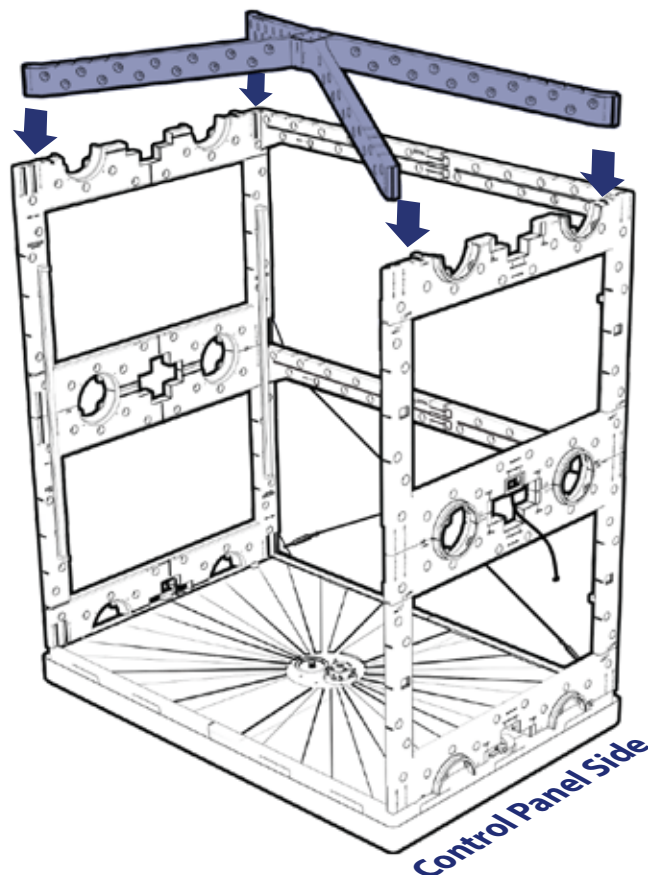
19

Connect Roof Truss

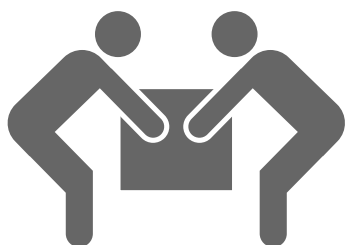
Connect the Roof Truss Unit to the top of the Side Wall panels. Locate inside slots and pull down to secure.



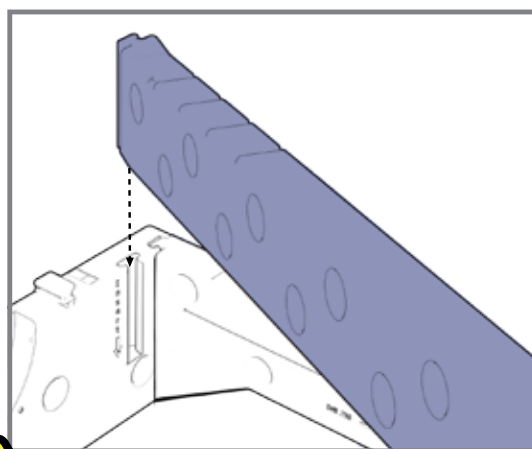
Ensure correct Truss placement



Rubber mallet may be needed to fully secure Roof Assembly onto Side Walls. Push Side Walls in if necessary to line up slots.



TEAM LIFT



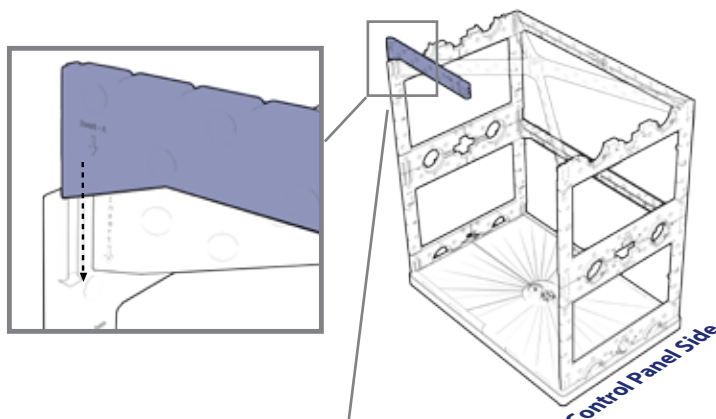
Roof Truss pieces slide into inner slots of the Side Wall Assemblies



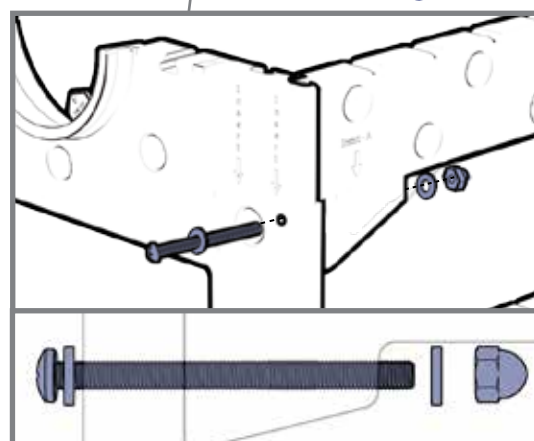
It is recommended that two people lift Roof Assemblies to install and secure.

20 Install Pulley System Bar & Left Female Support Beam Section

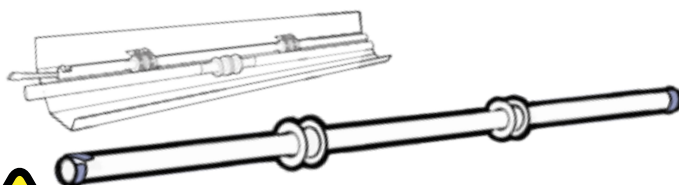
- A** Locate the two (2) remaining Support Beam Sections. Connect the Female Support Beam Section to the left side outer slot and pull down to connect.



- B** Gather one (1) 5" Bolt, two (2) Washers, and one (1) Cap Nut. Slide a Washer onto the Bolt. Install the Bolt through the Wall Panel and the Support Beam. Slide a Washer onto the Bolt and secure with a Cap Nut using a crescent wrench to tighten, but DO NOT over-tighten.

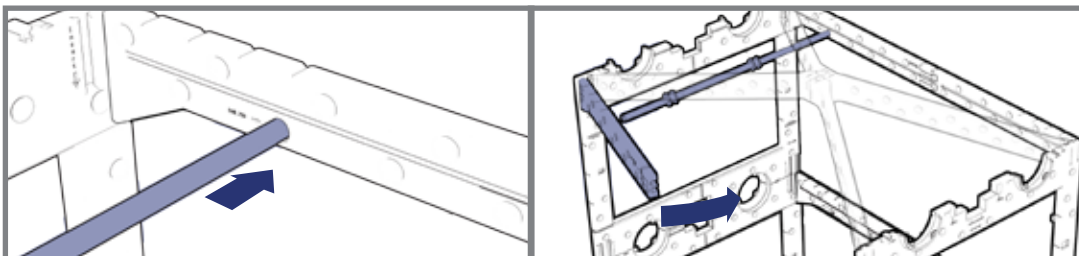


- C** Locate the Light Pulley System Box with the two Light Adjustment Bars. Locate the left Pulley System Bar with two open spools. Remove the adhesive backing from each side of the Bar.



Rubber bands are to be kept on the bars for locating purposes. Have one person continue to hold the Female Support Beam while completing Step 19.

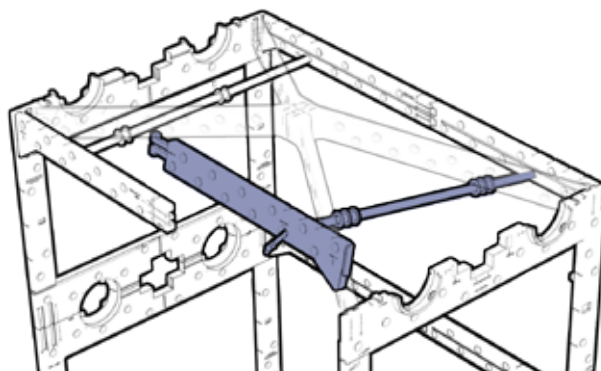
- D** Place the left Pulley System Bar into the receptor holes located in the rear and front beam.



It is recommended that two people are used to connect the Support Beams and Pulley System Bars.

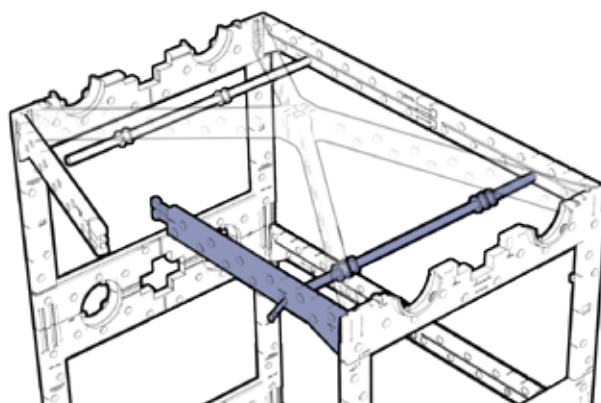
21 Install Right Pulley System Bar & Right Male Support Beam Section

- A** Locate the last remaining Male Support Beam Section. Place the right Pulley System Bar (with the four spools and cordage) into the upper rear Support Beam hole, then feed the handle through the right side Male Support Beam Section hole.

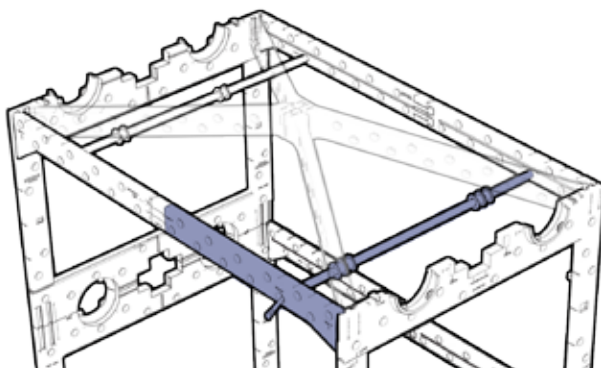


Do not remove cordage from bags.

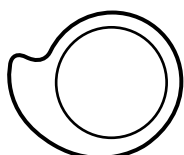
- B** Locate the outer slot on the right side and pull down to connect the Male Support Beam onto the Side Wall Panel.



- C** Connect the Female Support Beam Section to the Male Support Beam Section.



Important: Safety stop mechanism on the internal side of the handle must be engaged fully into the Male Support Beam.



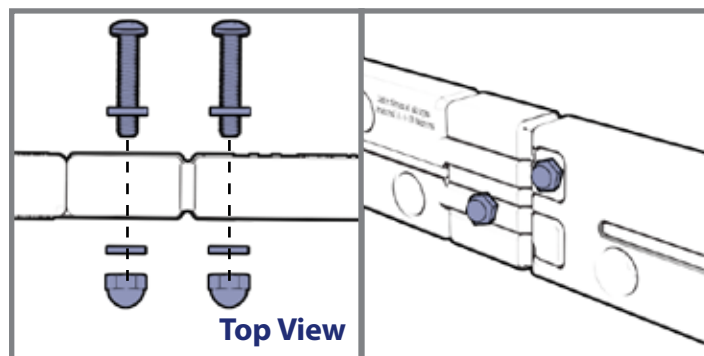
Safety stop mechanism looks like this from the inside of the unit.



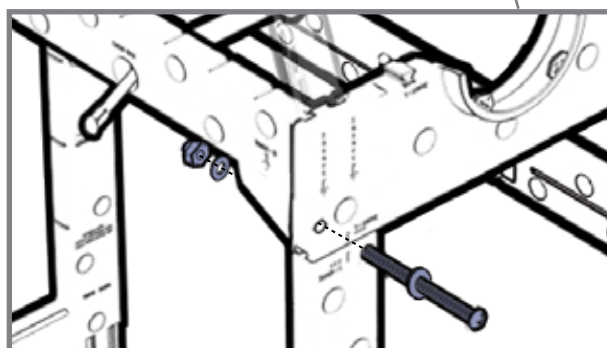
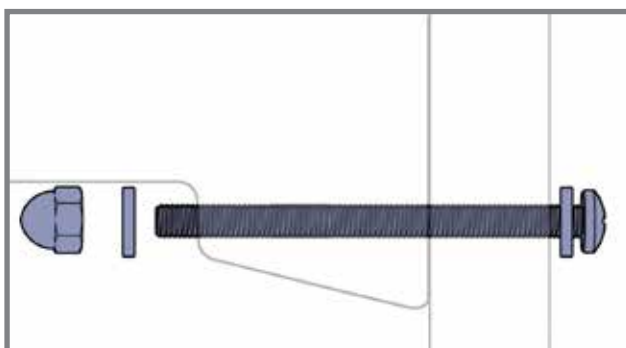
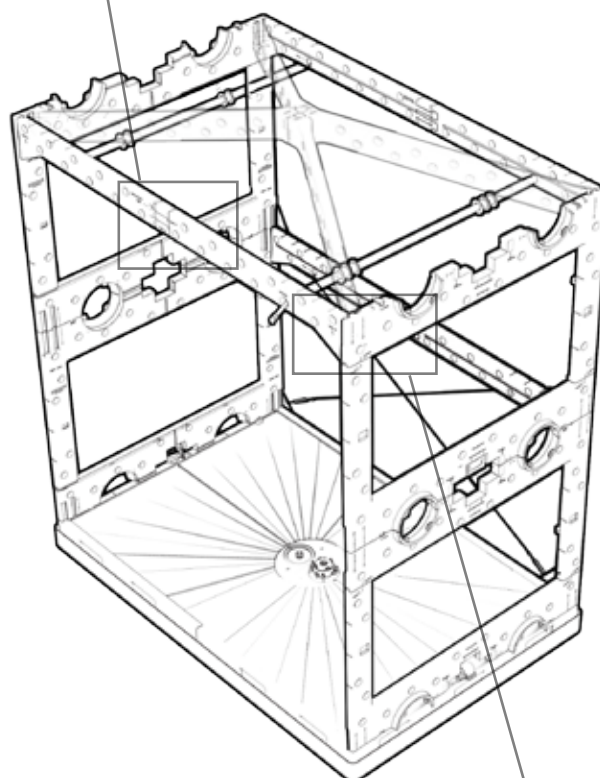
It is recommended that two people are used to connect the Support Beams and Pulley System Bars.

22 Install Structural Support Hardware

- A** Gather two (2) 1.75" Bolts, four (4) Washers, and two (2) Cap Nuts. Twist a Bolt with Washer into the top Female Support Beam Foot Section connecting both Support Beams. Attach one Washer and Cap Nut and use a crescent wrench to secure the Bolt on the cord track side of the Beam. Repeat the same steps to secure the center of the bottom Female foot to the Male Support Beam.



- B** Gather one (1) 5" Bolt, two (2) Washers, and one (1) Cap Nut. Slide a Washer onto the Bolt. Install the Bolt through the Wall Panel and the Support Beam. Slide a Washer onto the Bolt and secure with a Cap Nut using a crescent wrench to tighten, but DO NOT over-tighten.



23

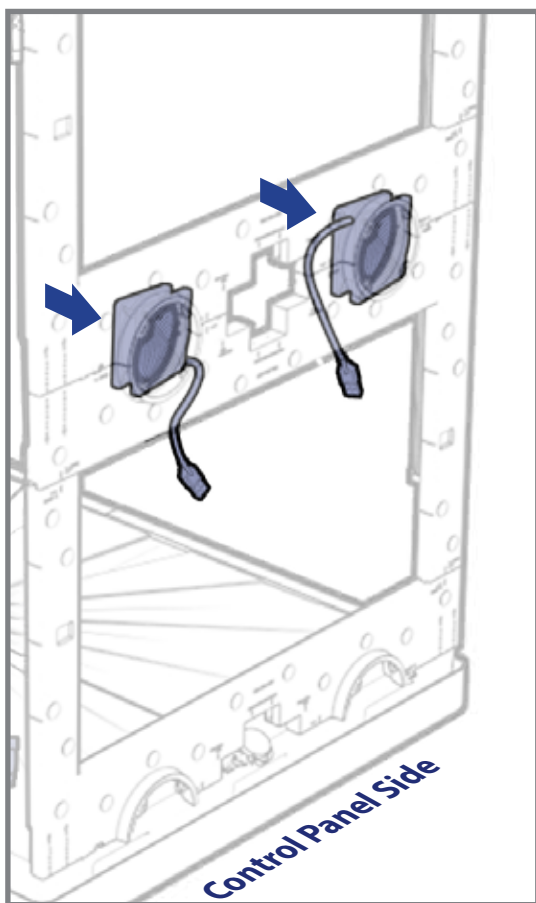
Install Fans

Locate one (1) of the two (2) Fans supplied and two (2) of the four (4) supplied Fan Grills.

Position Fan Grills on both sides of the Fan unit.

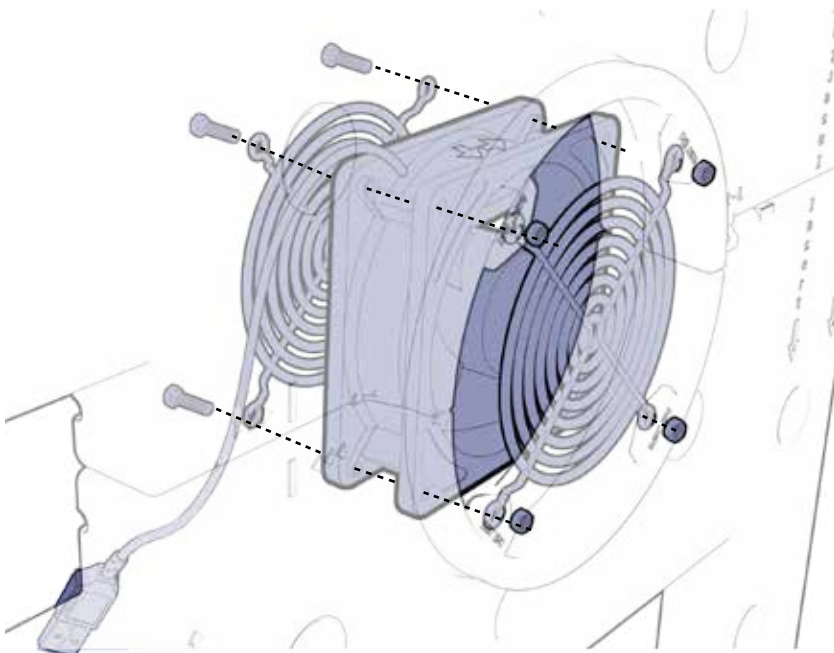


Ensure metal legs on the Fan Grills are flush with the fan unit.



If holes are not pre-drilled into the mounting tabs, drill 1/8" holes into plastic tabs.

Be sure the fans power cord is not punctured or damaged and is positioned on the inside of the unit.



Using the provided nuts and bolts install the Fan, mounting it to the four plastic tabs of the circular fan receptors on inside of the Wall Panel (as shown).

Repeat step to install the 2nd Fan.

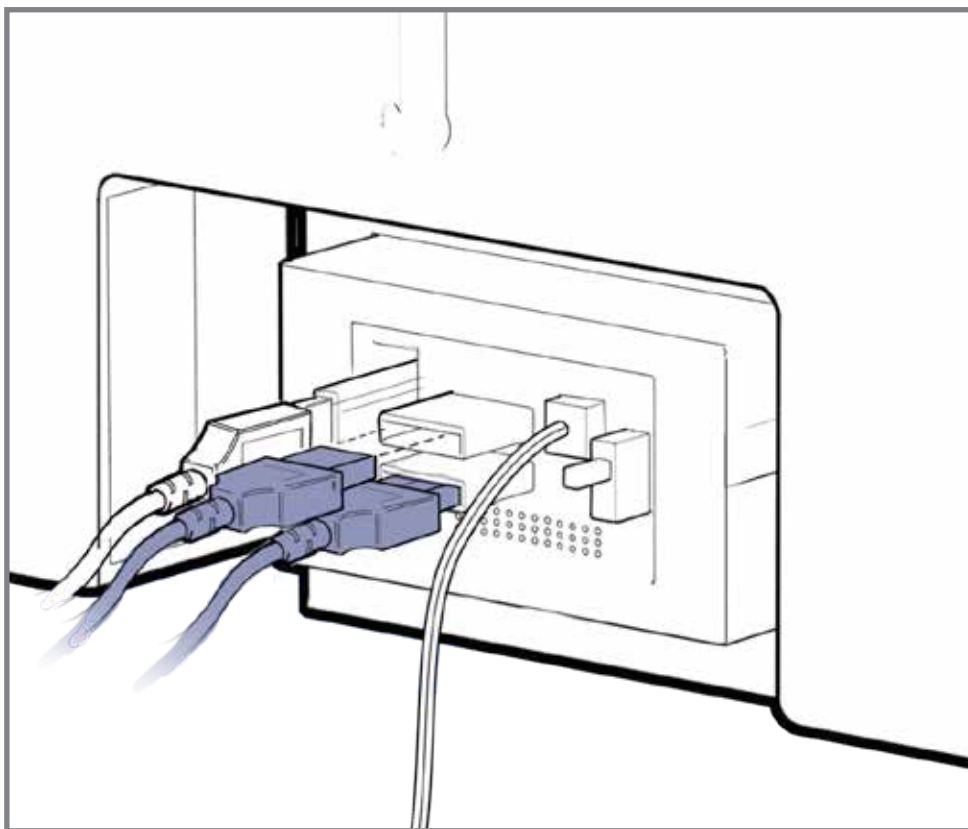


Install the fans so the arrow is pointing towards the outside of the unit. This will blow air out of the unit.

24

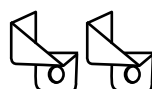
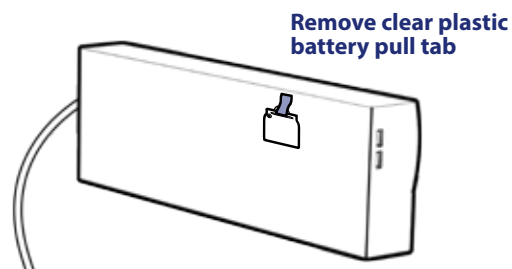
Plug Fan Units into Thermal Controller

Plug both of the Fan Unit USB plugs into the Thermal Controller.

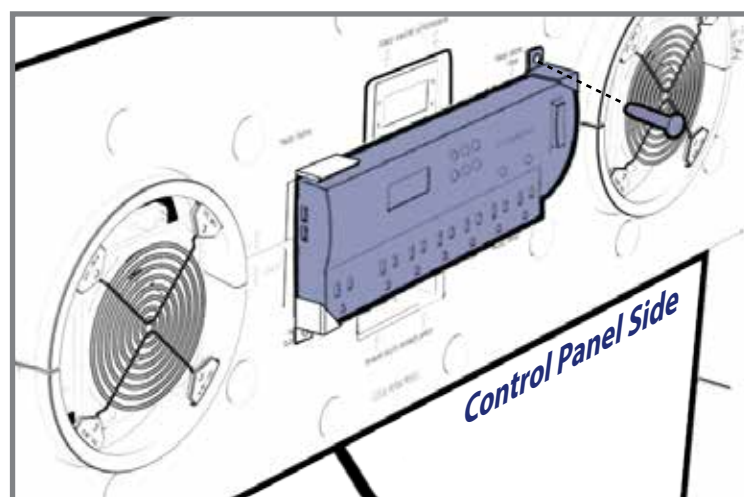
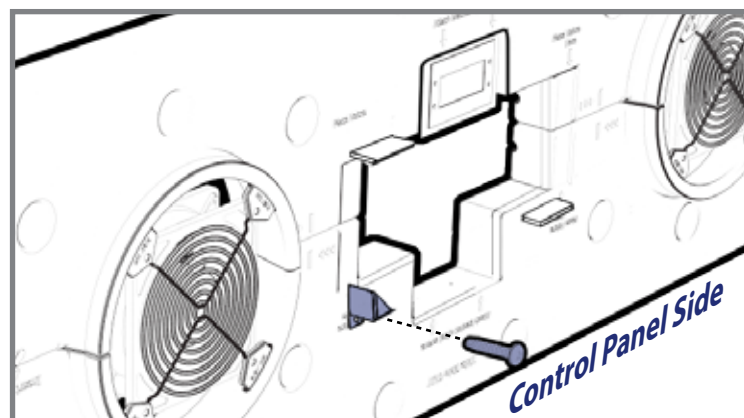


25 Install Power Control Panel

- A** Locate the Control Panel. Remove the clear plastic battery pull tab.
- B** Locate the two (2) Corner Brackets, and two (2) Self Tapping Screws.
- C** Insert one (1) Corner Bracket into the indentation on the lower left section on the Control Panel Side Wall and attach with a Self Tapping Screw.
- D** Slide the Control Panel into the Corner Bracket and between the two (2) shelf features, and feed the cord into the inside of the unit (leave unplugged). Attach the last Corner Bracket to the upper right indentation on the Side Wall Panel with a Self Tapping Screw.



Corner Brackets



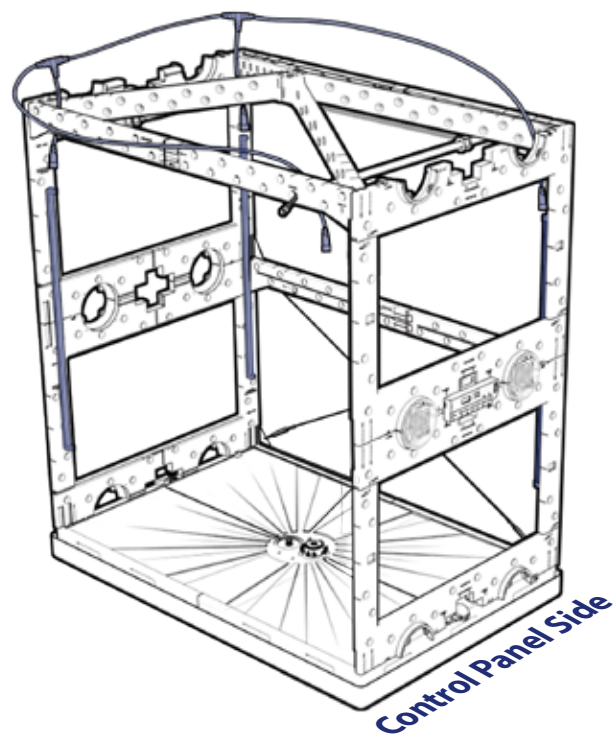
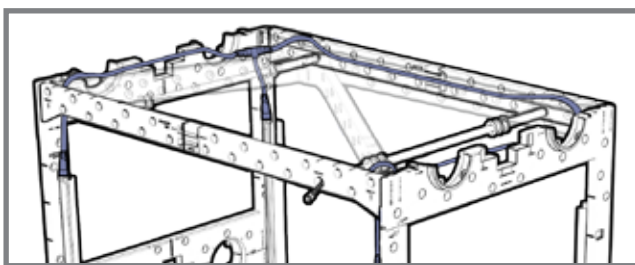
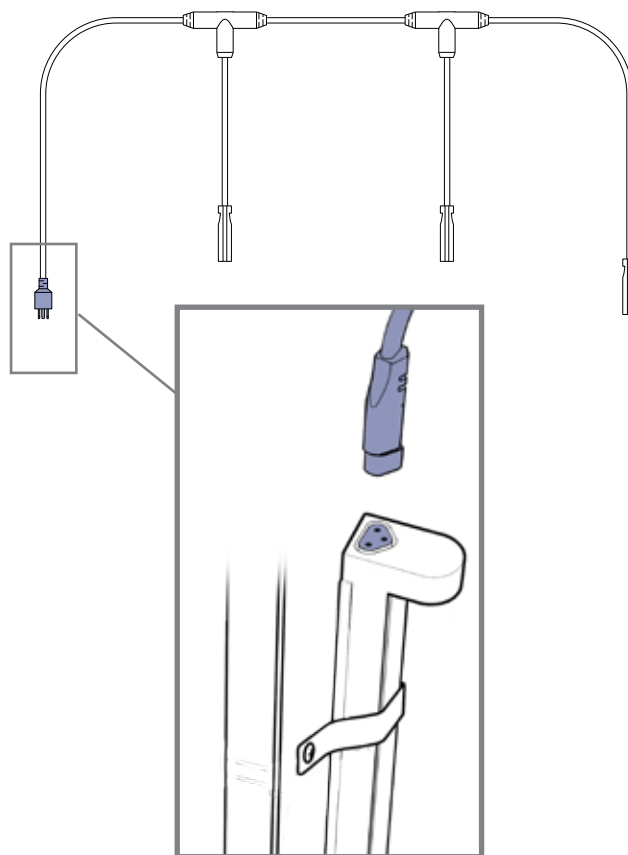
DO NOT plug the Control Panel into a power source!

26 Install Single Bulb Light Unit Wiring

If installed correctly, all four (4) Single Bulb Light Units should have an open plug on the top side.

- A** Find the Daisy Chain cord. Start with the Single Bulb Light Unit that has female end exposed on the Top Side (should be on the control panel side). Plug the only male end of the Daisy Chain cord into the top female opening of the Single Bulb Light Unit.
- B** Run cord to opposite Side Wall Panel over the top of the upper Support Beam and press the cord into the cord tracks, as shown. Plug the next female connection into the Single Bulb Light Unit.
- C** Run the cord to the top of the next Single Bulb Light Unit and plug it in.
- D** Run the cord back to the control panel side and snap into the cord tracks as shown. Plug the last connection into the top of the last Single Bulb Light Unit.

Daisy Chain Cord



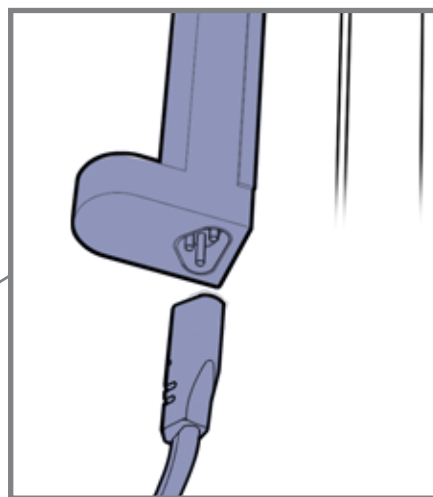
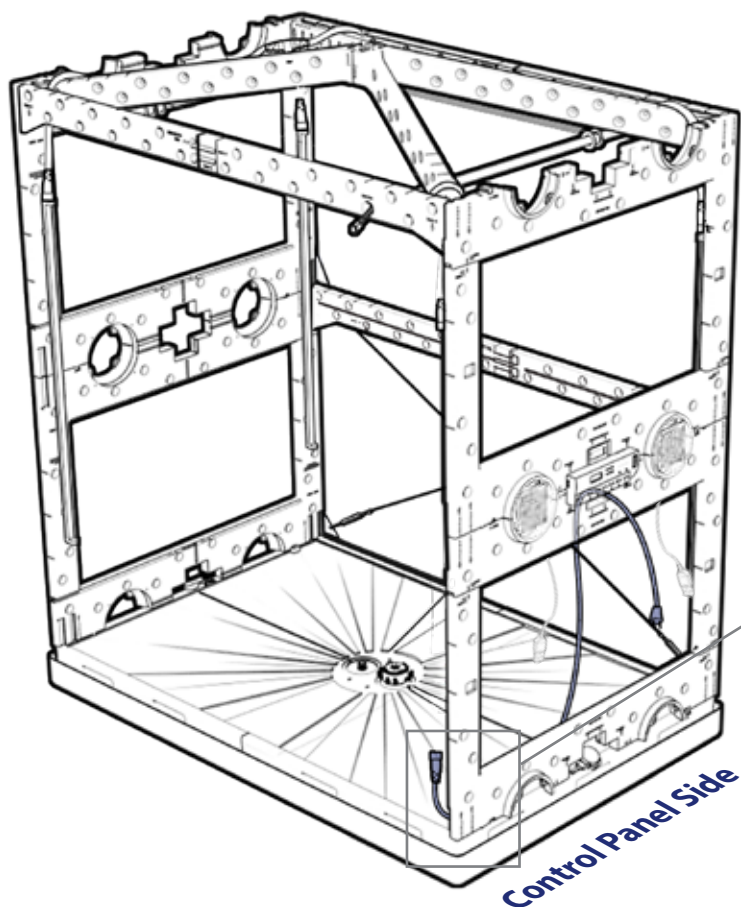
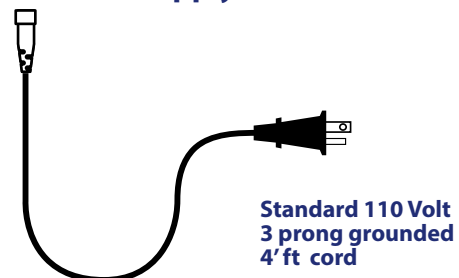
27

Install Single Light Unit Power Supply Cord

Find the power supply cord. Locate the Single Bulb Light Unit with the male end exposed on the Bottom Side (on the control panel side), and plug the Power Supply Cord into it.

Leave the cord loose for now.

Power Supply Cord



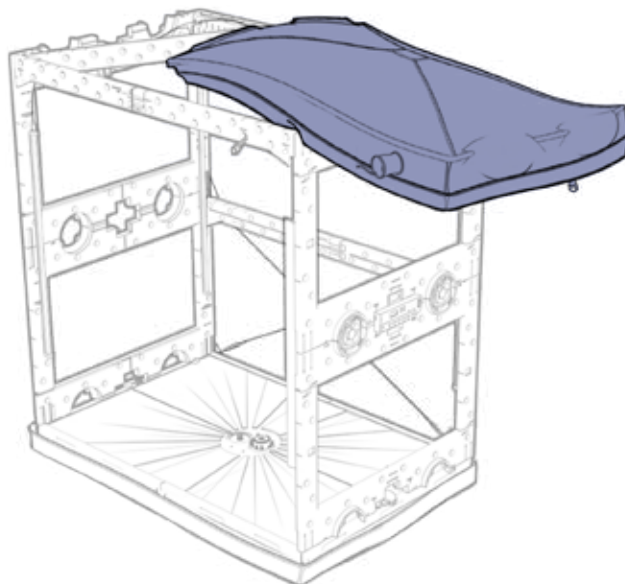
DO NOT plug the Power cord into a power source.

28 Install Top Shroud

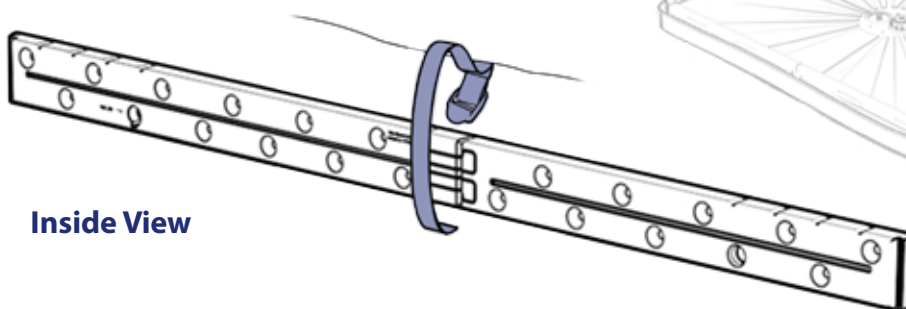
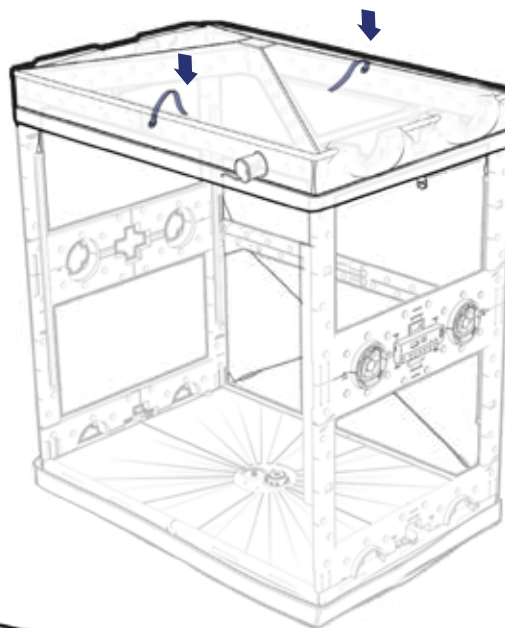
- A** With the Top Shroud piece in hand, locate the 4" round access sleeve, this will be positioned over the Light Adjustment Handle on the front side.

With two people, slide the Top Shroud over the Roof Truss.

Fit the small 4" round access sleeve over the Light Adjustment Handle.



- B** Locate the buckle straps on the middle inside of the front and back of the Top Shroud. Pull these over the front and back upper Support Beams and draw tight.



Inside View



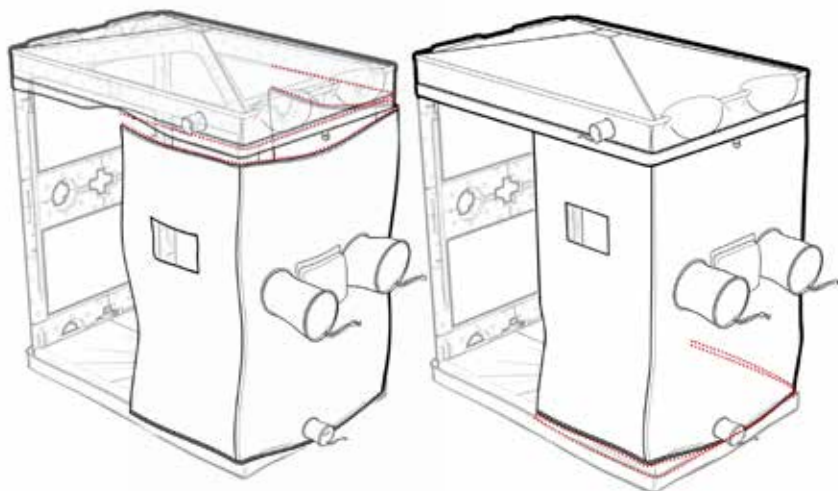
Ensure reflective Mylar Surface is facing inward on unit when installing shroud.

29 Install Right and Left Shroud

Start with the Right Shroud (section without logo), start zipper at the top middle of the right side of the unit. Zip all the way around the top as shown.

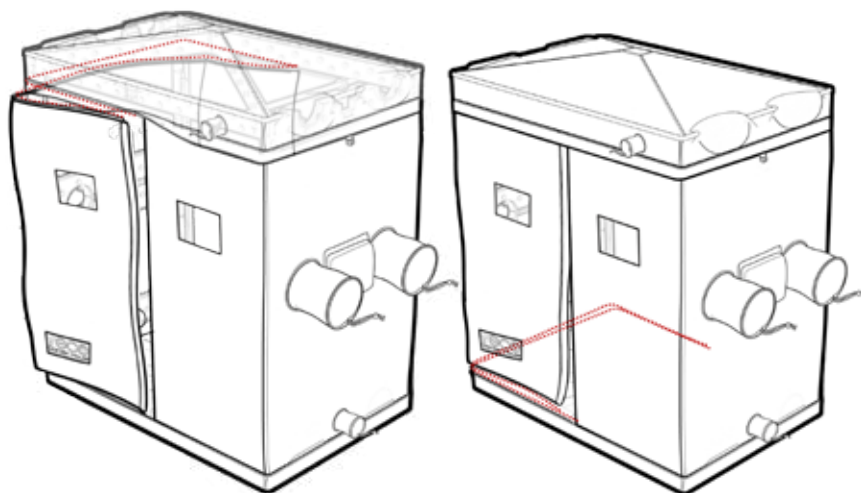
Zip the bottom half of the Right Shroud to Shroud Tray.

Right Shroud



Repeat these steps to install the Left Shroud (with logo).

Left Shroud



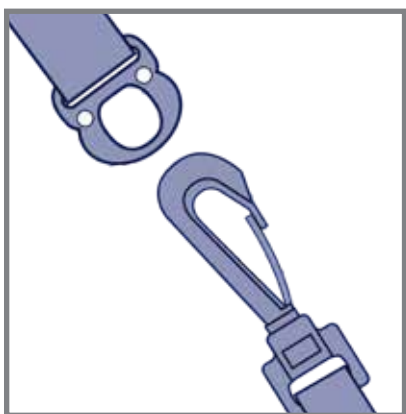
Ensure reflective Mylar Surface is facing inward on unit when installing shroud.

30 Fold Shroud Open

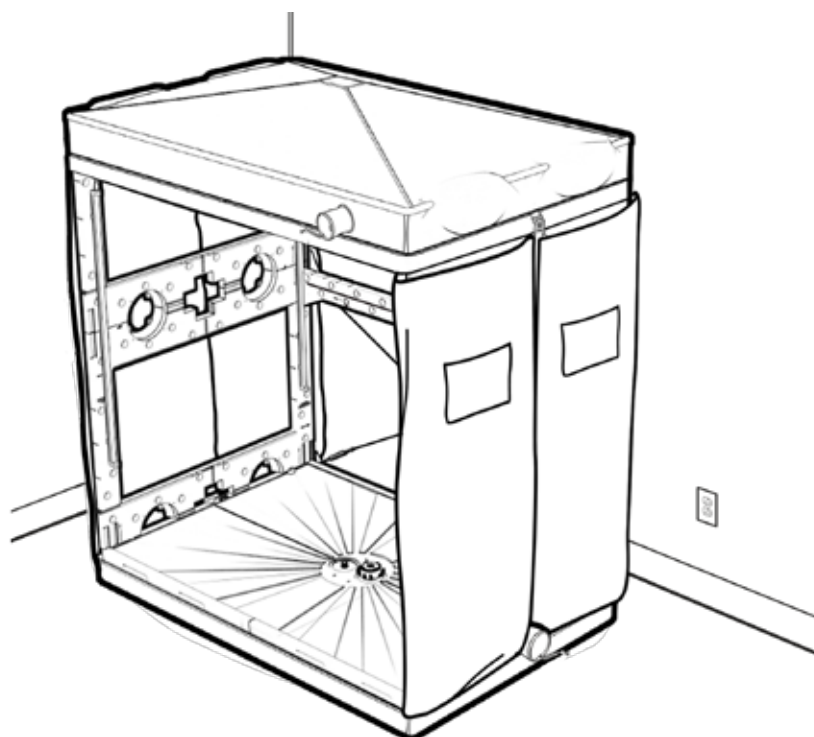
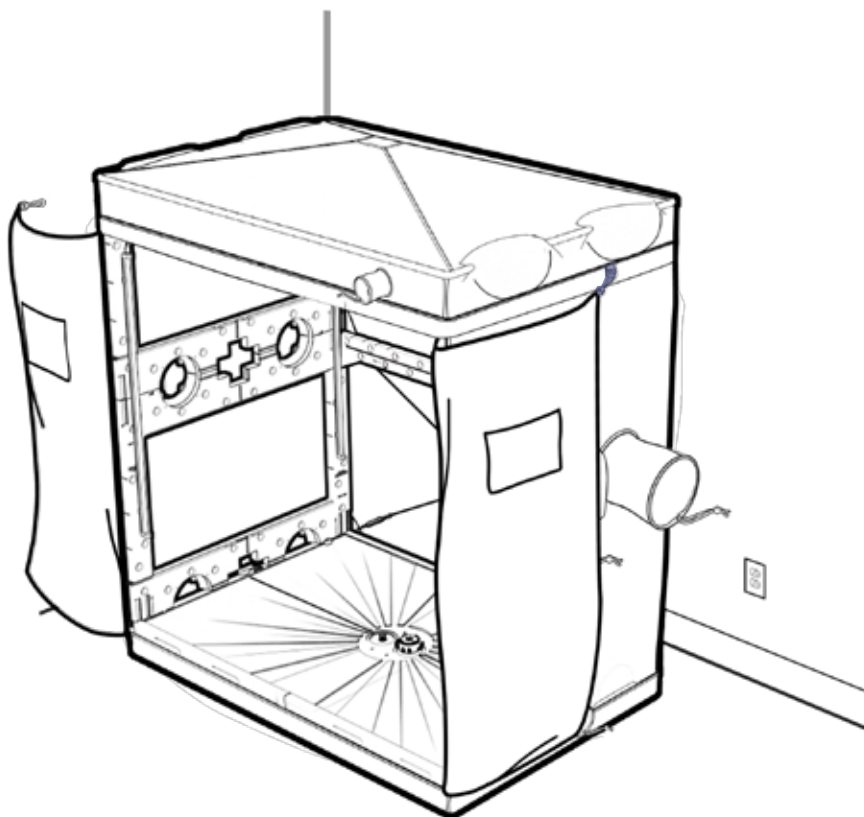
- A** Unzip the front, central zipper.

Unzip the front side, top and bottom, of both the right and left shroud.

Fold back the right and left shroud as shown and clip to secure.

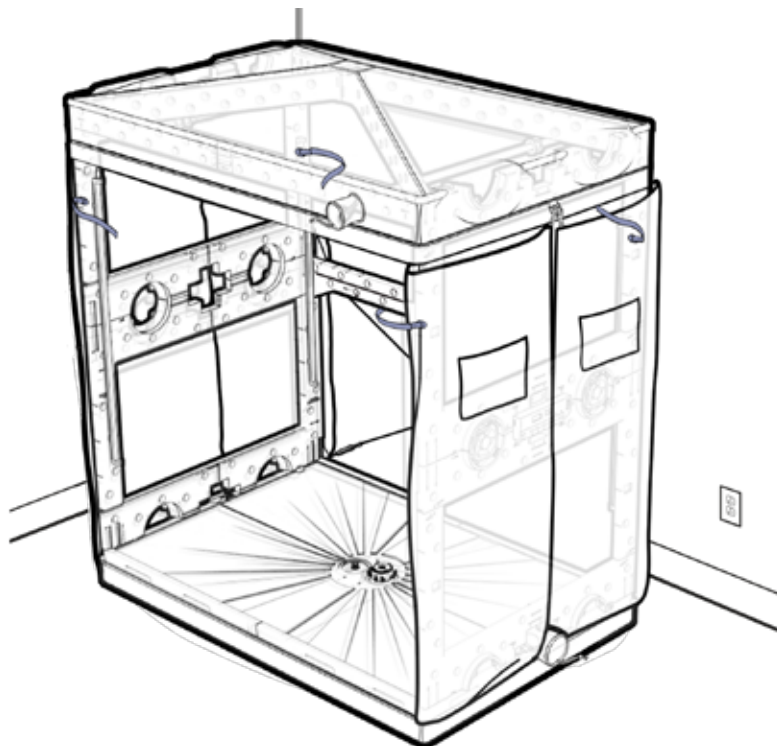


- B** Repeat steps to open up the backside.



31 Attach the Shroud Straps

Locate the straps on the inside of the Left and Right Shroud at each of the corners. Pull the straps around each of the four Single Bulb Light Units, connect them together and pull tight making sure the straps are laying flat.



32 Position Gray Water Pump Cord

Locate the Gray Water Pump Cord and feed through the sock hole located at the bottom of the Shroud opposite of the Control Panel Side.

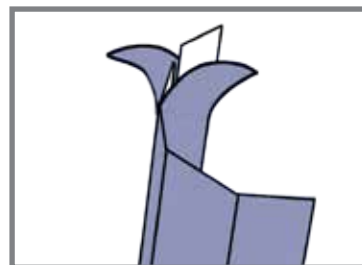


The Gray Water Pump should be plugged into a separate 110V outlet (NOT the Control Panel) ONLY when you are ready to drain the Gray Water Tank. Plugging in this pump when there is no water in the Gray Water Tank will cause the pump to burn out!

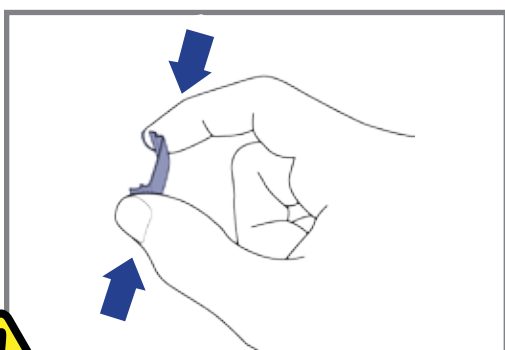


33 Install the Vertical Light Reflectors

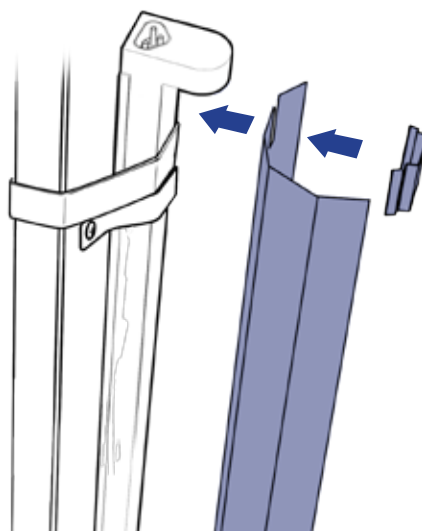
- A** Locate one (1) Light Reflector and two (2) Steel Reflector Clips. Remove the protective film from both sides of the Reflector.



- B** With the Reflector in proper orientation on light assembly (see image below) snap the bottom and top clips over the Reflector and onto Single Bulb Unit as shown.

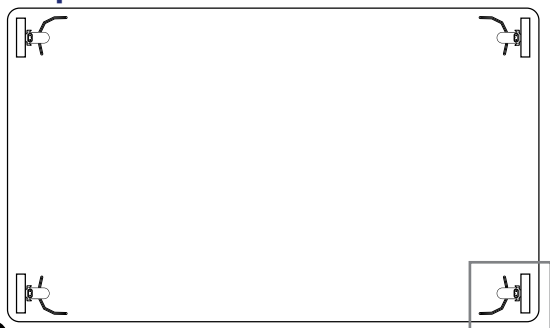


Ensure the Steel Reflector Clips fit tightly. If not squeeze slightly.

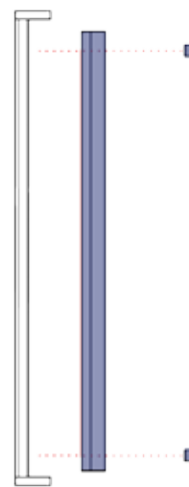
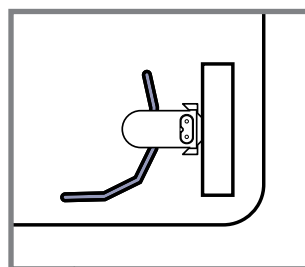


The Reflector will lay over both the zip ties and the shroud straps.

Proper Orientation



Ensure the reflectors are facing with the longest side aligned to the longest side of the unit. Reflectors may need to be flexed slightly to ensure they don't interfere with the Middle Support Beam.



USE CAUTION:
SHARP EDGES.

- C** Repeat this on all four sides.

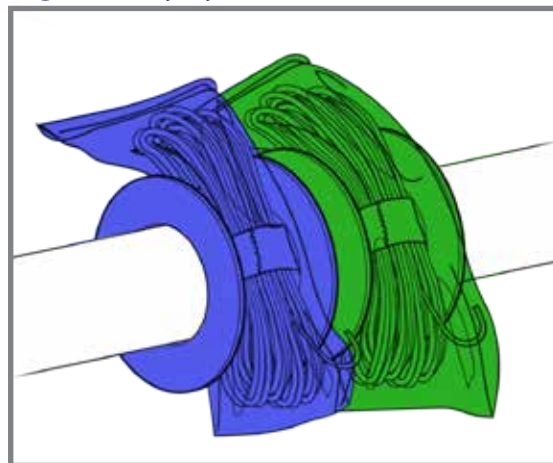
34 Install Pulley System for 8-Bulb Overhead Light Unit

- A** Cut the rubber bands off of the Left Pulley System Bar to allow for free movement of the two spools.
- B** Un-Bag and Un-tape the cordage hooks on the four Right Pulley System Bar spools.
- C** Let the “shorter” inside two (2) fall down to be used on the crank handle side of the light unit.
- D** Feed the “longer” outside two (2) cords across the unit and lay over top of the free wheeling spool on the Left

Left Pulley System Bar

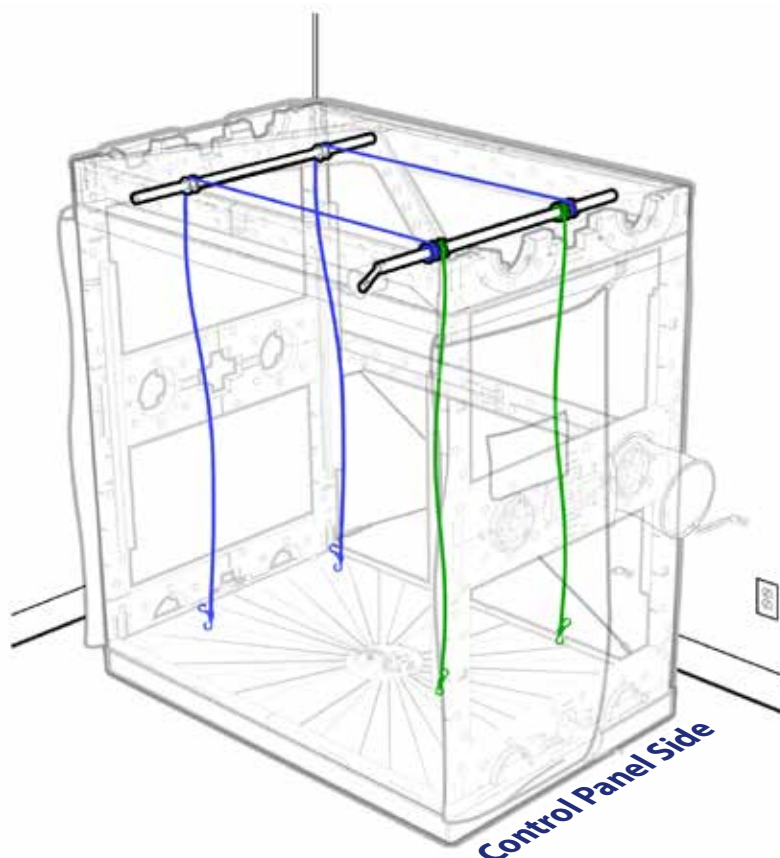
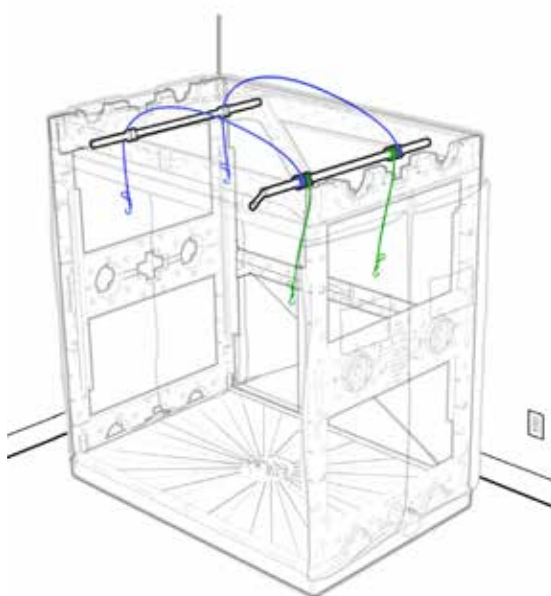


Right Pulley System Bar



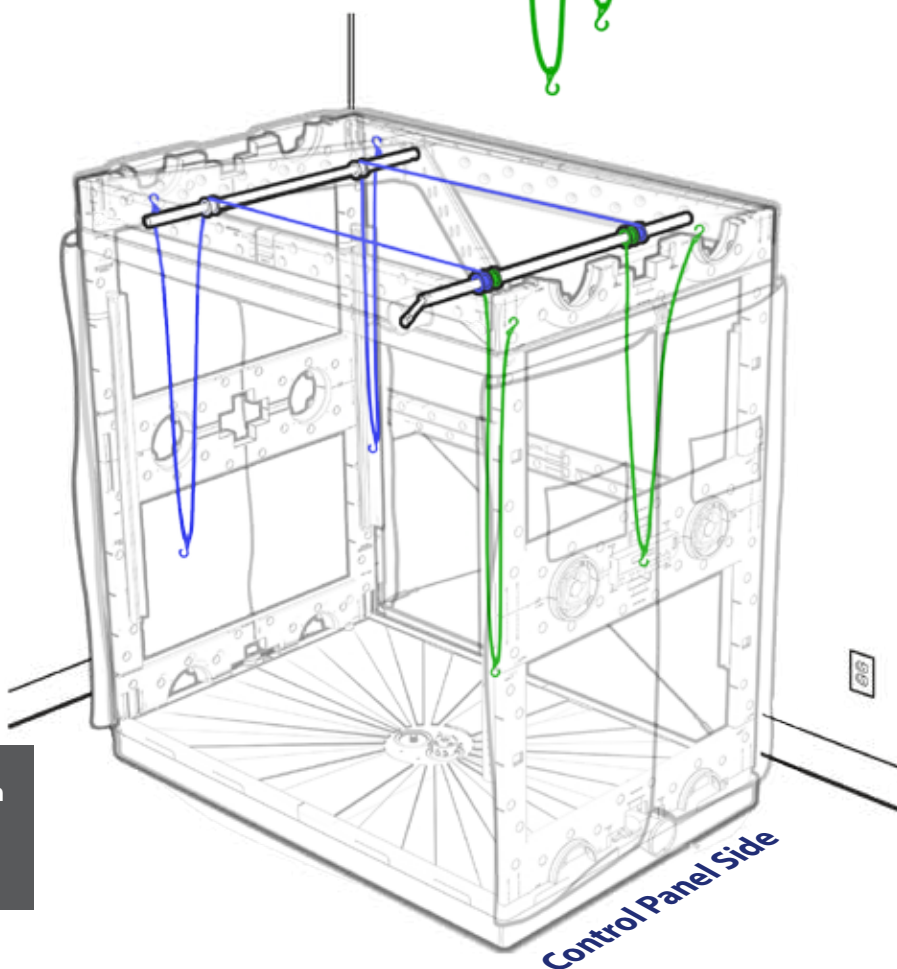
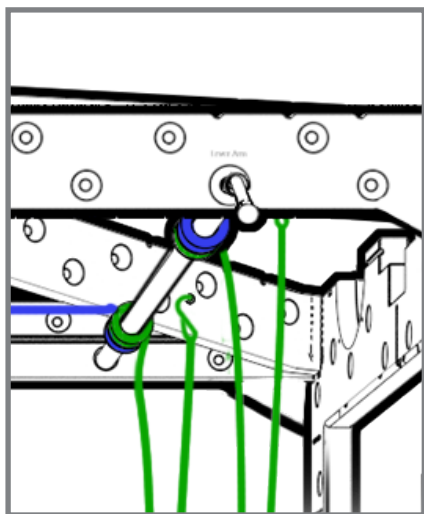
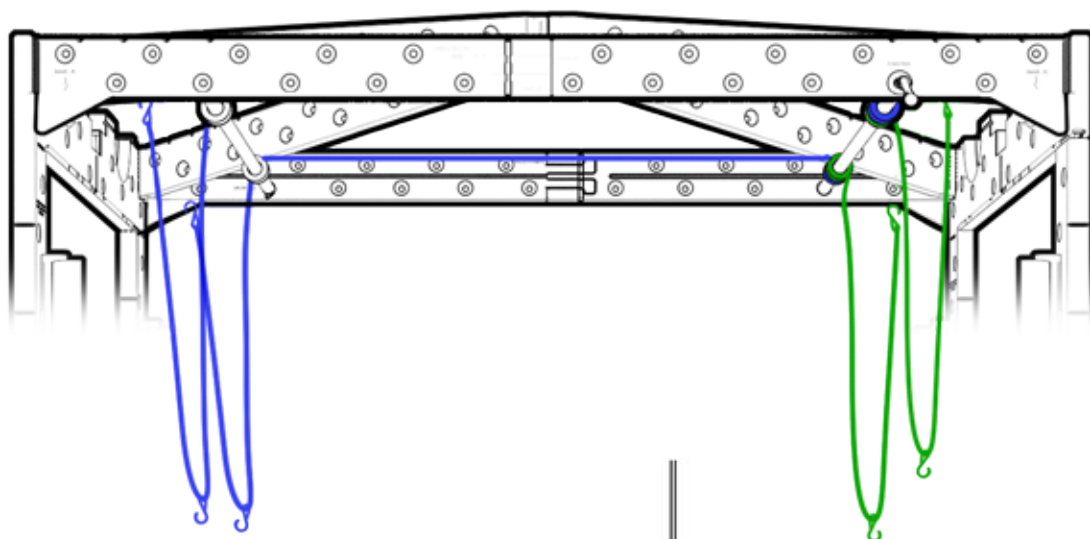
Longer cordage
(Outside Spools)

Shorter cordage
(Inside Spools)



35 Install Pulley System for 8-Bulb Overhead Light Unit

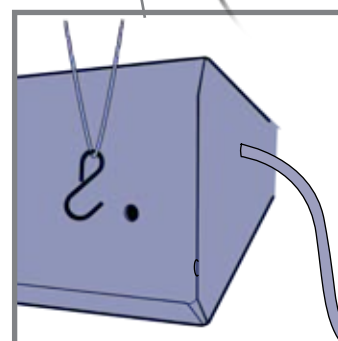
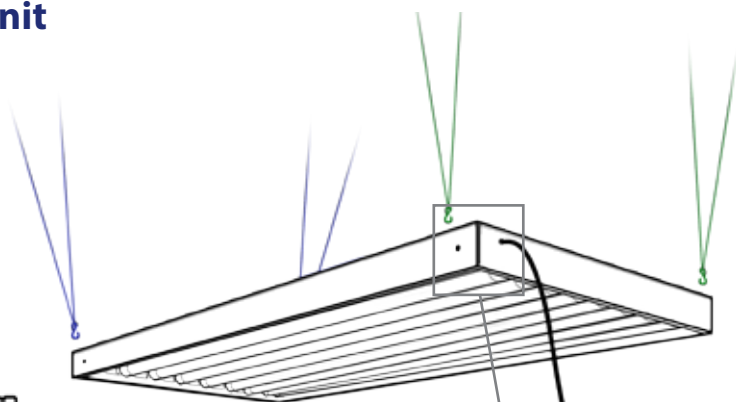
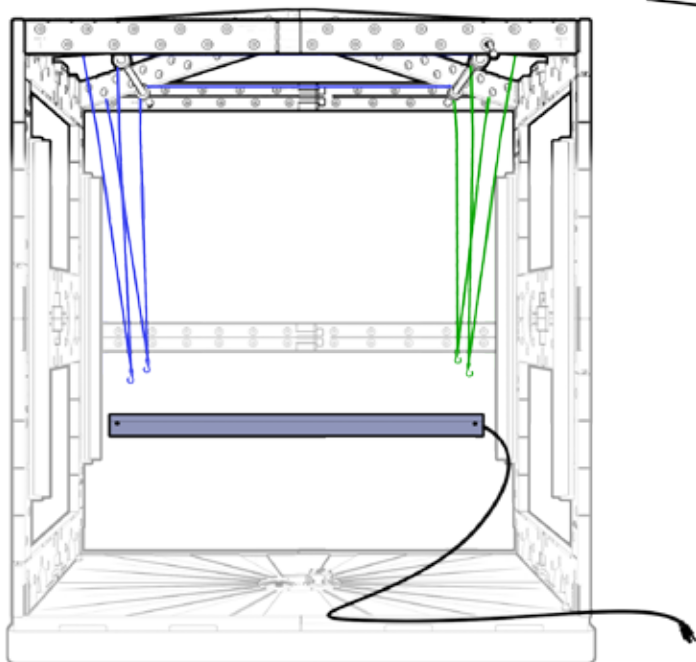
Take the loose ends of each of the four (4) cords and attach the J-hooks into the holes located on the Roof Truss.



J-Hooks should hook in to 1/8" hole on the roof truss near Light Adjustment Bar (approximate location shown).

36 Install 8-Bulb Overhead Light Unit

With two (2) people, take the 8-Bulb Overhead Light Unit and attach the four (4) "J" hooks into each of the four (4) corners.



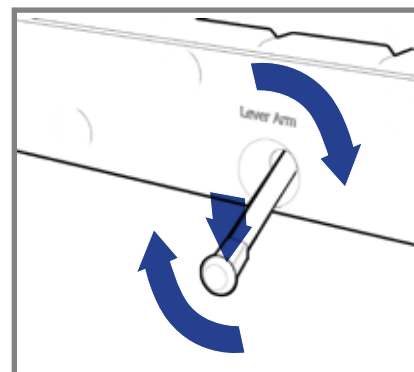
Make sure power cord is on the Control Panel side. Watch out for hanging Main Light Unit as it can both move downward or side to side during use/adjustment.



It is recommended that two people are used to connect the 8-Bulb Light Unit to the J-Hooks due to safety and fragility concerns.

37 Retract Light Bulb Unit

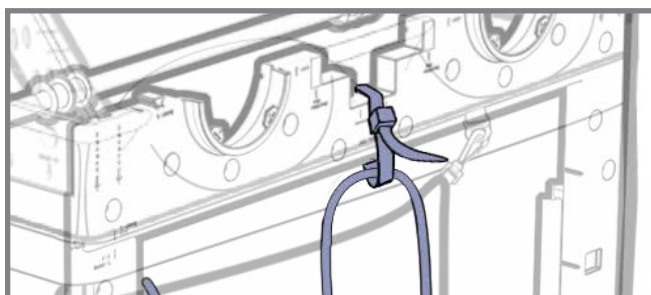
Wind up the 8-Bulb Overhead Light Unit by pushing down on the handle attached to the Pulley System Bar, then rotating clockwise. Rotate until the 8-Bulb Overhead Light Unit is aligned to Top Shroud.



38 Attach the Overhead Lighting and Freshwater Pump Cords

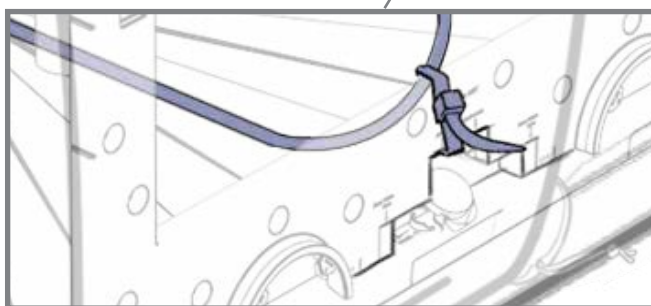
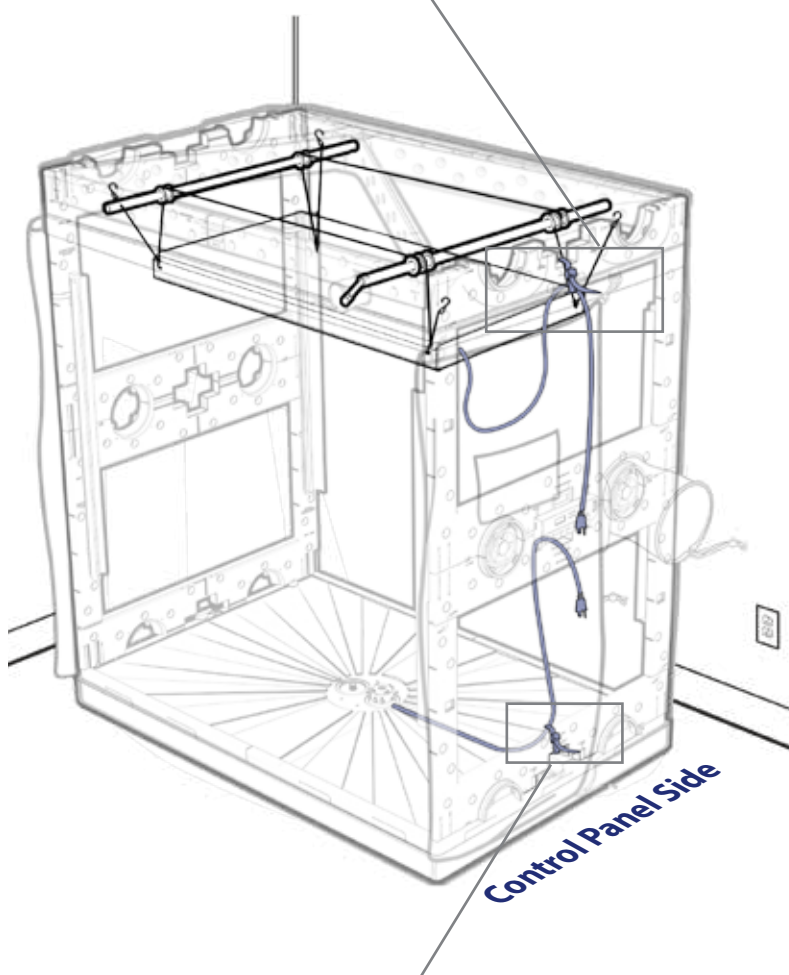
- A** For the Overhead Light, locate the upper Side Wall Beam on the Control Panel Side and loosely attach a zip tie around the center.

Run the cord from the Overhead Light through the zip tie straight down just until it reaches the Control Panel and pull the zip tie tight. This will leave slack between the Overhead Light Unit and the zip tie so that the Overhead Light can be raised and lowered.



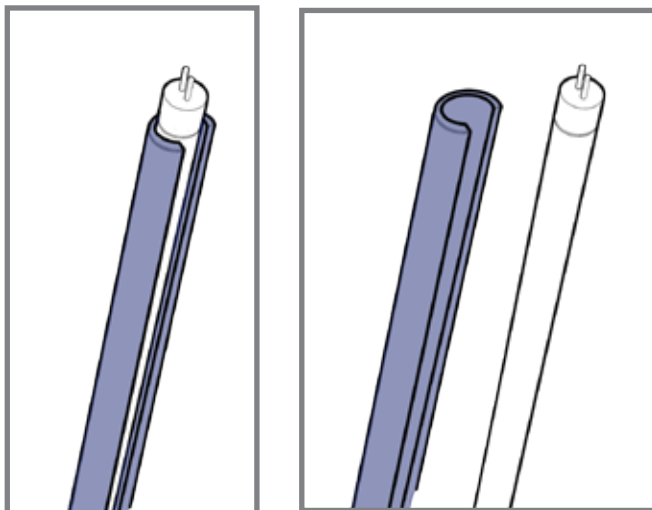
- B** For the Freshwater Pump Cord, locate the lower Side Wall beam on the Control Panel side and loosely attach a zip tie around the center.

Holding the zip tie up with one hand, run the cord from the Freshwater Pump through the zip tie on the top side of the lower beam and straight up through the hole under the Control Panel and tighten the zip tie so that there is no slack on the Freshwater Tank floor.

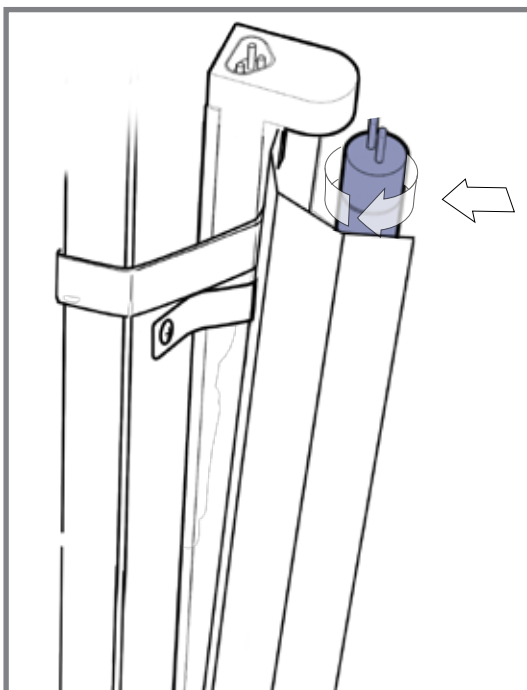


39 Install Light Bulbs

- A** Remove the protective foam from each of the four (4) Single Light Bulbs.



- B** Carefully install the four (4) Bulbs into Single Light Bulb Units by inserting and twisting them to lock in place.

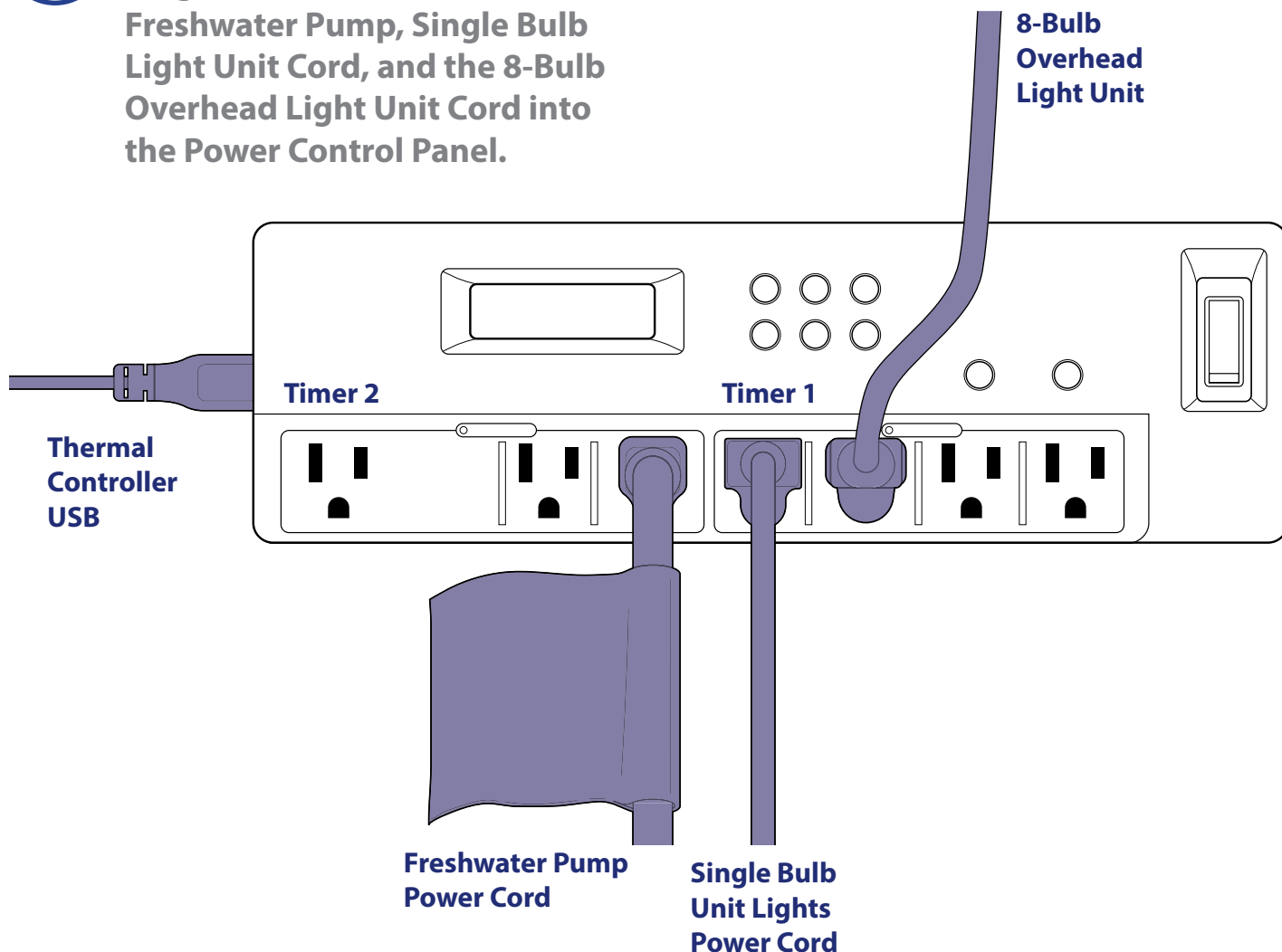


USE CAUTION:
SHARP EDGES.

40

Electronics Schematic

Plug the Thermal Control Unit, Freshwater Pump, Single Bulb Light Unit Cord, and the 8-Bulb Overhead Light Unit Cord into the Power Control Panel.



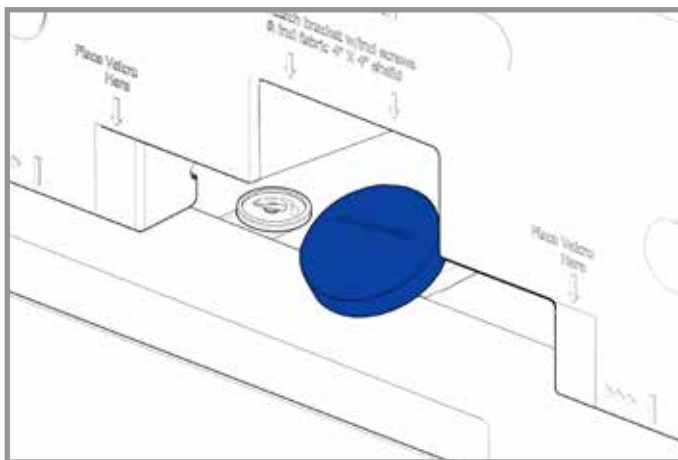
DO NOT plug in the Power Control Panel.



The Gray Water Pump should be plugged into a separate 110V outlet (NOT the Control Panel) ONLY when you are ready to drain the Gray Water Tank. Plugging in this pump when there is no water in the Gray Water Tank will cause the pump to burn out!

41 Fill the Freshwater Supply Tank

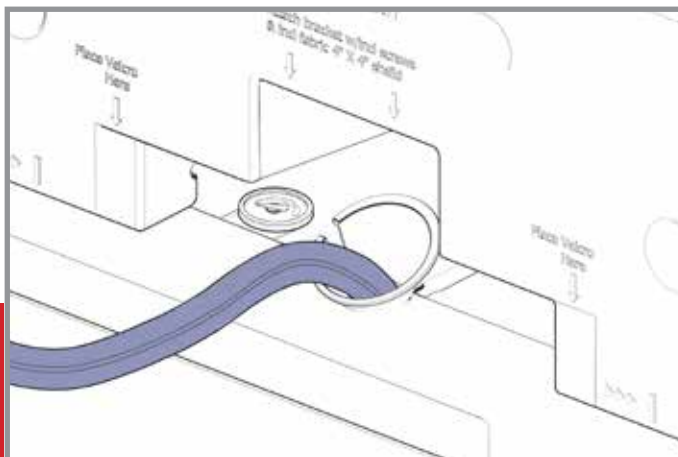
- A** Locate the blue cap on the Supply Tank.



- B** Remove the cap and insert the water source hose (no larger than 3/4") into the Supply Tank (holds approximately 33 gallons (125L)).



DO NOT leave the Tank unattended while filling, to ensure it does not overflow.



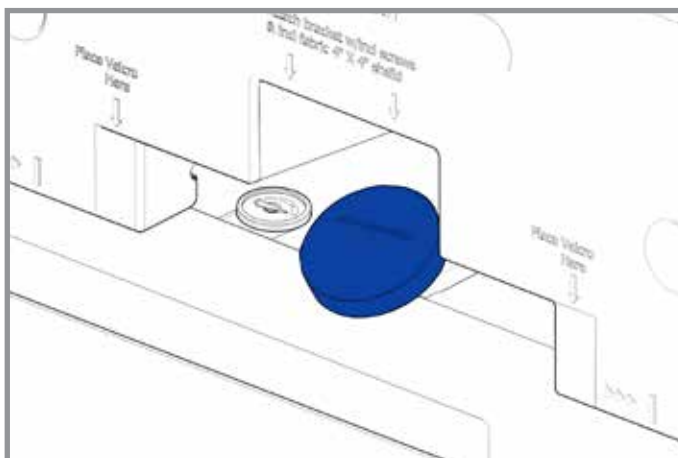
- C** Once the Water Level Gauge arrow points to full, the tank is full, turn off the water source and re-attach the Blue Cap.



Empty

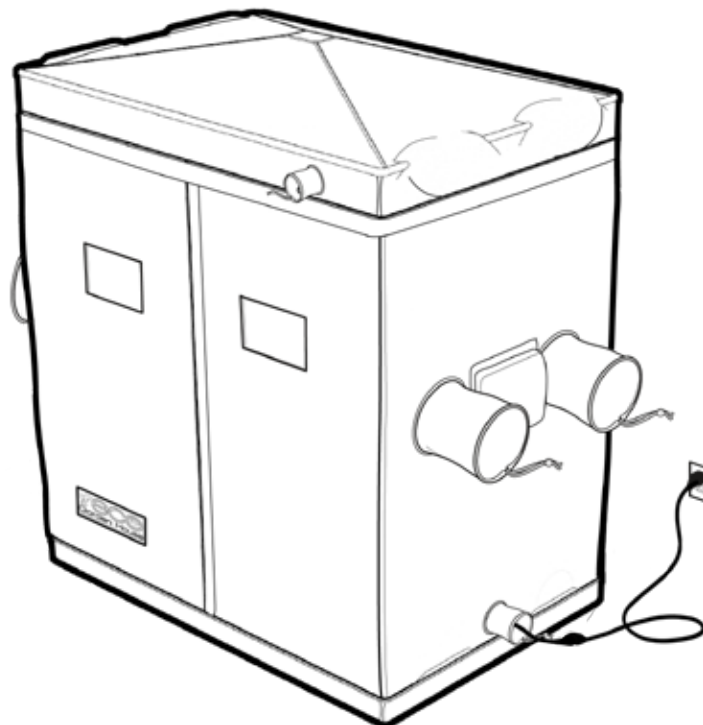


Full



42**Plug In Control Panel**

Feed the Control Panel cord through the base shroud sleeve. Attach an extension cord (not included), and plug into a 110v wall outlet.

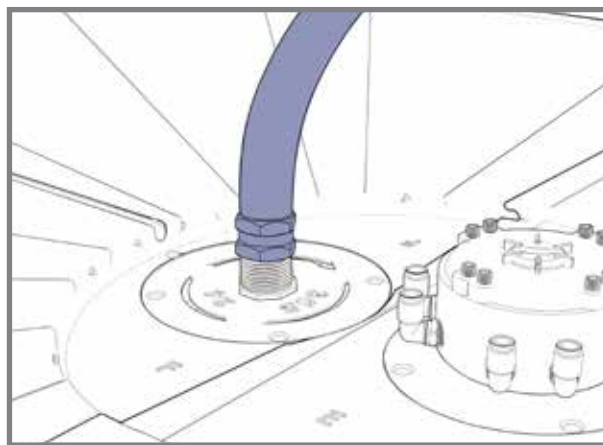


Congratulations! You have completed the Eco Garden House Assembly.

Additional Information:

When Gray Water Tank is Full, Attach Garden Hose

Attach Garden Hose to the male pipe thread fitting when ready to activate Gray Water Pump. Do not plug in Gray Water Pump until there is water to drain.



The Gray Water Pump should be plugged into a separate 110V outlet (NOT the Control Panel) ONLY when you are ready to drain the Gray Water Tank. Plugging in this pump when there is no water in the Gray Water Tank will cause the pump to burn out!

Lighting Information

The Eco Garden House lighting system is designed to simulate the natural light cycles of year-round growing (winter, spring, summer, fall). Therefore, the amount of light and light cycle you choose will depend upon the type of plant you are growing, (long day plants vs. short day plants) the current stage of the plant's growth cycle, (seedling, starts, small plant, etc) and whether or not you're wanting your plant in the vegetative or fruiting/flowering stage of growth. Refer to the General Lighting Guidelines below to help determine the lighting schedule for your plants.

General Lighting Guidelines

			Day-Night Crop Lighting Cycles			
Short Day Plants		Long Day Plants	LIGHT	DARK	LIGHT	DARK
A	Flower	Vegetative	8 Hours	16 Hours		
B	Vegetative	Vegetative	8 Hours	8 Hours	1 Hour	7 Hours
C	Vegetative	Flower	8 Hours	6 Hours	4 Hours	6 Hours
D	Vegetative	Flower	16 Hours	8 Hours		
E	Vegetative	Flower	6 Hours	2 Hours	8 Hours	8 Hours
F	Flower	Vegetative	12 Hours	12 Hours		
G	Vegetative	Flower	8 Hours	8 Hours		
H	Flower	Vegetative	16 Hours	16 Hours		

* (A-F) Normal 24 hour light day-night cycle * (G) Artificially shortened day-night cycle * (H) Artificially lengthened day-night cycle

Short Day Plants form flowers only when day length is less than about 12 hours. Many spring and fall flowering plants are short day plants, including chrysanthemums, poinsettias and Christmas cactus. If these are exposed to more than 12 hours of light per day, bloom formation does not occur.

Long Day Plants require only a short night to flower. These bloom only when they receive more than 12 hours of light. Many of our summer blooming flowers and garden vegetables are long day plants, such as asters, coneflowers, California poppies, lettuce, spinach and potatoes. These all bloom when the days are long, during our temperate summers.

Day Neutral Plants form flowers regardless of day length. Tomatoes, corn, cucumbers and some strawberries are day-neutral.

- The distance and intensity of light your plants can handle will vary by type of plant. To help reduce damage from overexposure, we suggest you initially start your lighting system position greater than 24" away from the top of the plants and continue to lower your lighting system over a period of a few days until your grow lights are closer to the tops of your plants. You may wish to consider using this simple test to determine the final position of your grow lights: Place your hand just above the tops of your plants. Reposition the grow lights if you can feel the heat coming from the grow light system. Raise the light fixture until you can no longer feel the heat on your hand.
- **WARNING:** Plants will discolor and damage from overexposure if the lighting source is too close.
- Replace your Full Spectrum, High Output T5 Fluorescent Grow Light Bulbs when the ends darken or as otherwise may be required based on your use. Note that once the ends have darkened, your T5 fluorescent grow bulbs may be producing as little as half of their light output.

Watering Information

Tailor your water schedule according to the condition of the soil, making sure it doesn't stay too dry or get too wet. Water plants only when they need it. Watering needs will vary depending on the lighting frequency, size and type of plant and growth cycle. The old rule of thumb trick, stick your thumb into the soil and feel for moist dirt. If it's dry, it needs water, if it's moist, leave it alone. Seed packets and plant tags will generally give recommendations on the amount of water that is needed for the type of plant you're growing, along with spacing requirements. Regular watering, fertilizing, and pruning are required to maintain healthy plants indoors. Always use a water soluble nutrient/fertilizer in the Eco Garden House in order to maintain a healthy watering system for your plants. Based on your use, you may desire to use the chart below for the Eco Garden House Drip Irrigation Watering System output:

General Watering Guidelines

8-Way Manifold # of Lines Open	Gallons Per Hour Per Line	Total Gallons Per Hour	Gallons Per Minute Per Line	Total Gallons Per Minute
1	10	10	0.17	0.17
2	9	18	0.15	0.15
3	8	24	0.13	0.13
4	7	28	0.12	0.12
5	6	30	0.10	0.10
6	5	30	0.08	0.08
7	4	28	0.07	0.07
8	3	24	0.05	0.05

*Maximum open setting on pump and lines *Pressure based on 1 ft. vertical head

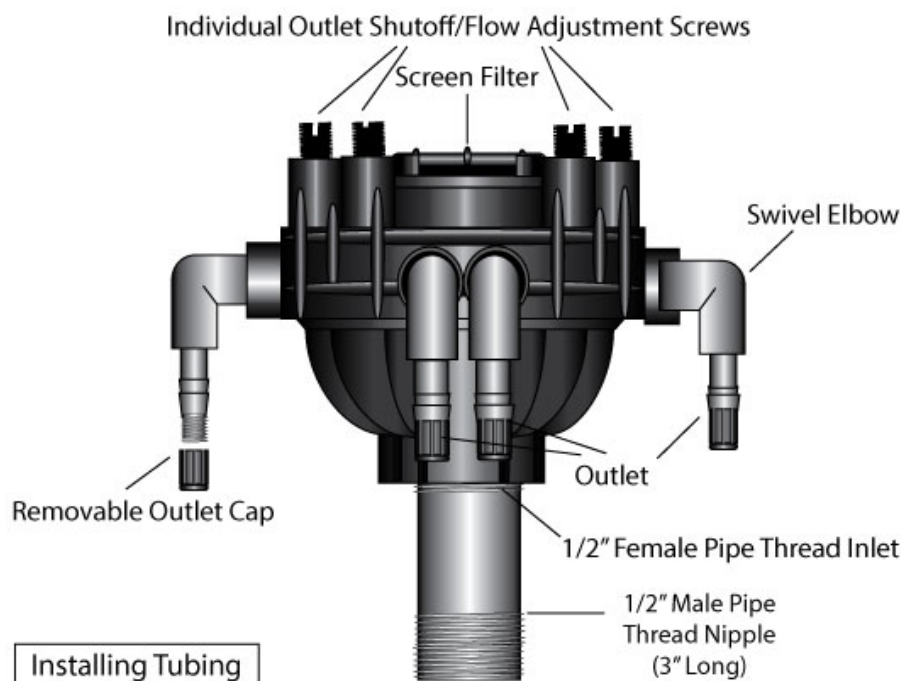
Signs of Over-Watering May Include:

- Wilting from stem towards leaves
- Lower leaves dropping
- Discoloration
- Plant might stop growing
- Wilting foliage

Signs of Under-Watering May Include:

- Wilts along the outer tips of the leaves first
- Dry soil
- Brown edges along the leaves
- Wilting foliage
- Leaves or flowers drop prematurely

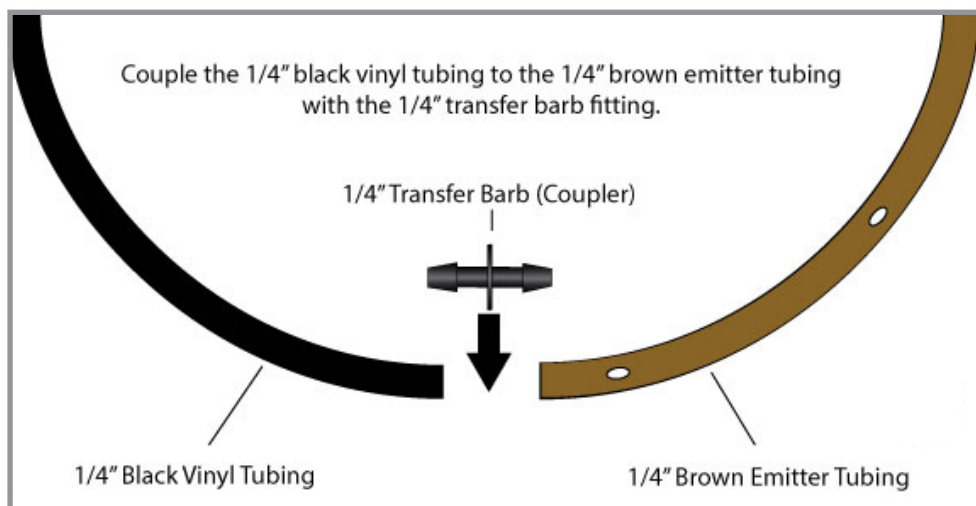
8-Way Manifold & Drip Supply Kit Instructions



Installing Tubing

1. Starting at the 8-Way manifold, roll out the 1/4" black vinyl tubing to the first area to be watered and cut the tubing to the desired length.
2. Roll out a length of the 1/4" brown emitter tubing sufficient to cover the area to be watered. If the planting is in a container, a loose circle or spiral of tubing will do.
3. Using a 1/4" transfer bar, couple the 1/4" vinyl tubing to the 1/4" emitter tubing (**Illustration 1**).
4. Terminate the 1/4" emitter tubing with a 1/4" goof plug (**Illustration 2**).
5. Remove the cap from one of the 8-Way manifold outlets and slide the loose end of the 1/4" vinyl tubing onto the outlet with a rocking motion (**Illustration 3**).
6. Once tubing is in place, secure with U-shaped hold down stakes.
7. Repeat these steps for each outlet to be used

1



8-Way Manifold & Drip Supply Kit Instructions

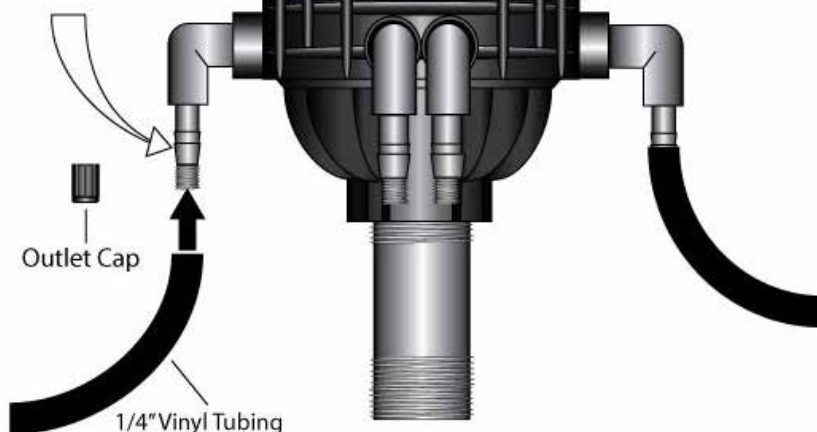
2

Terminate the 1/4" brown emitter tubing with a goof plug.

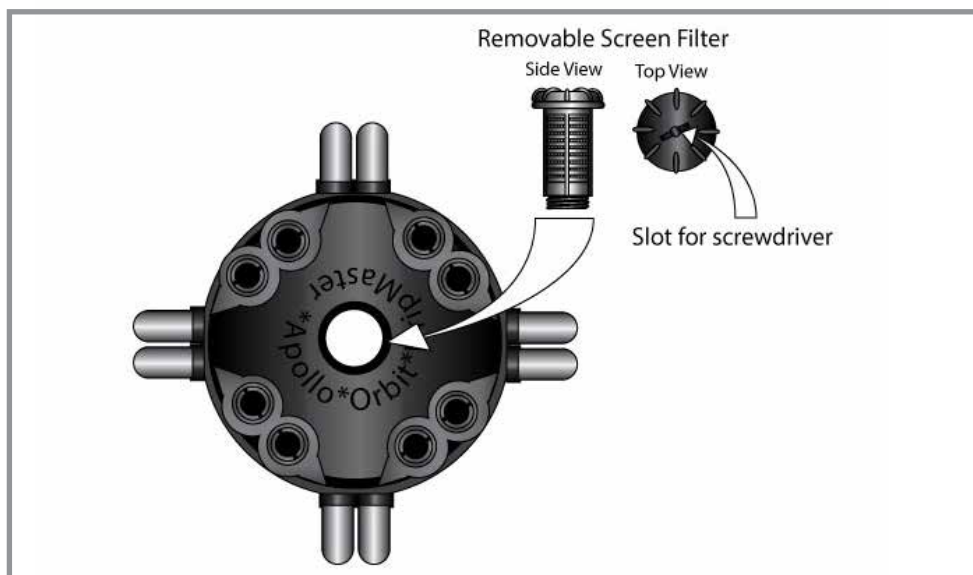


3

Remove Cap and
Slide 1/4" Vinyl
Tubing onto Outlet



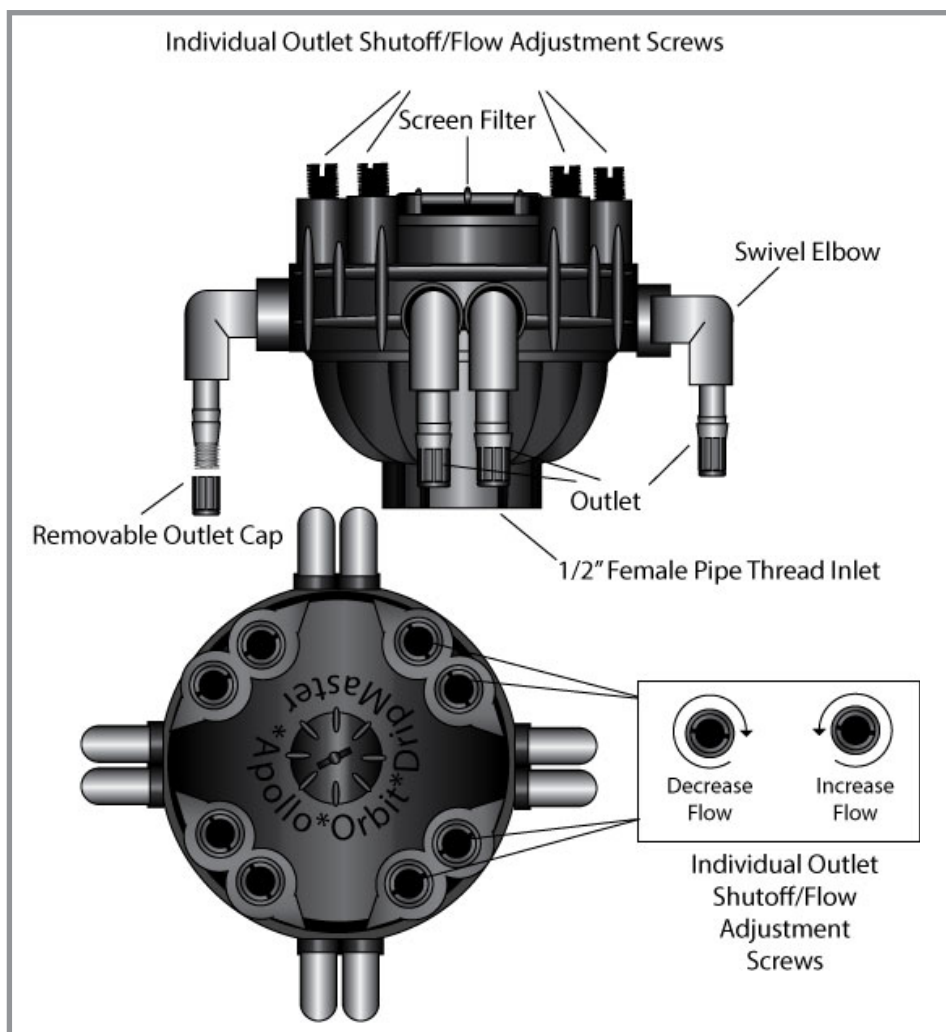
Removing Screen Filter for Cleaning



The 8-Way manifold has an internal screen to help prevent the 1/4" emitter tubing from clogging. The filter can be easily removed using a at blade screwdriver. For general debris, the screen can be cleaned with canned air or clean compressed air (no oil). If mineral scale is the issue, soak the filter in a white vinegar solution to dissolve build-up.

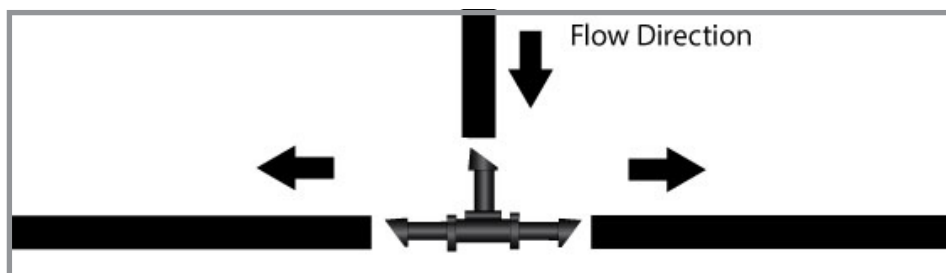
8-Way Manifold & Drip Supply Kit Instructions

Shutoff/ Flow Adjustment Screws



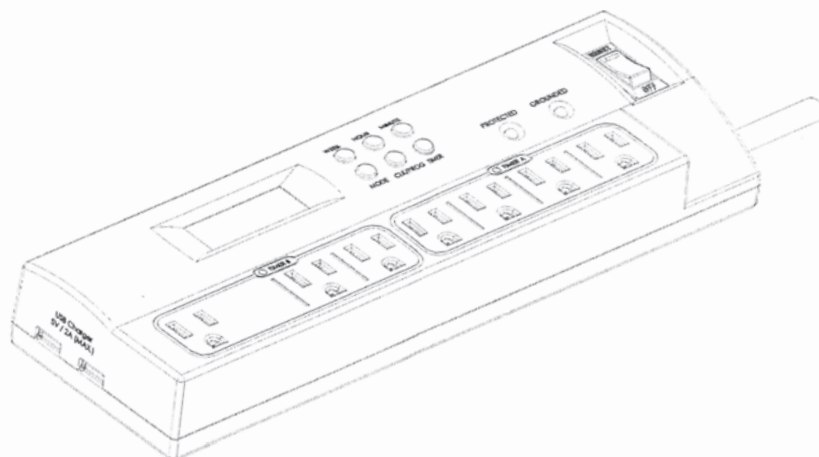
Each outlet on the 8-Way 1/4" manifold has a shutoff screw that can be used to adjust the flow from full (20 GPH) to 0 (0 GPH) with a flat blade screwdriver. Clockwise will reduce the flow and counterclockwise will increase the flow. This is particularly useful when the plants being serviced by an outlet no longer need watering or require reduced watering.

Tee Barb Fittings



The tee barb fitting can be used to split the flow, allowing two different plants or two different areas to be watered from a single outlet.

Control Panel Programming Instructions



A. INITIAL SET UP

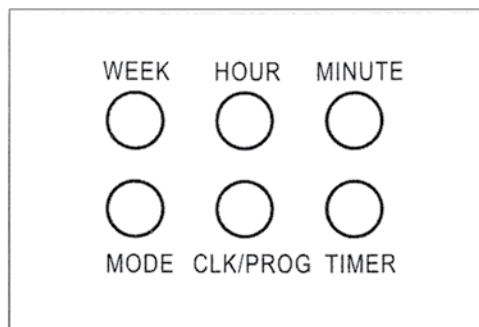
1. Plug the surge strip and switch on before setting the timer.
2. The display is easier to read when viewed .
3. Display now shows (Flashing)



B. EXPLAINING THE BUTTONS

Read this section before attempting to program your timer.

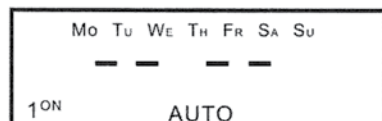
- **CLK/PROG** BUTTON
Press to switch setting timer mode or clock mode for setting days, hours & minuets.
- **WEEK** BUTTON for setting days
- **HOUR** BUTTON for setting hours
- **MINUTE** BUTTON for setting minuets
- **TIMER** BUTTON
Press for 20 program **On/Off** BUTTON to setting power of BB58
- **MODE** for setting outlet Group **Timer1 /Timer2** and ALLON/AUTO mode for whole outlets



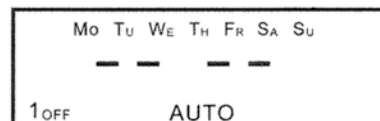
TIMER BUTTON (program)

Each time you press "**TIMER**" button either an "**ON**" or "**OFF**" command is displayed. There are 20 possible switching commands, ten "**ON**" and ten "**OFF**". This diagram helps explain what happens when you press "**TIMER**" button

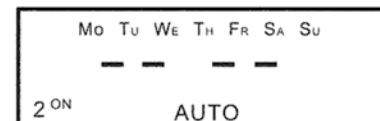
First press of the "**TIMER**" button, "**ON**" appears



Second press of the "**TIMER**" button, "**OFF**" appears.



Third press of the "**TIMER**" button, "**ON**" appears for second program on step.



Continual pressing of "**TIMER**" button changes the display through sixteen "**ON**" and sixteen "**OFF**" switching commands.

You don't need to use all "**ON**" or "**OFF**" switching commands.

Example : You may choose to use only four switching commands.

Program 1 First Command [1. ON 8:00pm Switch ON
Second Command [1. OFF 10:30am Switch OFF

Program 2 Third Command [2. ON 11:05pm Switch ON
Fourth Command [2. OFF 12:15am Switch OFF

WEEK BUTTON

Selects day groupings and individual days.

1. First press "**TIMER**" button.
2. Next by repeatedly pressing "**WEEK**" button, you can select 10 possible day settings.

① MO TU WE TH FR SA SU

(24 hour) program - your "**on/off**" program will repeat every day.

- ② MO Will only operate MONDAY
- ③ TU Will only operate TUESDAY
- ④ WE Will only operate WEDNESDAY
- ⑤ TH Will only operate THURSDAY
- ⑥ FR Will only operate FRIDAY
- ⑦ SA Will only operate SATURDAY
- ⑧ SU Will only operate SUNDAY
- ⑨ MO TU WE TH FR
Will operate MONDAY to FRIDAY
- ⑩ SA SU Will only SATURDAY and SUNDAY

HOUR BUTTON

Hour setting (press and hold for fast forward). AM or PM appears in left of hour digits to show morning or afternoon.

MINUTE BUTTON

Minute setting (press and hold for fast forward)

CLK/PROG BUTTON

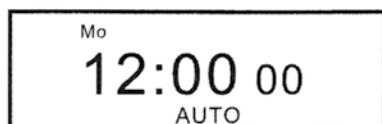
Press and hold whilst setting week, hours and minutes for clock press to return to clock function.

MODE BUTTON

At timer mode, Press "**MODE**" button to select outlet group **Timer1** or **Timer2**.
At clock mode, press "**MODE**" button to setting timer at **ALL ON** or **AUTO** mode.

C. HOW TO SET PRESENT TIME AND DAY

1. Press and hold : "CLK/PROG" button.
2. Press "HOUR" button to set hour of day.
(Press and hold for fast forward).



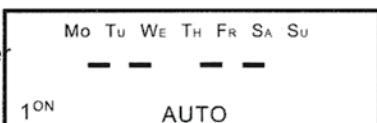
3. Press "MINUTE" button to set minutes of day.
(Press and hold for fast forward, Am or PM appears in left of hour digits)
4. Press "WEEK" button until the day of the week appears.
5. Release "CLK/PROG" button.

D. SETTING DAILY "ON" AND "OFF" PROGRAM

Example A

You want to switch an appliance or light "ON" every day of the week at 8:10 pm and "OFF" at 11:06pm with outlet group TIMERA

1. Press "CLK/PROG" button switch to timer mode. press "TIMER" button once.
The display will show.



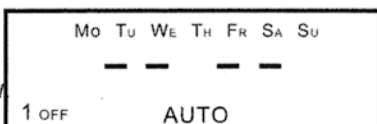
2. Press "HOUR" button to show.



3. Press "MINUTE" button to show.



4. Press "TIMER" button, once.
The display will show



5. Press "Hour" button to show



6. Press "MINUTE" button to show.



7. Press "MODE" button to select Timer1 as show right side.

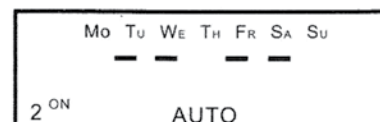


8. Press the "CLK/PROG" button to return clock mode.
Your timer is set to switch "ON" at 8:10 pm and "OFF" at 11:06pm every day of the week. The display is showing the clock function.

Note : You still have available a further nine "ON" and nine "OFF" switchings . You can see these if you press the "TIMER" button 20 times. The first and second press of the button will show the program you have just set.

To set more "ON/OFF" program:

1. Press "TIMER" button until display reads:



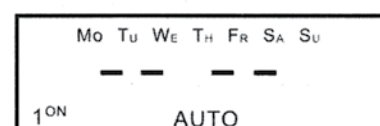
2. Repeat steps 2 to 8 adding your new "ON" and "OFF" time.

E. SETTING "ON" AND "OFF" ON DIFFERENT DAYS

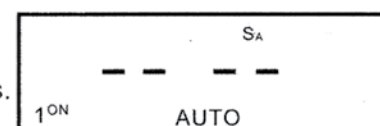
Example B

You want to switch an appliance or light "ON" at 1:30pm Saturday and "OFF" at 7:15am Monday with outlet group TIMERB

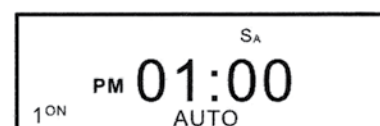
1. Press "CLK/PROG" button switch to timer mode. press "TIMER" button once.
The display will show.



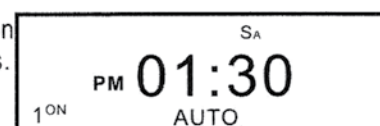
2. Repeatedly press "WEEK" button until Saturday appears.



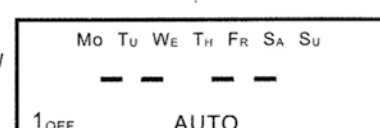
3. Press "HOUR" button until 13:00 appears:



4. Press "MINUTE" button until 13:30 PM appears.



5. Press "TIMER" button, display will now show "OFF" program.



- Repeatedly press "WEEK" button until "MO" (Monday appears:)



- Press "HOUR" button until 7:00 appears:



- Press "MINUTE" button until 7:15 appears:



- Press "MODE" button to select Timer2 right side as show



- Press "CLK/PROG" button to return clock mode.

F. VARIOUS PROGRAMMING FEATURES

The BB-58 offers the following useful programs which are usually only found in more expensive industrial timers.

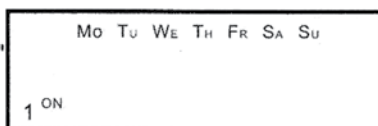
Daily Program (24 hours)
Weekday Program
Weekend Program
Specific Days

We have described in Example A and B how to set "ON" and "OFF" program for daily (24 hours) timer, and specific days. This timer also has a built-in capacity to select groups of days.

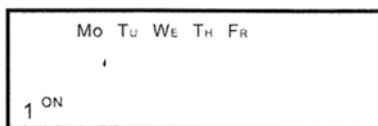
Weekday Program (Monday to Friday)

Switches electrical appliances "ON" and "OFF" at the same time every day from Monday to Friday and repeats program continuous with outlet group Timer1 or Timer2

- Press "CLK/PROG" button press "TIMER" button until display shows:



- Press "WEEK" button until display shows:



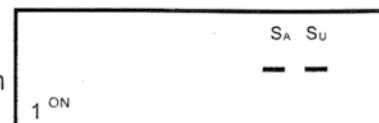
- Set required "ON" time then repeat time and day setting procedure for your desired "OFF" time.

Note : Ensure that **MO TU WE TH FR** is display for both "ON" setting and "OFF" setting by pressing the "WEEK" button until **MO TU WE TH FR** is shown.

- Press "MODE" button to select outlet group Timer1 or Timer2 which you like.
- Finally, plug your appliance or light into **BB-58**.

Weekend Program (Saturday and Sunday only)

Use the same procedure as previously described but press "WEEK" button until display shows.

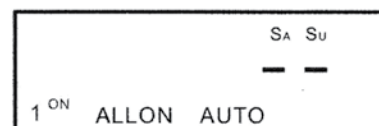


G. CHECKING AND CHANGING SWITCHING COMMANDS

Checking

- Press of "CLK/PROG" button then press "TIMER" shows your present "ON" and "OFF" switch settings (ten "ON" and ten "OFF" switchings are possible). When pressing the "TIMER" button check that correct 24 hour, weekly or day settings are showing. These should correspond with your programmed "ON" and "OFF" switchings. If all days are showing your timer is set for daily (24 hour) program. Refer to explanation of "TIMER" and "WEEK" button.

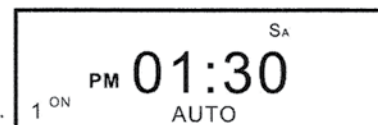
- Press "MODE" button at clock mode to select "ALL NO" mode then display shows and all outlets will ON. Press "MODE" button again back to "AUTO" mode for timer setting.



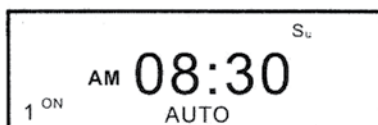
Changing

Example :

- If you have programmed " ON". Saturday 1:30PM as shown in section, and you want to change to "ON" Sunday 8:30 , Press "CLK/PROG" button then press "TIMER" button to show:



- Press the "HOUR" button repeatedly to change from 13:30 to 8:30. Now press the "WEEK" button to change from "SA" to "SU", the display will show.



- Press "CLK/PROG" button to return to clock function.

H. USER HINTS

1. For indoor use only, this time switch is not weatherproof.
2. Ensure the your appliance or light is in the "AUTO" position when connected to the power strip timer.
3. Do not expose **timer** to extremely high or low temperatures. Do not place in direct sunlight.
4. Display digits are clearer when viewed from a frontward angle.
5. To fast forward press and hold buttons "HOUR", "MINUTE" and "WEEK".
6. Check your programmed times by pressing the "TIMER" button(up to 20 switching commands available).
7. Return to clock function by pressing "CLK/PROG" button.
8. Power switch off to shut down outlets after ALLON setting.
9. Please take battery out of when you not use timer for long.
10. Change battery when LCD not display.
11. Do not set timers to overlap.

I. WARNINGS

1. **DO NOT** connect to an ungrounded outlet.
2. **DO NOT** use with extension cords or adapters that eliminate the connection to ground.
3. The power strip is designed for indoor use only.
4. Install the power strip away from heat emitting appliances such as radiators or heat registers.
Never install electrical wiring during a lightning storm.
5. **DO NOT** use this unit for any application other than the intended use in this product. Failure to do so violates any warranty and may cause harm to the user at their own risk.
6. **DO NOT** Overload the Power Supply.
7. Up to two (2) of the USB Fan Controllers can be plugged into the controller for use. Only USB items that draw less than the provided 1.0 Amp per outlet can be used.
8. **DO NOT** overload the Controller. The Total Max. Power rating is 1875 Watts total combined load. The Max. Amps. Is 15A.

J. ADDITIONAL INFORMATION & WARNINGS

- TYPE 3 SURGE PROTECTIVE DEVICE
- VPR 400V (L-N), (L-G), (N-G)
- MAX. LOAD: 15A; 125VAC; 60HZ
- **CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK:
FOR INDOORS USE IN DRY LOCATIONS ONLY.
DO NOT PLUG INTO ANOTHER RELOCATABLE POWER TAP.

USB Powered Programmable Thermal Controller With LED Display

Set Stop Temp:* Press “stop button” once to put unit in Stop programming mode and the turn off temperature will blink, use the right Up/Down buttons to set the temperature press the “stop button” again to return to the real time readout.

Set Start Temp:* Set Start Temp: Press “start button” once to put unit in Start programming mode and the start-up temperature will blink. Use the right Up/Down buttons to set the temperature (note: it must be at least 2F/1C higher than the turn off temperature) press “start button” again to return to the real time read-out.

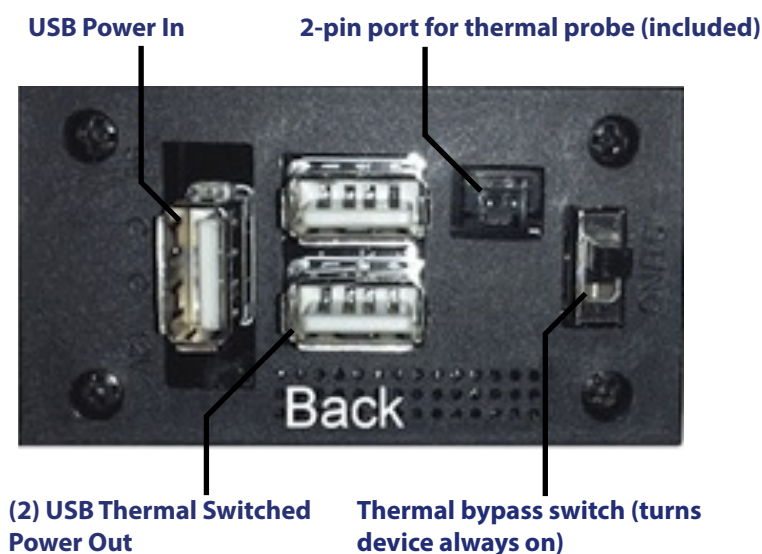
C/F or Up: Will change display to and from Fahrenheit and Celsius or will increase the temperature when in the Start or Stop programming mode.

Down: Will decrease the temperature when in the Start or Stop programming mode.

Display On/Off Switch: To turn display light off (device will still function) simply press and hold the C/F Button for 5 seconds. Repeat the process to turn display back on.

***Important Notes:** DO NOT REMOVE PROTECTIVE SHIELD from the thermal probe to prevent static charge from damaging the sensor. Only one fan can be connected to each USB port located on the back of the controller. Maximum (2) fans per unit. *Not tested at extreme temperatures.

***STOP TEMPERATURE HAS TO BE AT LEAST 2 DEGREES LOWER THAN START TEMPERATURE**



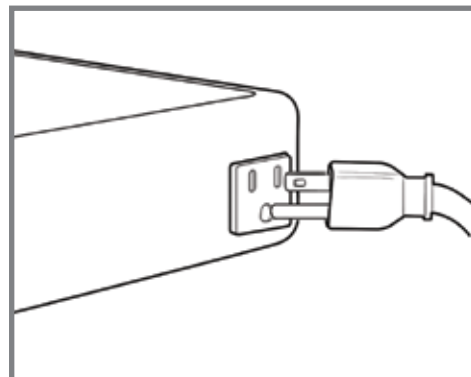
Light Units

8-Bulb Horizontal Light Warnings:

- Orientation for Mounting: Horizontal
- Electrical Rating: 120V; 60Hz; 3.75A
- Bulb Replacement Marking: T5 HO 54W
- Caution: Risk of Fire.
- Use Only T5 fluorescent 54 watt lamps.
- Output: 40,000 Lumens

Vertical Lights Warnings:

- Orientation of Mounting: Vertical
- Electrical Rating: 120V; 60 Hz; 0.82A
- Bulb Replacement Marking: T5 HO 54W
- Caution: Risk of Fire.
- Caution: Risk of Electrical Shock.
- Caution: Use in Dry Location Only.
- Caution: Not to Be Used on a Dimmer Circuit.
- Warning: Link 4 Units Maximum.
- Warning: Only Connect to Adjacent Units.
- Use Only T5 fluorescent 54 watt lamps.
- Output: 5,000 Lumens



Installation

1. Carefully remove all of the components from the box and the protective foam per instructions.
2. Inspect the included components for any damage, missing parts, or other concerns. Contact TPG with any concerns at: 1.888.449.3326.
3. If there is a protective film on the reflector surfaces, be sure to remove it completely prior to installing the bulbs.
4. Before installing the T-5 fluorescent bulbs remove the cardboard and inspect each socket end on the fixture to ensure it is ready to receive the pins on the bulb ends. Gently align the pins vertically upon inserting in each socket and once all the way down; gently rotate to seat the pins into a horizontal orientation. You should feel a small click upon proper location.

SPECIAL NOTES, INSTRUCTIONS AND OPTIONS

- T-5 fixtures are intended for 120v/60Hz use only.
- Avoid direct contact with water and liquids to prevent electric shock or internal damage to the unit.
- Lumen output may vary depending on electrical and other conditions.

Water Pump Instruction Guide

INTRODUCTION

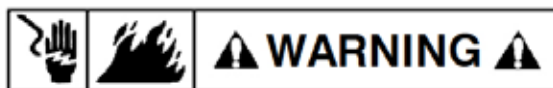
This instruction sheet provides you with the information required to safely own and operate your pump. Retain these instructions for future reference. Please examine your pump carefully to ensure that no damage occurred during shipment. If damage has occurred, please contact the place of purchase. They will assist you in replacement or repair, if required.

READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE, OR SERVICE YOUR PUMP. KNOW THE PUMP'S APPLICATION, LIMITATIONS, AND POTENTIAL HAZARDS. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

DESCRIPTION

This is a magnetic-drive, submersible, statuary fountain pump. It has an epoxyencapsulated motor and a thermoplastic housing. A permanent magnet is attached to the impeller and acts as the rotor would in a conventional motor.

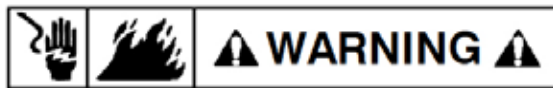
SAFETY GUIDELINES



MAKE CERTAIN THAT THE UNIT IS DISCONNECTED FROM THE POWER SOURCE BEFORE ATTEMPTING TO SERVICE OR REMOVE ANY COMPONENT.

Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in explosive atmospheres. Pump should only be used with clean water. Do not use to pump heated liquids. Pump should only be used with liquids compatible with pump component material. Do not handle pump with wet hands or when standing on a wet or damp surface or in water. This pump is supplied with a grounding conductor and/or grounding type attachment plug. To reduce the risk of electric shock, be certain that it is connected to a properly grounded grounding type receptacle. Support pump and piping when assembling and when installed. Failure to do so may cause piping to break, pump or motor to fall, etc.

ELECTRICAL CONNECTIONS

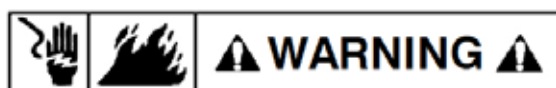


- 1. Check the pump label for proper voltage required. Do not connect to voltage other than that shown.**
- 2. This pump is supplied with a 3-prong electrical plug. The third prong grounds the pump to prevent possible electrical shock hazard. DO NOT REMOVE the third prong from the plug. A separate branch circuit is recommended. Do not use an extension cord.**
- 3. The National Electric Code requires that a ground fault circuit interrupter (GFCI) be used in the branch circuit supplying fountain pumps and other pond equipment.**
- 4. To reduce the risk of electric shock, use only on portable, self-contained fountains no larger than five feet in any dimension.**

CONSULT INSTRUCTION SHEET ILLUSTRATIONS FOR PROPER ASSEMBLY AND DISASSEMBLY OF YOUR PUMP.

OPERATION

1. Operate the pump in clean, fresh water completely submerged. Do not let the pump run dry.
2. The pump can be placed in any position. There are suction cup feet provided with the pump. To install the suction cups, wet the ends and slide them into the slots on the bottom of the pump housing.
3. Support the weight of the pump adequately. DO NOT support the pump by the discharge connection.
4. Adjust the flow rate by turning the flow control located on the front of the pump. To reduce the flow rate further, place a valve on the discharge side of the pump or, if flexible tubing is used, a clamp on the tubing.
5. If the pump will be idle for an extended period, clean it according to the SERVICE INSTRUCTIONS section.



SERVICE INSTRUCTIONS

WARNING: Disconnect the pump from the power source before attempting to service or remove any component.

WARNING: Do not modify, cut, saw, sand, or grind any part of the pump. Doing so can cause harmful emissions.

CAUTION: Consult instruction sheet illustrations for proper assembly and disassembly of your pump.

NOTE: This pump is permanently lubricated. Oiling is not required.

1. Remove the front plate/screen (1) by gently squeezing its sides and pulling it from the main body.
2. Turn the volute plate (2) 1/8-turn counter-clockwise (gently using pliers, if necessary) and remove it from the pump body.
3. The shaft/impeller assembly (3), and rubber mounting end cups (4) may also come out with the volute plate. If not, remove the shaft/impeller assembly, then check for two rubber end cups, which should be located on each end of the shaft. One of the cups may remain inside the pump body impeller cavity and the other may remain inside the volute plate. If so, make sure they are still there when reassembling the pump.
4. Use a small brush or stream of water to clean any corrosion or debris from the impeller, shaft, and the impeller cavity.
5. Reassemble the parts in reverse order.
6. Inspect the power cord to ensure that it is in good condition and has no nicks or cuts.
7. If, after servicing, the pump trips its circuit breaker or GFCI, or otherwise does not operate properly, replace pump.

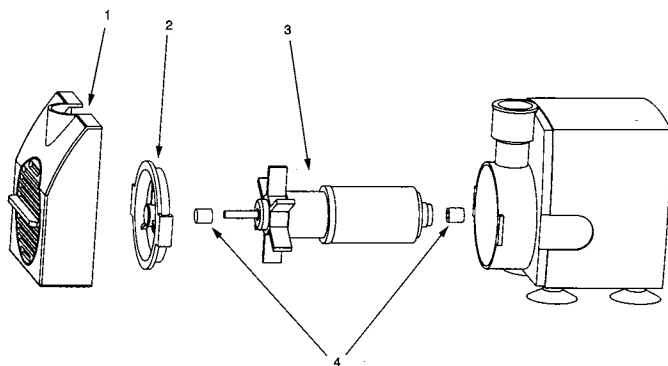


Fig. 1



END-USER RESTRICTIONS

The Unit is offered and available to users who are 18 years of age or older and reside in the United States or any of its territories or possessions, for use strictly in compliance with all applicable laws, regulations, and ordinances. You represent and warrant that you meet all of the foregoing eligibility requirements.

INTELLECTUAL PROPERTY RIGHTS

The Unit and its entire contents, features and functionality (including but not limited to all information, software, text, displays, and the design, selection and arrangement thereof), are owned by TPG, its licensor's, or other providers of such material and are protected by United States and international copyright, trademark, patent, trade secret and other intellectual property or proprietary rights laws. The terms of this Assembly Guide permit you to use the Unit for your personal, non-commercial use only. You must not assemble, use, reproduce, distribute, modify, create derivative works of, publicly display, store or transmit the Unit or any portion thereof; you must not access or use for any commercial purposes any part of the Unit or any services or materials related to the Unit; and you shall comply with all applicable laws, regulations and ordinances related to the Unit and the use thereof.

If you wish to make any use of the Unit other than that set out in this section, please address your written request to TPG. Any use of the Unit not expressly permitted by the terms of this Assembly Guide is a breach and may violate copyright, trademark and other laws.

WAIVER

No waiver by TPG of any of the provisions of this Agreement is effective unless explicitly set forth in writing and signed by TPG. No failure to exercise, or delay in exercising, any right, remedy, power or privilege arising from this Assembly Guide operates, or may be construed, as a waiver thereof. No single or partial exercise of any right, remedy, power or privilege hereunder precludes any other or further exercise thereof or the exercise of any other right, remedy, power or privilege.

GOVERNING LAW

All matters arising out of or relating to this Assembly Guide, including without limitation the assembly and use of the Unit are governed by and construed in accordance with the internal laws of the State of Ohio without giving effect to any choice or conflict of law provision or rule (whether of the State of Ohio or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than those of the State of Ohio. Any legal suit, action or proceeding arising out of or relating to this Agreement shall be instituted in the federal courts of the United States of America or the courts of the State of Ohio in each case located in the City of Columbus and County of Franklin, and you irrevocably submit to the exclusive jurisdiction of such courts in any such suit, action or proceeding.