

Conservatory

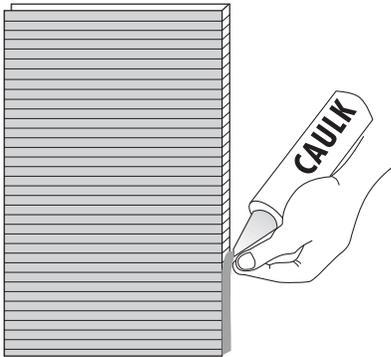
Paneling Instructions

The frame of your greenhouse is now finished. After all the Units are joined, you are ready for the squaring and the paneling application. Following are instructions for applying the Solexx Rolled Panels

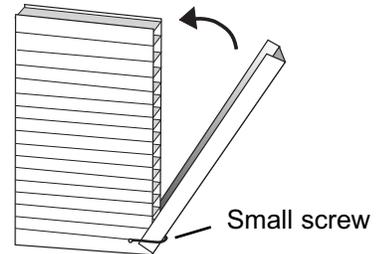
HINTS FOR PANELING

Listed below are several hints that will make paneling your greenhouse easier. If you have suggestions to help future customers please let us know.

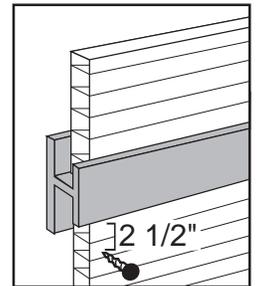
1. **Paneling:** Apply paneling when temperature is moderate (average temperature for your area - not extreme). When attaching panels to the PVC Pipe, be careful not to over-torque the screws. The washers should just make a dimple in the plastic. The screws should be placed about 12" - 15" apart on the panels and about 6" apart around the perimeter of the walls, roof and any overlapped joint.



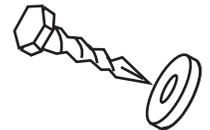
2. **U-TRIM:** Insert 1/4"-1/2" of silicone caulking into the open flutes of the panels to prevent water intrusion. Slide U-Trim over the ends of panels where specified in the instructions. Secure U-Trim with **Small Screws** by poking a small hole in underside of the U Trim and screwing through U-Trim and into the panel. Place screws on each end of U-Trim and 1 or 2 in between. ► Note: When using caulking, cut tip of tube at an angle. Be careful not to get caulking on nice clothing or jewelry.



3. **H-CHANNEL:** If H-Channel is difficult to slide on, spray panel edges with Pam (Vegetable oil). Also tapping on ends of H-Channel with a hammer or rubber mallet helps H-Channel slide on easily. Secure panels by placing screws into pipes 2" from each side of H-Channel. You can cut H-Channel by scoring on both sides with a knife and then bending at the score or use tin-snips.



4. **SCREWS:** Use the pictures as a guide for placement of screws. Use your discretion on your greenhouse. The number of screws required for each step in paneling may not exactly coincide with the picture.



5. **CUTTING PANELS AND ROLLS:** Panels cut easily with a long sharp knife. (we recommend a sharp fillet knife). Use PVC Frame for a guide when trimming panels.

6. **TIE DOWN:** Please remember to tie down your greenhouse once you begin applying the glazing. The greenhouse is light enough that on a windy day it could blow over.

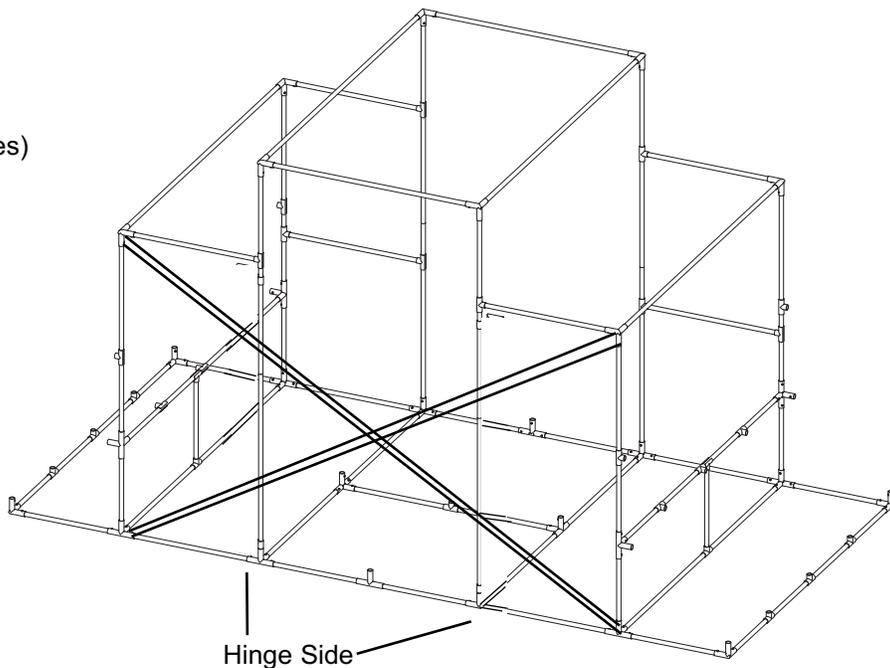


I A. Squaring

Pieces Required:

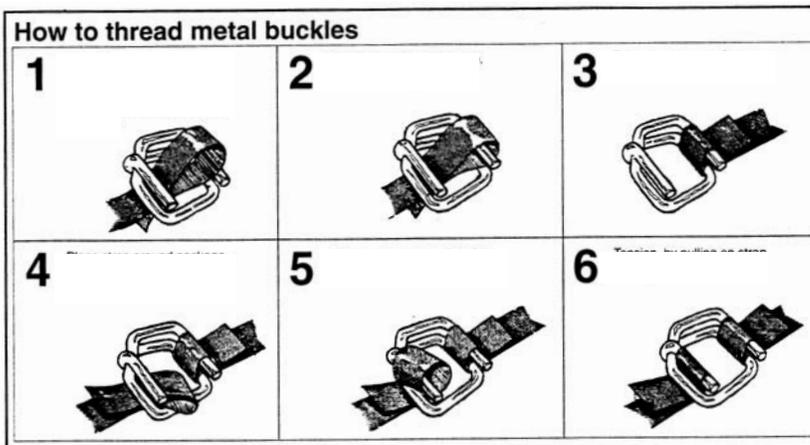
- 4 Yellow Banding
- 4 Metal Banding Clips
- 4 77 1/2" Side Door Casing (2 with Hinges)
- 2 38" Top Door Casing
- 6 1" Screw

1. On the front side of the greenhouse, loop a piece of Banding through the eye bolt on the Metal Corner Post on the 35 3/4" Composite Tube above the door and around the Metal 4-way T at the bottom corner of the other door.
2. Thread banding to the metal buckle as shown.
3. Repeat starting at the top of the other door using 2nd piece of Banding.
4. Measure each yellow band. If the measurements are within 1/4", then the front endwall is square. If not, tighten the banding that is longer until the lengths are equal.



I B. Sizing Door Frame for Door Casing (Repeat for each door)

1. Using the Top Door Casing as a measuring device, check to make sure the door opening is 36 7/8" at both the top and bottom from inside to center of the pipes. (The Top Door Casing fits between the 90" Tubes.)
2. Make sure the door openings are square by measuring diagonally from corner to corner and making sure the measurements are the same.
3. Again place the Top Door Casing over the 35 3/4" tube. Hold temporarily in place with one screw inserted from the front and into the tube.
4. Temporarily place the side Door Casing with the hinge pieces attached on whichever side you want your door to hinge.
5. Place the other Side Door Casing on the opposite side of door opening. All three Door Casing pieces should fit snugly.
6. Remove the Door Casing Pieces. They will be used in the Door Assembly **STEP VI**. Proceed with paneling.



1. Form a 3" loop by folding banding away from you (short end of banding needs to be on top). With buckle tines facing upright, pass loop up through center of buckle.
2. Slip the loop over the tine (farthest from you).
3. Pull banding down and away.
4. Place banding around specified frame area. Fold a new loop by folding banding toward you.
5. Slip new loop over other tine.
6. Tension by pulling banding coming from coil

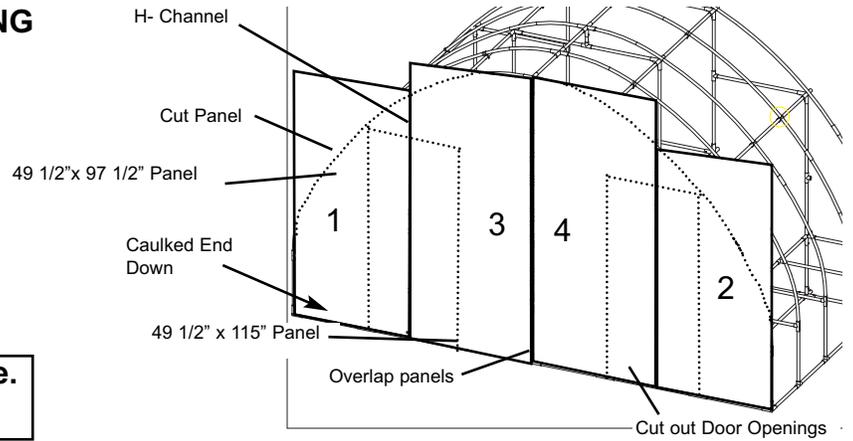
To loosen banding, grasp coil with pliers and twist your wrist so banding slides loose from tine.

II FRONT AND BACK END WALL PANELING

Parts Required:

4	49 1/2" x 97 1/2" Panels
4	49 1/2" x 115" Panels
4	17" H Channel
240	1" Screws

**Don't forget to secure your greenhouse.
The panels create wind resistance.**



Picture Shows 12"
Fan Installed



- Put caulking 1/4" - 1/2" into the open flutes on one end of each panel (The 4'1" wide side) and let dry.
- Note: The short panels (97 1/2") are panels #1 & 2 and the long panels (115") are # 3 & 4.** Hold panel #1 (Caulked end on the ground) in place on the left side so it covers the outside rib pipe. The opposite side of Panel #1 goes approximately to the center of the door opening. Attach with screws. Place screws 6-9" apart on the rib. Use only 2 screws on door side frame and 1 screw on top door frame (these screws will be removed later.) Trim panel by carefully following the Ribs and the door frame using a sharp knife. Cut out the door opening. Use the top of the rib pipes and the bottom of door opening pipes as guides, making sure the pipes are covered with plastic.
- Attach panel #3 (49 1/2" x 115" panel) so it almost butts up to Panel #1 above the door on 1 side (leave about 1/4" between the 2 panels), and overlaps the pipes in the center of the greenhouse on the other side. Attach with screws on all sides except on the side that overlaps the center pipe. Carefully trim the panel on the top and around the door opening as in step #2. Slide a 17" H Channel between the 2 panels above the door.
- Repeat steps 2 & 3 in applying Panels 2 & 4. Panels #3 and 4 will overlap in the center. Put screws through both panels and into the center pipes.
- Caulk all the cut edges (Open flutes) along the top of the panelling on the end wall.
- Repeat steps I (Page 2) and step II (Page 3) for the back end wall. (When repeating step 1, put bands next to back end wall to square the back end wall)

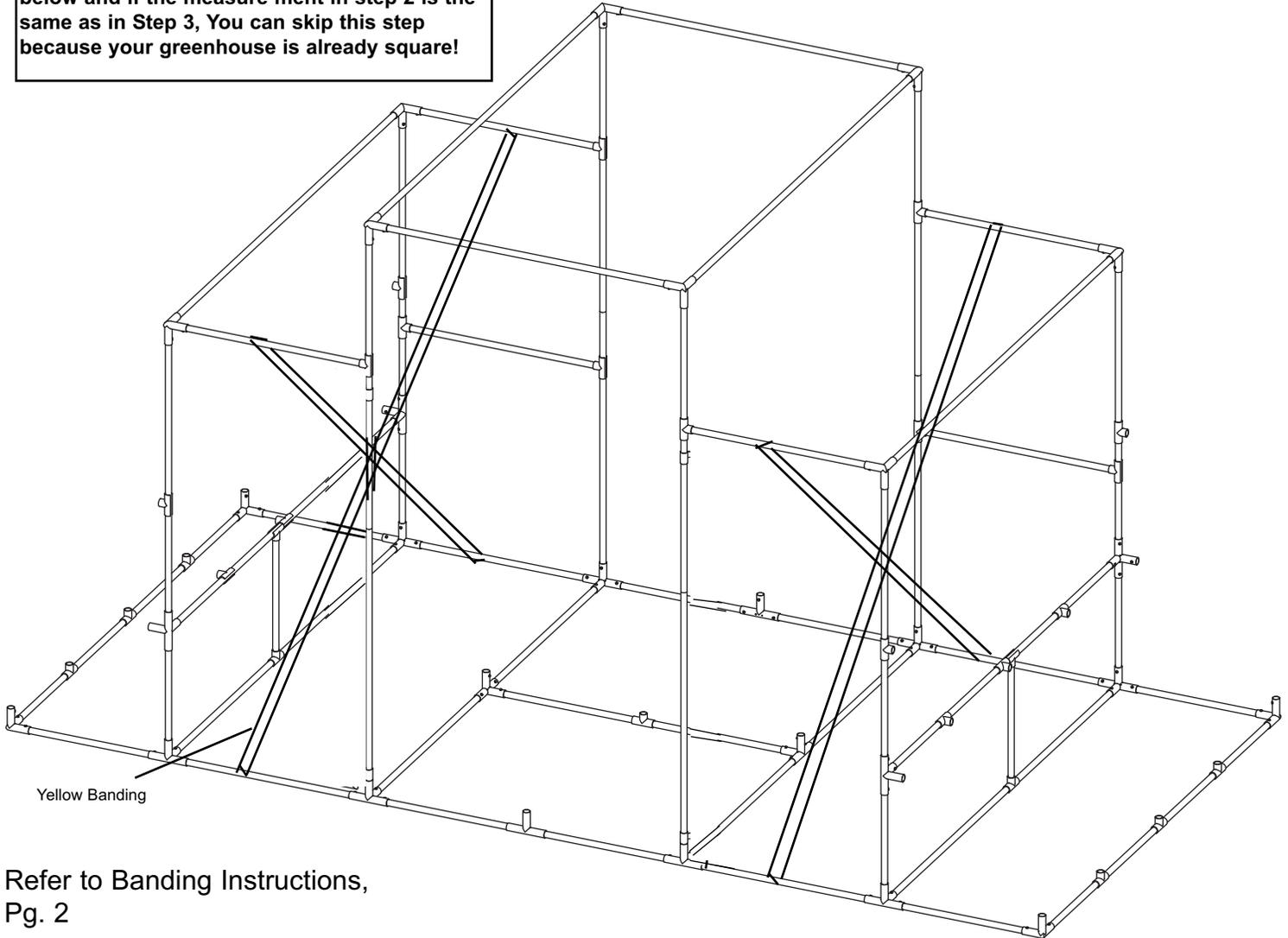
III. Squaring

Pieces Required:

- 4 Yellow Banding (from back endwall)
- 4 Metal Banding Clips (from back endwall)

Front and back end wall paneling should be completed before starting this step.

Note: Measure the distance in steps 2 & 3 below and if the measurement in step 2 is the same as in Step 3, You can skip this step because your greenhouse is already square!



Refer to Banding Instructions,
Pg. 2

1. Remove Yellow Banding from the Back Endwall.
2. Attach a Yellow Band from the 35 3/4" pipe above the Front Left Door to the base frame pipe on the back side of the greenhouse.
3. Attach a yellow band from the 35 3/4" pipe above the back left door to the Base Frame Pipe on the front side of the greenhouse.
4. Repeat steps 2-3 on the right door.
5. Check that the diagonals are equal. Tighten or loosen the bands to make them equal.

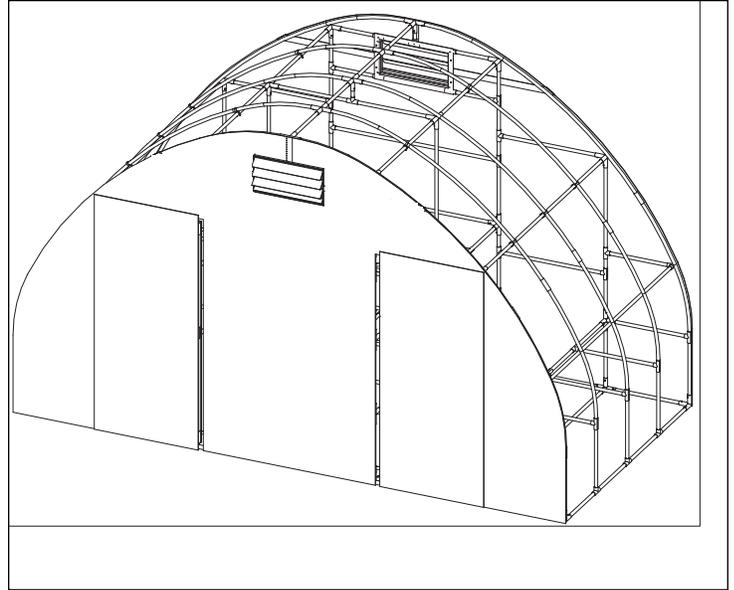
IV Louver

Parts required:

1 Louver Box

Note: You need to decide if you are going to install a fan/fans, and the placement of them. Also, you need to decide where you will be placing the 2 louvers that are included in the kit. Putting a fan at one end and a louver at the other end is probably the most likely choice. The remaining louver can then be used as a base vent at the opposite end from the fan.

1. Refer to Louver Installation Instructions in the Louver Box



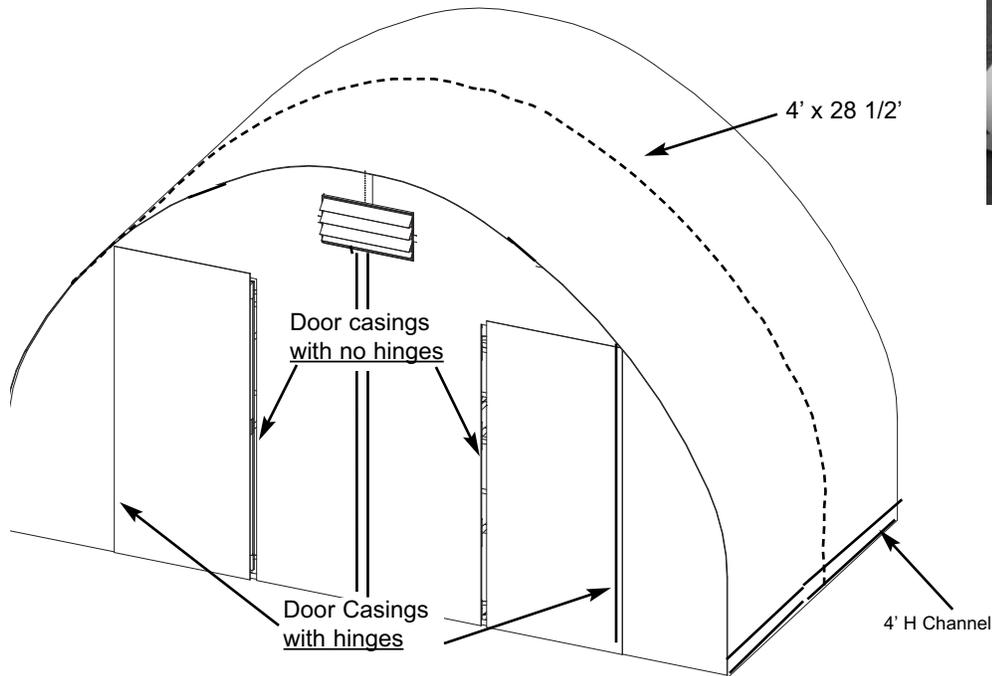
V. TOP PANELING

Pieces Required:

- 2 49 1/2" x 28 1/2' Solexx
Paneling for each 8' unit
- 1 49 1/2" x 28 1/2' Panel for each walk-through
- 2 4' H Channel for each 8' unit
- 2 49" U-Trim
- 6 97" U-Trim
- 20 Small phillips Screws
- 200 1" Screws for each 8' unit

►NOTE: Center the 1st roll panels so you have **1 -1 1/2"** of **overhang on the front** of the greenhouse. **Do not cut off the overhang.** It will help keep water out of the endwall panels.

Note: Measure your greenhouse frame before you cut the roll.



1. Caulk one end of each piece of 28' paneling.
2. Position 1 piece of paneling with the caulked end touching the ground on 1 side of the greenhouse. Pull the roll up and over the top to the opposite side of the greenhouse. **Hint: If you attach vice grips to the end of the roll and tie a rope to the vice grips, you can throw the rope over the greenhouse and pull the rope and the roll over the top of the greenhouse. One person can stand inside the greenhouse and help guide the plastic over while the other person pulls the rope.** Place it over the ribs so it overhangs equally on the 1st and 3rd ribs. On the 1st and 2nd ribs attach screws. Position screws about 6" to 8" apart on the first rib and about every 3' on the second rib. At ground level on the side opposite the caulked side, trim the paneling so it is just off the ground.
3. Repeat step #2 to attach the remaining pieces of paneling, overlapping the panels by about 3" on the 3rd rib, and attaching every 6" to 8". Slide a piece of 4' H Channel over the uncaulked end of the panel. The H Channel will just touch the ground. On all sides except the side with H Channel, be sure and screw the plastic to the Base Frame.

Note: To attach the screws to the top of the greenhouse, use a tall ladder and lean it on the frame. You probably can put most or all of your weight on the frame to attach screws.

4. Apply U-Trim to the curved edges of the top paneling on the front and back of the greenhouse. (See Step 2 on "Hints for Paneling", page 1 - You will use three of the 97.5" and one 49" section of U-Trim for each side.

**►If you purchased a tie down kit, install it now!
If not, you will need to secure the greenhouse to the ground.**

Tie Down Kit Instructions for 4 or 6 Anchor kit

Disclaimer: While these ties down augers are effective in most situations, proper conditions are required to prevent failure. Improperly tightened or loose anchors, high winds, loose or sandy soil, waterlogged or flooded soil, or extremely rocky soil can contribute to anchors pulling out of the ground. You will need to determine the best means to anchor the kit for your unique situation. If you have concerns about your conditions, a concrete perimeter, concrete slab, or corner holes are good alternatives to anchoring into soil.

Parts Needed: (4 anchor)

- 4 - 15" or 30" Steel Anchors
- 4 - Turnbuckles
- 4 - Metal Hooks
- 8 - 1 1/2 x 1/4" bolts
- 8 - 1/4" locknuts
- 8 - Washers

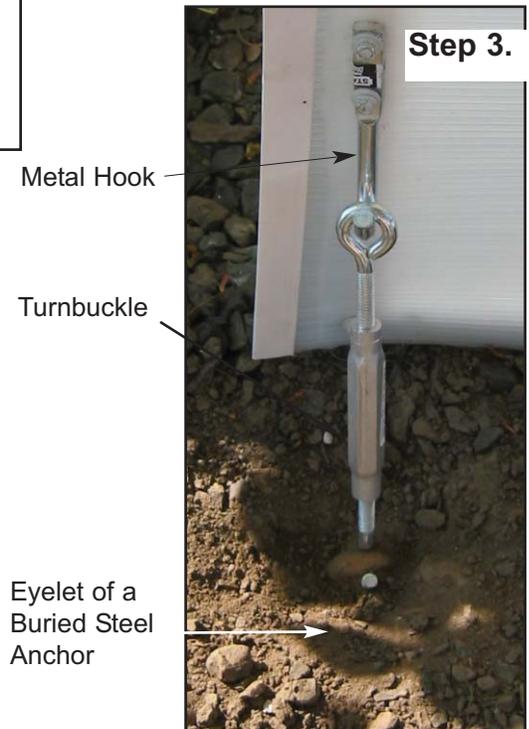
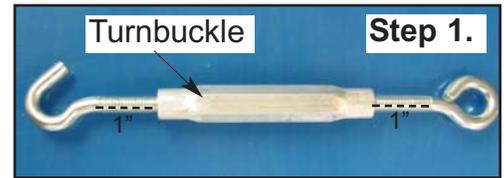
(You need a 1/4" drill bit to predrill for the bolt holes)

Parts Needed: (6 anchor)

- 6 - 15" or 30" Steel Anchors
- 6 - Turnbuckles
- 6 - Metal Hooks
- 12 - 1 1/2 x 1/4" bolts
- 12 - 1/4" locknuts
- 12 - Washers

(You need a 1/4" drill bit to predrill for the bolt holes)

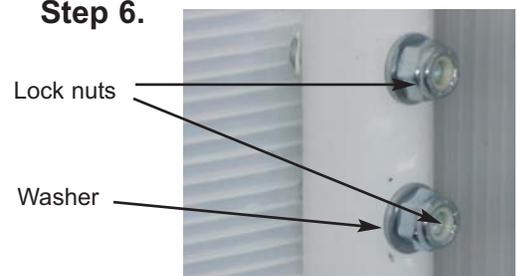
1. Loosen **turnbuckles** so the bolts of the turnbuckle are out about 1" on each side.
2. Screw one 15" or 30" **steel anchor** into the ground using a screwdriver, rod, or pipe inserted through the eyelet of the anchor. This will act as a handle for you to twist the anchor into the ground. The eyelet should be just showing above ground. This will prevent the greenhouse from shifting. Also, make sure the anchor is as close to the greenhouse as possible for the most secure pull. Place 1 anchor at each corner of the greenhouse. For units longer than 8', place one anchor in the middle of the each sidewall or every 8' along the sidewall plus the corners of the greenhouse.
3. Slide the hook of one turnbuckle onto the eyelet of a ground anchor. Slide a **Metal hook** through the eyelet of a turnbuckle.
4. Hold the flat part of the hook up tight against a corner rib outside the greenhouse. Using a 1/4" drill bit, drill a hole through each of the holes in the **metal hook**, clear through the Solexx and the rib including the 1/2" PVC pipe inside the rib.
5. From outside the greenhouse push a **bolt** through each hole in the **metal hook** and through the rib.
6. From inside the greenhouse, slide a **washer** over each bolt and secure it with a **lock nut**. Tighten the locknuts.
7. Repeat this process on each of the other corners.
8. Tighten the turnbuckles to remove any slack.



Step 4.



Step 6.



VI. Door

Pieces Required:

- 1 36 1/2" x 80" Door Panel
- 1 77 1/2" Side Door Casing (Used in Step 13b)
- 1 77 1/2" Side Door Casing with Hinges (Step 13b)
- 1 75" Composite Tubing- BLACK (with holes for Hinges)
- 1 75" Composite Tubing- BLACK
- 1 38" Top Door Casing (Used in step 13b)
- 2 33" Composite Tubes- BLACK
- 1 36" U-Trim
- 4 90° Metal Elbows
- 1 Snap-T's
- 49 1" Screws
- 3 Small phillips Screws
- 1 33" Composite Cross Bar with Snap T (for door) - slotted

Door Parts Bag:

Outside Handle, Inside Handle, 3-point Cam

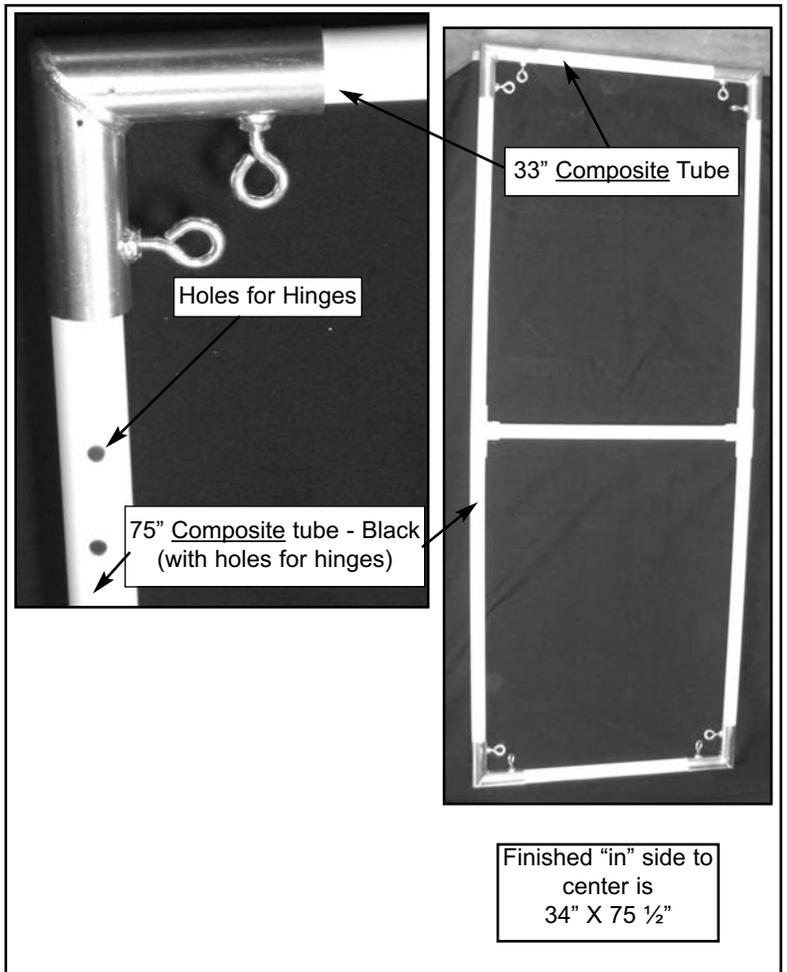
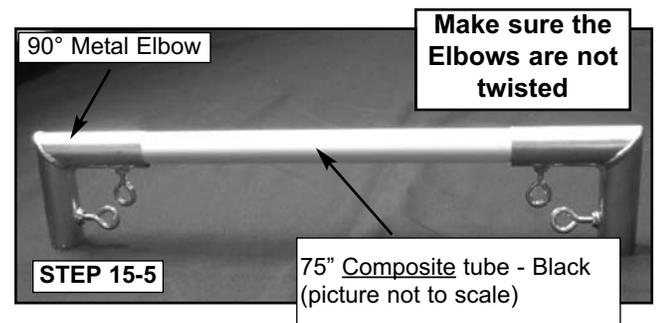
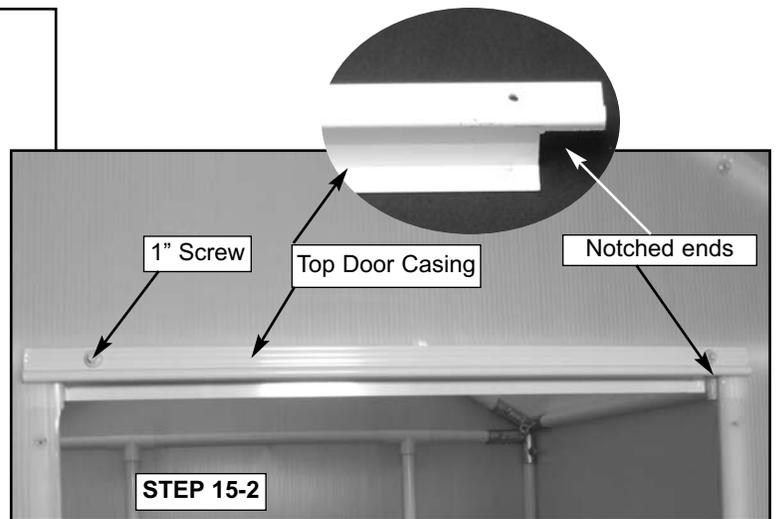
Hinge Bag: 1/4" x 1-3/4" Bolts (4), Lock Nuts (4), Hinge halves and pins (2), Flat Washers (2)

Door Parts Bag: 8/32 Hex Lock Nut, 3/8" Lock Nut, 32 x 1-3/4" Machine Screw, 1" Metal Screw, 4mm Allen Wrench

Door Cable Bag: Turnbuckle, 76" Wire Cable, 1/16" Wire Cable Clamps (2)

1. Remove the temporary screws from around the Door opening.
2. Attach the Top Door Casing to the Tube above door with 1" Screws. Make sure it is level.
3. **Decide which side you want your door to open (as you face the door) and attach the 77" Side Door Casing with hinge halves attached on the side you want the door to hinge.** Attach to the 90° Composite Tube with 1" Screws. Making sure casing is straight up and down.
4. Attach the **Side Door Casing with no hinges** to the opposite side of the door opening with 1" Screws. Making sure casing is straight up and down.
5. Assemble the door frame on a flat surface by attaching one **90° Metal Elbow** to both ends of both **75" Composite Tubes**. Tap the tubing so that it is completely seated into the elbow. Make sure the pre-drilled holes in the 75" tube with holes are facing up as the frame lays on the ground. You will be attaching hinge halves using those holes in a later step. Connect these 2 assemblies using the **33" Composite Tubes**.

Hints: It is important to attach the 75" tubes into the elbows first, followed by the 33" tubes. Line up the holes on the hinge side so they are centered on top. The door frame should measure 34" x 75 1/2" ("In" side to center). Tighten the eyebolts. You will adjust this frame when you hang the door so the measurements don't need to be exact at this time.



6. Attach the snap T end of the 33" PVC Cross bar to the side door tube **WITHOUT** drill holes. **Attach near the center of the tube (you can adjust it up and down later). Make sure the holes in the crossbar are facing up and looks like picture A.**

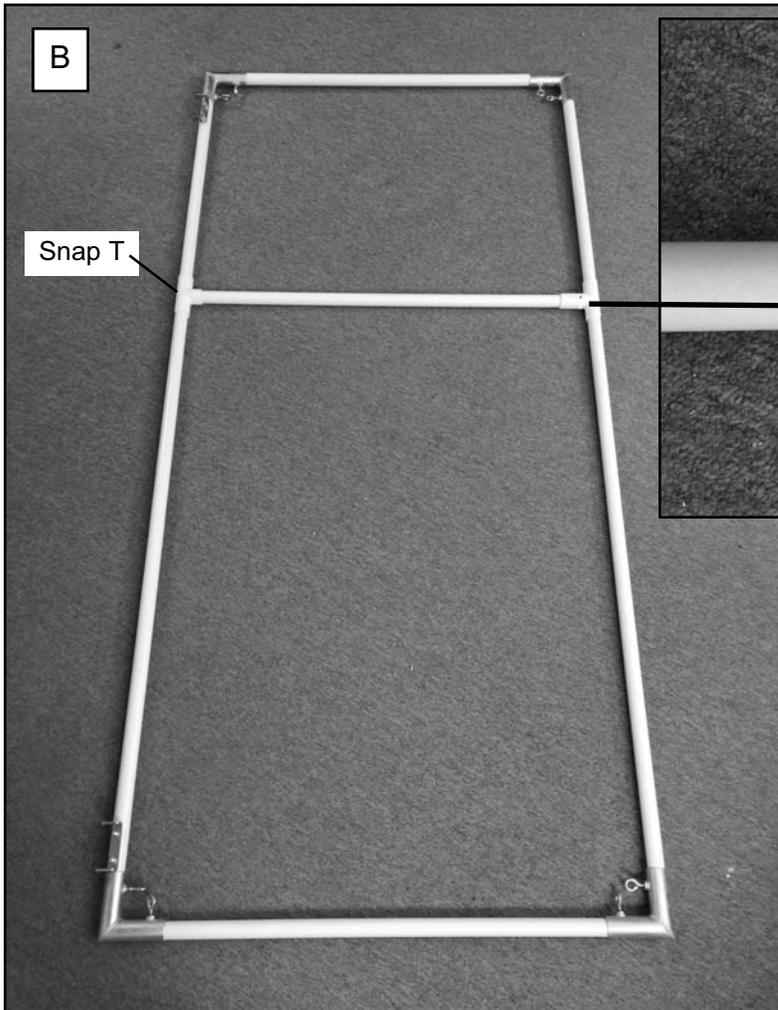
Attach a snap-T to the center of the opposite door tube and then slide the Cross Bar into this snap-T. See picture "B" below. Make sure that this cross bar is not causing the frame to be bowed out in the middle, if so, try compressing the snap-t on the end of the cross bar. If that doesn't work, separate the snap-T from the end of the cross bar and use a hack saw to trim that tube down a little bit. Then insert the end of the cross bar back into the snap-T.



This side of the cross bar for the door faces up (While assembling the door frame or towards the outside of the greenhouse when the door is hung)

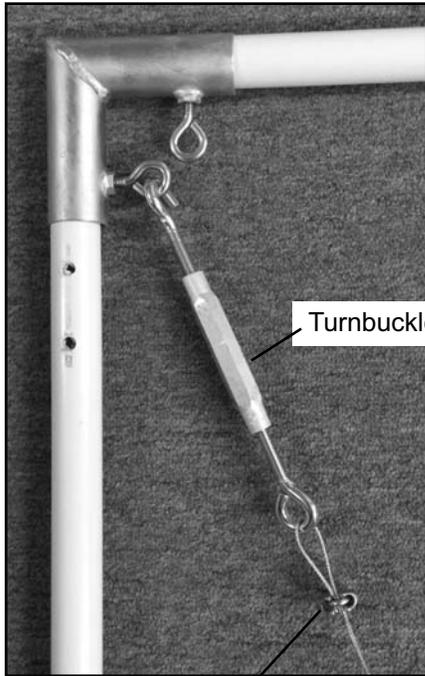
Make sure that the big hole and little hole remain lined up. If they are not aligned, then use the shaft of a screw driver inserted into the large hole and push or pull on the screw driver to move the snap-T on the tube. Once the large hole in the snap-T is aligned, you can use your hand to move and line up the smaller hole. You will insert the lock through the larger hole in a later step. Aligning these holes now will make that easier.

7. **Attaching the cross cable door support.** See Picture "C" next page. You will be using two cable clamps, a turnbuckle and the 76" long - 1/16" diameter cable. These are all grouped together in the door kit bag. Start at the metal elbow that is on top of the side door tube holes. Place the Hook of the turnbuckle through the eye bolt that is pinching the metal elbow fitting onto the side door frame tube, not the eye bolt that goes to the upper tube. Then run the cable through the cable clamp, through the eye bolt of the turnbuckle and back through the cable clamp. Using a pair of Pliers or a socket, tighten the two nuts on the cable clamp so that



it pinches the two sections of the cable together creating a loop that is going through the eye bolt of the turnbuckle.

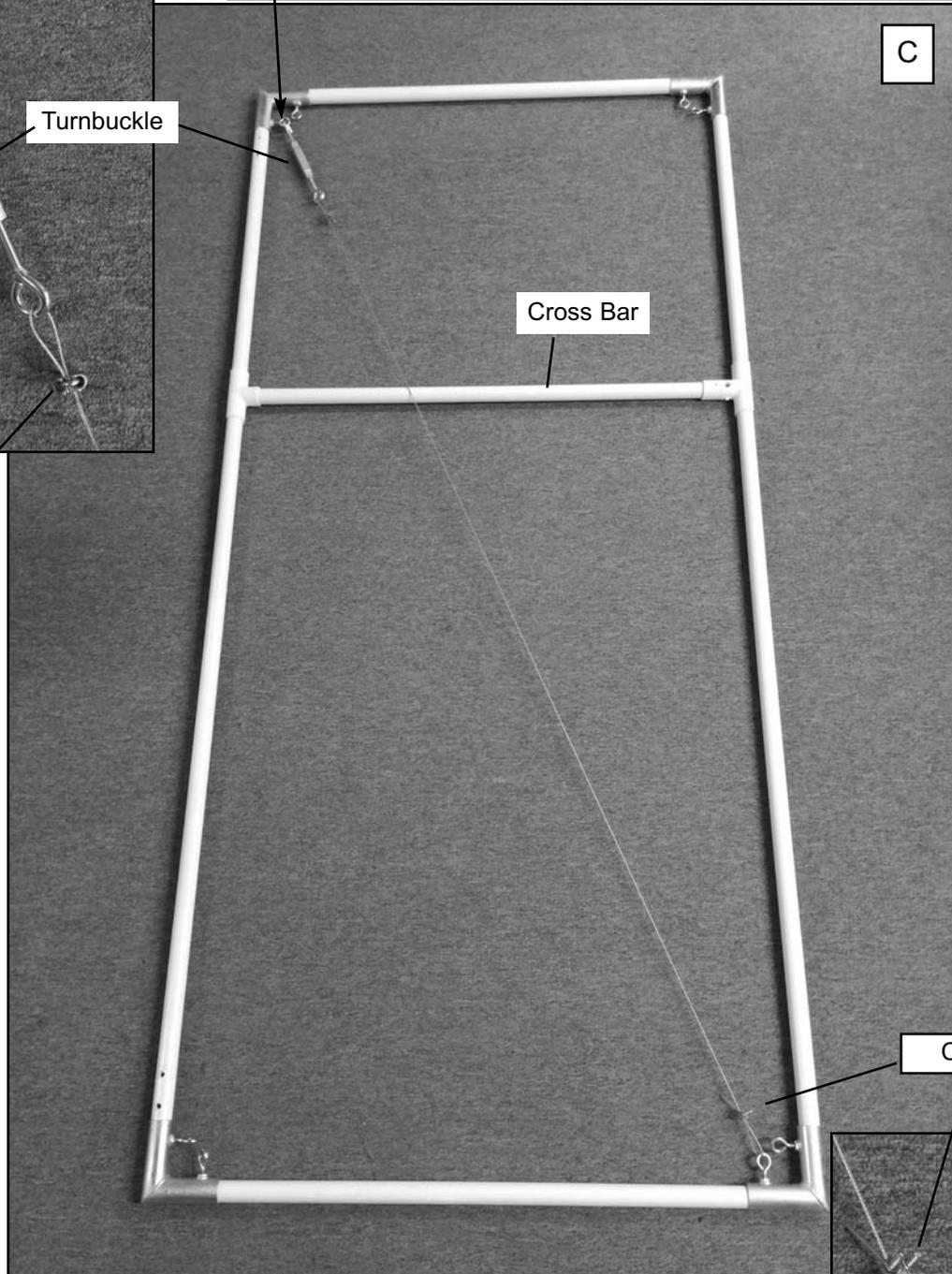
Cross Cable Door Support (Installed on Door frame)



Turnbuckle

Cable Clamp

Turnbuckle is mounted to this eye bolt on this fitting for a door that opens from the right side (as you face the door). For a door opening from the left (As you face the door) you would have the turnbuckle mounted on the upper elbow on the right side, to the eye bolt that pinches the side door tube.

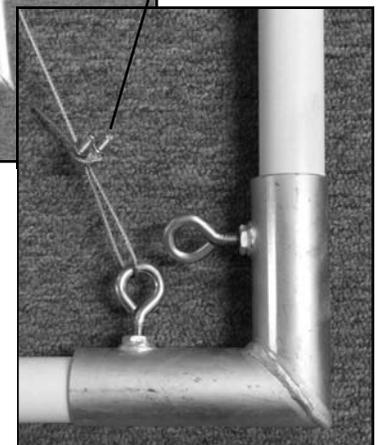


C

Cross Bar

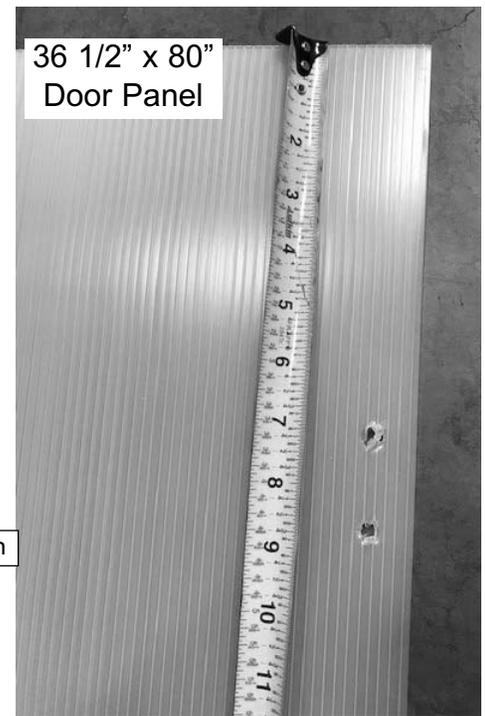
Cable Clamp

You will now connect the other end of this cable. **The cable will pass over the top of the cross bar of the door.** Run the cable through the 2nd cable clamp, through the eye bolt and then back through the cable clamp. Using a pair of Pliers, tighten the two nuts on the cable clamp so that it pinches the two sections of the cable together creating a loop that is going through the eye bolt of the metal elbow. See picture to the right.

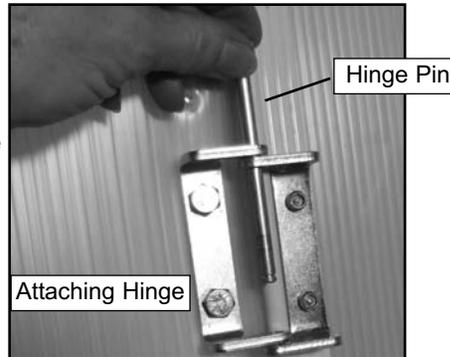


8. Place the **36 1/2" x 80" Door Panel with holes** on the Door Frame, aligning the holes in the Panel with the holes in the **75" Tube**. Measure in from one of the two ends to the first predrilled hole. The side that is 7" from the first predrilled hole is the top of the door panel. If needed, flip this panel over so that this end of the panel is the top of the door.

Once the panel is positioned, attach the **hinge halves** using two **1/4" x 1 3/4" Bolts**, **two lock nuts and one flat washer** for each hinge. **See next page for washer placement and hinge attachment.** From the underside, Insert a bolt through the door frame, through the washer (The washer is only used on one of the two bolts for the hinge half), through the door panel and then put the hinge half on top and attach the nut. Repeat this for the 2nd bolt and 2nd hinge. The nut will be on the side that the hinge half is on. Once all 4 bolts are put in place, they will be holding the door panel to the door frame. **Do not screw the rest of the Panel to the Door Frame yet.**



9. Position the Door into the door opening and align the hinge halves up as shown on next page. The upper hinge half will sit on top of the hinge half on the door casing and it will be opposite for the lower hinge. Once aligned connect the hinge halves on the Door to the hinge halves on the Door Casing using the 2 hinge pins. They are inserted from the top of the hinge for both hinges.



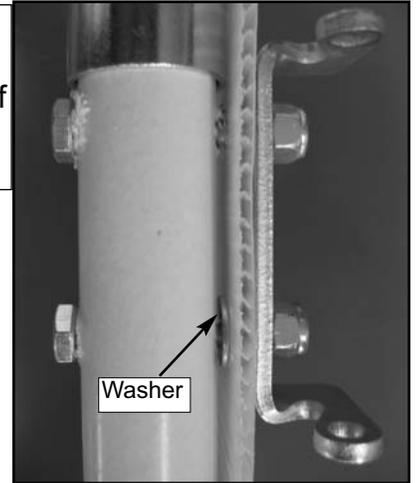
10. Now that the door is hung, close and open the door several times to make sure that none of the metal elbows of the door frame are hitting the metal casings of the door opening. If needed, adjust the door frame so that it fits within the door opening and is not touching the metal casings of the door opening. Make sure the top door tube is approx. 1/8" below the Top Door Casing. Very rarely would you need to trim a tube in the door frame but if trimming is needed, use a hack saw.
11. Tighten the cross cable door support a little bit by rotating the turnbuckle. Be careful not to lift the door very much - you just want to support the door. Verify that the lower tube of the door frame is not hitting the tube under it and that it is parallel with the tube below it. After doing this, repeat step 10 again and make sure that the adjustment on the cross cable door support didn't cause one of the door fittings to now touch the metal casings of the door opening. Once the door opens and closes freely, the fittings are not touching the metal casings of the door opening, and the cable has been snugged up, attach the door panel to the door frame using 1" screws. **Do not put any screws into the cross bar of the door, you will adjust this tube in a step below.**
12. You can leave the door panel oversized or you can trim the panel down so that it fits within the door casings. We prefer to leave the door panel oversized to help keep wind from blowing in around the door. *If you like the look of the door panel snugged into the opening of the door casings, then with the door shut, look through the door panel and mark the corners of the door opening on the door panel from the outside of the house. (keep in mind that you still want to keep the bottom of the door panel down at ground level) and then remove the door and lay it back down on a flat surface. Using a straight edge as a guide and the marks you made on the door panel, cut the top and only the one side (The side opposite of the hinged side of the door) of the door panel down to fit just inside of the door casings.*
13. Caulk the open flutes on the top and bottom of the door panel and reattach the door to the Hinges. Caulking the bottom of the door panel is easiest when the door is removed from the greenhouse.
14. Slide a **36" U-Trim** over the top of the door panel to cover the caulked flutes (cut u-trim to fit if needed). Attach u-trim with 3 **Small Phillips Screws**.

Hinge assembly & location of washer



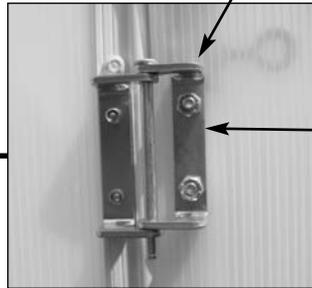
Upper hinge
Inside
greenhouse

Side view of
assembled
upper hinge-half
on door
→



Washer

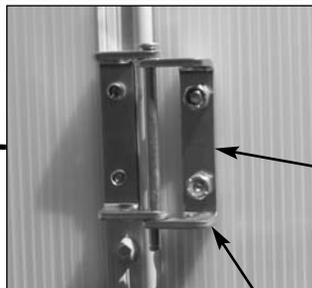
Upper hinge
(**Outside** greenhouse)
Hinge-half on door sits **above**
hinge-half on door casing.



One washer goes in-between the door panel and the door frame to even out the spacing with the fitting. The fitting sits under the door panel and hinge-half on one side of the hinge-half and one washer goes under the door panel and hinge-half on the other side.
(Bolt goes through the washer)

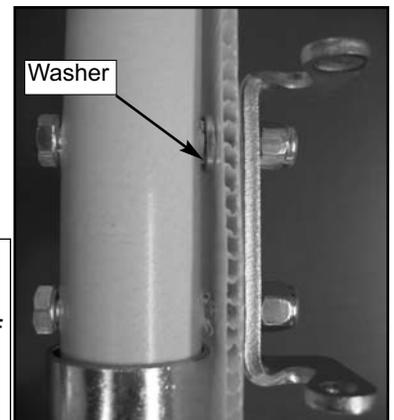


Lower hinge
Inside
greenhouse



Lower hinge
(**Outside** greenhouse)
Hinge-half on door sits **below**
hinge-half on door casing.

Side view of
assembled
lower hinge-half
on door
→



Washer

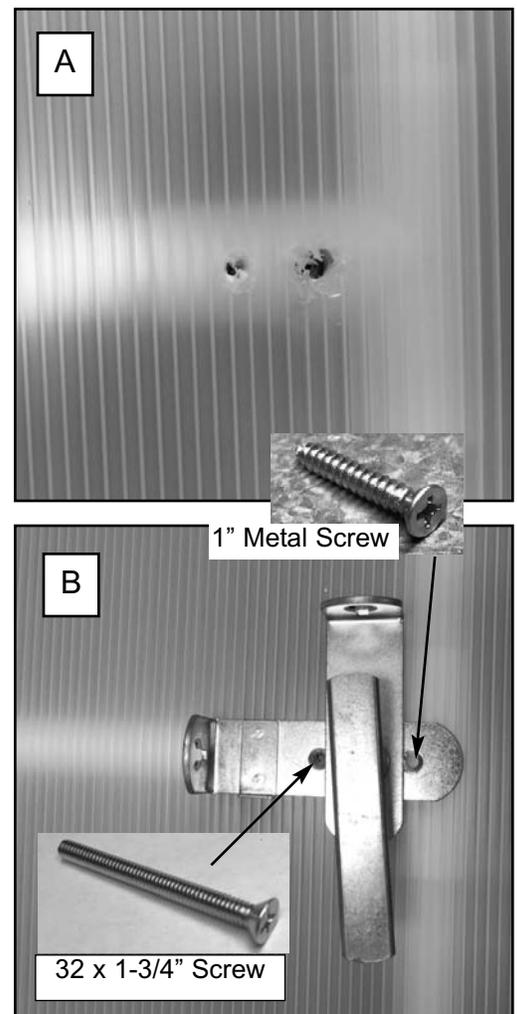
15. **Door lock** - The center cross bar of the door will set the height of your door lock/handle. From the outside of the greenhouse, look through the door panel at the holes in the predrilled snap-T, this would be the height of the outside door handle. To adjust to your preferred handle height, slide the cross bar up or down using a rubber mallet. Make sure to level.

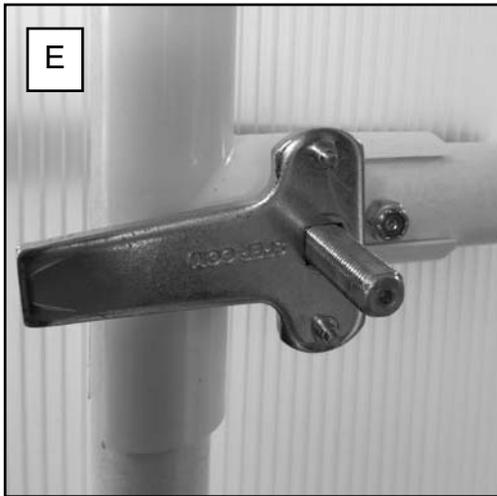
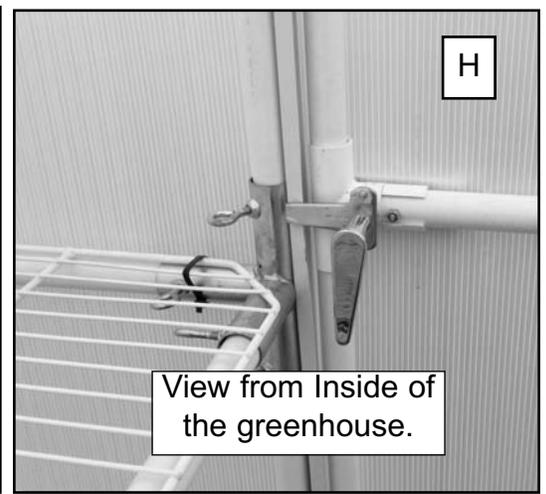
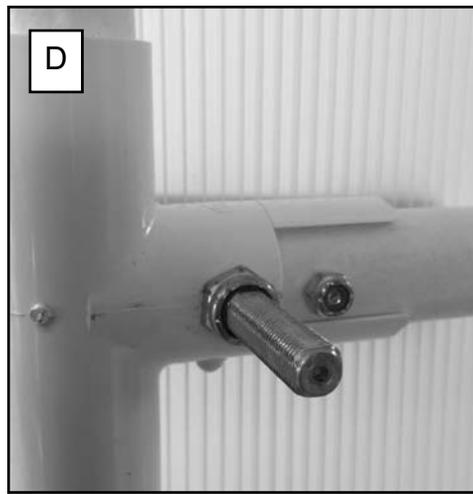
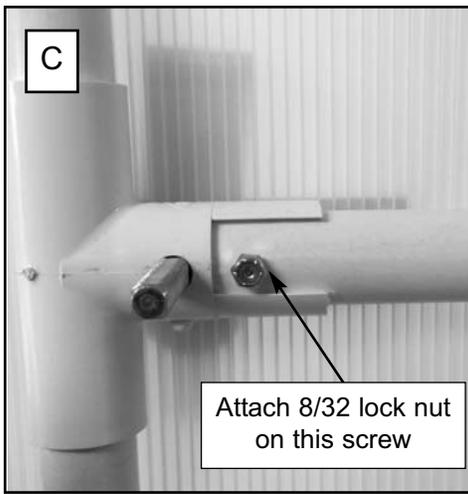
From the outside of the greenhouse, use a sharp thin bladed knife and push the blade of the knife through the panel and into the large predrilled hole. Do this twice so that you are cutting an "X" in the panel right where the predrilled hole is at and then twist the knife when it is in the hole, do the same thing for the smaller predrilled hole. See picture "A" to the right.

Now you will install the outer door handle. This handle has a thin nut included in the bag, remove that nut and keep it close by.

Insert the shaft of the door lock handle through the door panel and into the large hole of the door cross bar. You may need to twist or screw this into the hole. The handle should be flush with the door panel. Next, twist the door handle so that it is perpendicular to the metal plate that is just behind that handle (that plate is a part of the lock, there are two holes in that plate, you cannot see them unless you twist the handle on the outside door handle). See picture "B" to the right.

Insert the 32 x 1¼" flat head screw (the long one in the lock kit) through the hole that is closest to the middle of the door, the tube is predrilled behind this hole. Attach the 1" Metal Screw into the other hole (this hole is not pre-drilled) - this will lock cross bar in place - so make sure the bar is level.



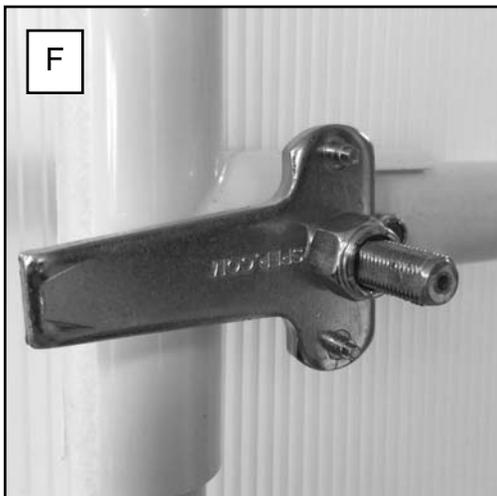


16. **Inside Door Handle** On the inside of the door, attach the 8/32 lock nut (the small nut in the kit) on this screw. See picture “C”.

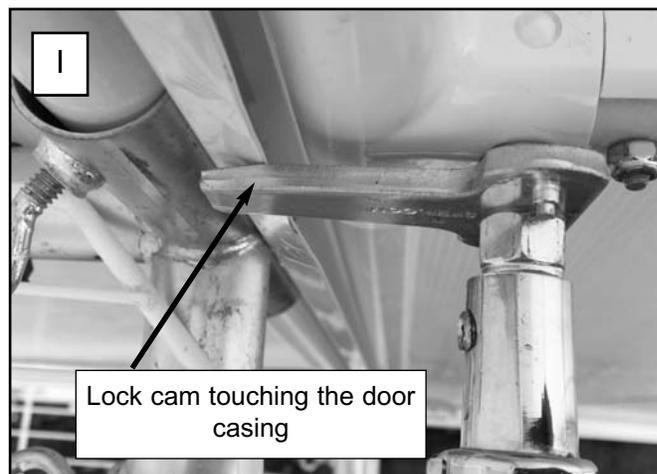
Attach the nut that came with the outer lock onto the shaft of the lock, snug this nut up against the tube, see picture “D”. Then turn the outer door handle several times, this helps seat the outer door handle on the tube.

Slide the door lock cam onto the shaft. See Picture “E”. Next put the thicker of the two large nuts onto the shaft. Tighten the nut but make sure you can still turn the door handle. See picture “F”.

Install the inner door handle (picture H). Make sure the outer door handle is in the position as shown in picture “G”, then using the 4mm allen wrench included in the door kit, loosen the set screw on the side of the inner door handle, position the handle so that it faces downward when you slide it on the shaft, then hold the handle pressed up against the nut and then tighten the set screw. Your lock is now installed.



Next go inside the greenhouse and shut the door, when the door is shut push the inner door handle down which will swing the door lock cam out so it is now behind the door casing keeping the door from opening. Check to see if there is any space between the door lock cam and the metal door casing, if so, use a pair of pliers and bend the metal door casing (where the door lock cam is next to it) towards the lock cam. This should now put the metal door casing right up against the door cam when the door is closed. See picture “I”. This adjustment keeps the door shut snugly against the door casings.





Other Helpful Hints

1. Caulk any holes from screws or punctures in the panels to help keep bugs and dirt out.
2. Be sure your Greenhouse is properly anchored to the ground or a foundation. **DURING AND AFTER ASSEMBLY**
3. Remove Shade Cloth in the winter.
4. Please call us if you have questions about assembling your greenhouse.
5. We welcome pictures of your greenhouse in use. Send to info@adapt8.us

ENJOY YOUR NEW GREENHOUSE!

P.S. Please share with us any ideas you have on improving our kits. Pictures are appreciated.
Copyright Adapt8 11/92 JAN. 2020 4th Edition V-1 Edition