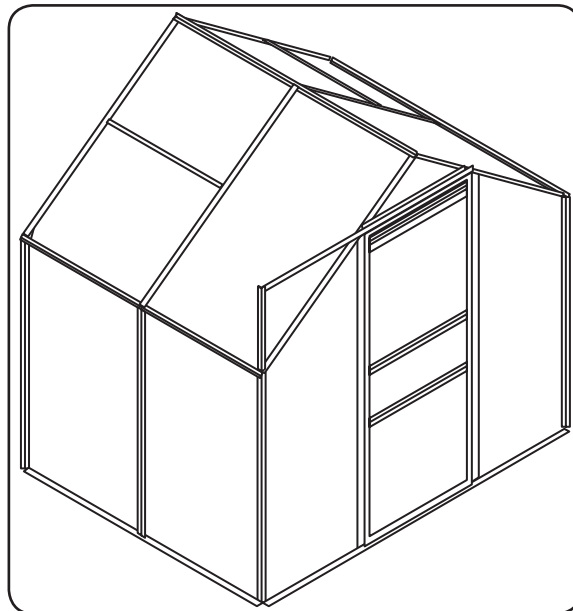




4' x 6' GREENHOUSE WITH TWO VENTS

Model 94515

ASSEMBLY INSTRUCTIONS



Due to continuing improvements, actual product may differ slightly from the product described herein.



3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: <http://www.harborfreight.com>

**TO PREVENT SERIOUS INJURY, READ AND UNDERSTAND
ALL WARNINGS AND INSTRUCTIONS BEFORE USE.**

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For technical questions or replacement parts, please call 1-800-444-3353.

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UNPACKING

When unpacking, check to make sure all the parts shown on the **Parts Lists at the end of this manual** are included. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

SPECIFICATIONS

Overall Dimensions	51 ¹ / ₂ " L x 74 ¹ / ₂ " W x 81" H
Window Dimensions	22 ³ / ₄ " L x 20" W
Door Dimensions	62 ³ / ₄ " H x 22 ³ / ₄ " W
Materials	Aluminum Frame Transparent Polycarbonate Sheets
Weight	48.5 lb.

Note: Diagrams within this manual are for reference only and are not necessarily to scale.

Save This Manual

You will need this manual for the safety warnings and precautions, assembly, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

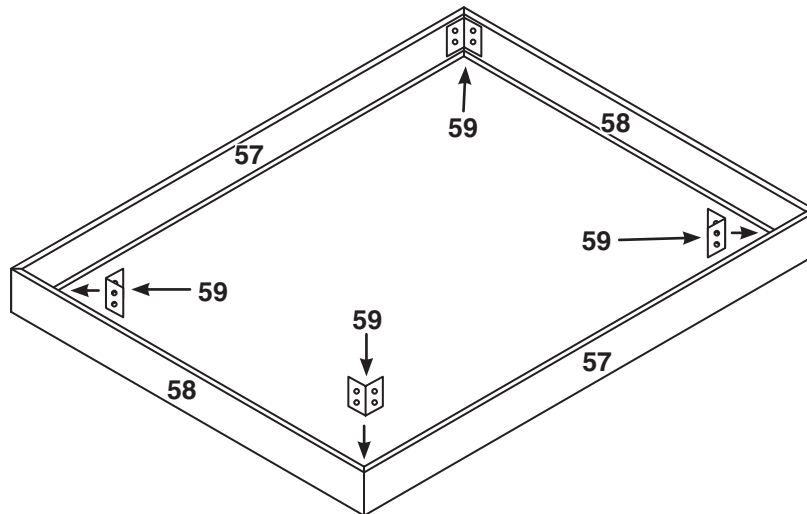
1. **KEEP WORK AREA CLEAN AND DRY.** Cluttered, damp, or wet work areas invite injuries.
2. **KEEP CHILDREN AWAY FROM GREENHOUSE.** Do not allow children to play in or climb on this product. Although this greenhouse does include some protective covers, there are still some exposed sharp edges. In addition, protective covers may fall off in time. Children must be supervised if allowed near the greenhouse.
3. **DO NOT ASSEMBLE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to assemble this product.
4. **USE EYE PROTECTION.** Wear ANSI-approved safety impact eye goggles when assembling this product. ANSI-approved safety impact eye goggles are available from Harbor Freight Tools.
5. **DO NOT OVERREACH.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
6. **STAY ALERT.** Watch what you are doing at all times. Use common sense. Do not attempt to assemble this product when you are tired or distracted from the job at hand.

7. **CHECK FOR DAMAGED PARTS.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
8. **REPLACEMENT PARTS AND ACCESSORIES:** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.
9. **MAINTAIN THIS PRODUCT WITH CARE.** Keep this product clean and dry for better performance.
10. **MAINTENANCE:** For your safety, service and maintenance should be performed regularly by a qualified technician.
11. **USE THE RIGHT PRODUCT FOR THE JOB.** Do not attempt to force a small product to do the work of a larger industrial product. There are certain applications for which this product was designed. It will do the job better and more safely in the manner for which it was intended. Do not modify this product, and do not use this product for a purpose for which it was not intended.
12. **MAINTAIN A SAFE WORKING ENVIRONMENT.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Avoid high traffic areas. Always keep the work area free of obstructions, grease, oil, trash, and other debris.
13. **PROPER GREENHOUSE LOCATION:** Make sure the Greenhouse is located on a flat, level, surface.
14. **WARNING:** The brass bushings in the door rollers of this product contain lead, a chemical known to the State of California to cause birth defects (or other reproductive harm). (California Health & Safety code § 25249.5, *et seq.*)
15. **THIS UNIT CONTAINS PIECES WITH SHARP EDGES.** The machined edges of the aluminum parts and the ends of the panel clips may be sharp. Handle all parts carefully.
16. **SNOW/DEBRIS ACCUMULATION HAZARD.** The heavy weight of accumulated snow or other debris can cause parts of this greenhouse to buckle suddenly. Do not allow debris to accumulate on top of the greenhouse. If snowfall is expected, place additional supports (not provided) underneath the Crown. **NEVER enter a greenhouse with accumulated debris on top.**
17. **WARNING:** The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.

BASE ASSEMBLY

IMPORTANT—READ THE FOLLOWING CAREFULLY BEFORE PROCEEDING

- The first step in assembly is to assemble a proper base. The greenhouse must be properly supported to help prevent property damage and injury in the event of strong winds or inclement weather. Wind and ground conditions may vary from site to site, and may affect the practicality and effectiveness of anchoring methods substantially.
 - Be certain to check with local authorities to obtain all required building permits and to familiarize yourself with any building codes that may apply.
 - Decide on a location for the greenhouse. The location should be a level, well-lit area that is sheltered from the wind. The door of the greenhouse should not open towards the prevailing wind, if possible.
1. Excavate an area for the base of the greenhouse. The area must be 4' 6" wide by 6' 5" long by 2¹/₂" – 2³/₄" deep. The floor of the hole must be level and square. The diagonal dimensions, from corner to corner, should each be 7' 10".
 2. Assemble the Base outside the hole as shown below. Use Base Bolts (60), Base Nuts (61), and Connectors (59) to secure the pieces together.

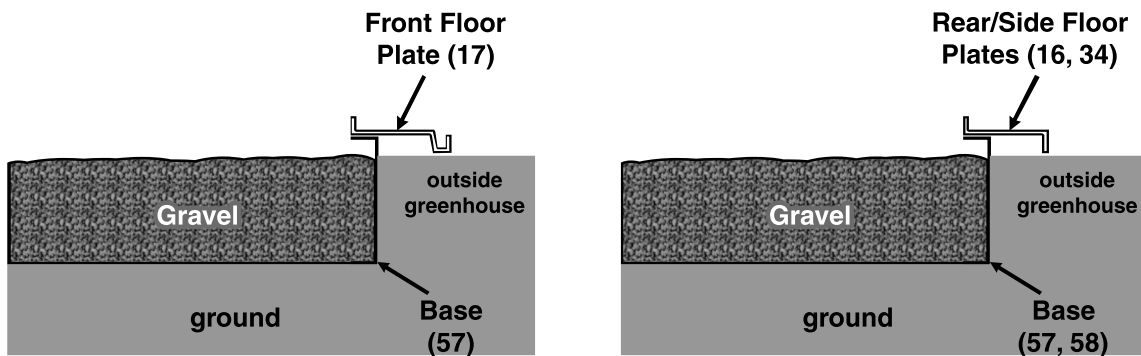


Base Assembly

3. With assistance, lower the Base into the hole. The diagonal dimensions, from outside corner to outside corner, must be equal for the base to be square.
4. Fill the hole around the outside of the base with soil.
5. This base will need to be filled with about 10-11 cubic feet of gravel or another appropriate fill material (not provided). The gravel should reach up to about 1¹/₂" – 3³/₄" below the lip of the base.

FRAME ASSEMBLY

- Unless noted otherwise, all frame parts will be attached using the Bolts (43) and Nuts (52) provided. Bolts should all be assembled with their heads facing the outside of the greenhouse. Tighten Nuts only about $\frac{1}{4}$ turn past finger-tight; be careful not to overtighten.
- Lay out all parts by number prior to assembly.
- An assistant or an appropriate support (not included) will be useful to keep the partially assembled parts upright during assembly. An assistant should be used to assemble the Crown pieces to the rest of the frame.
- Assemble on a clear, calm day. Wind may damage the Greenhouse and will make assembly difficult.

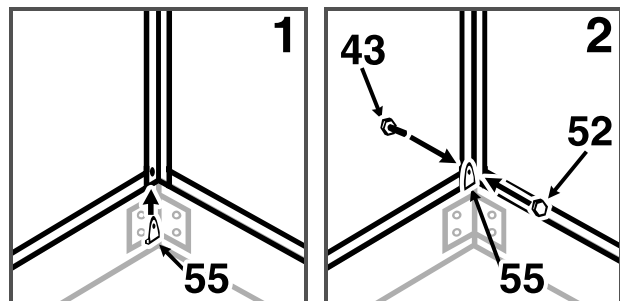


Cross Section

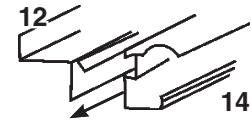
Assembling the Outer Frame

1. Lay all Floor Plates (16, 17, 34) out on top of the base with the flanges facing the outside of the greenhouse as shown above. Make sure that the Front Floor Plate (17) is on the side that you want your door to be located.
2. There are four Corner Studs (1, 29) to be attached to the Floor Plates (16, 17, 34), the end with two holes should be at the bottom. As explained below, attach Left-hand Corner Studs (1) on the outside of the front-left and rear-right corner using two Bolts each Stud. Attach the Right-hand Corner Studs (29) on the outside of the two remaining corners, also as explained below.

To attach the corner studs, as shown to the right: **1**) slide a Hold Down Connector (55) up under the rail and over the end of the Bolt (43), then **2**) secure it using a Nut (52). Use two Hold Down Connectors for each Corner Stud.



- Place two Bolts (43) and Nuts (52) into the holes on the Top Doorway Beam (12). Do not tighten them yet. While making sure that the profiles of the parts are oriented as shown to the right, slide the slot on the Door Rail (14) over the heads of the bolts on the Top Doorway Beam. Align the right edge of the Door Rail on the Doorway Beam, then tighten the Nuts.



- Attach a Corner End Cap (47) to the top outer corner of each Corner Stud (1, 29).
The 8 spots requiring a Hold-down Connector (55) are marked with a plus (+).

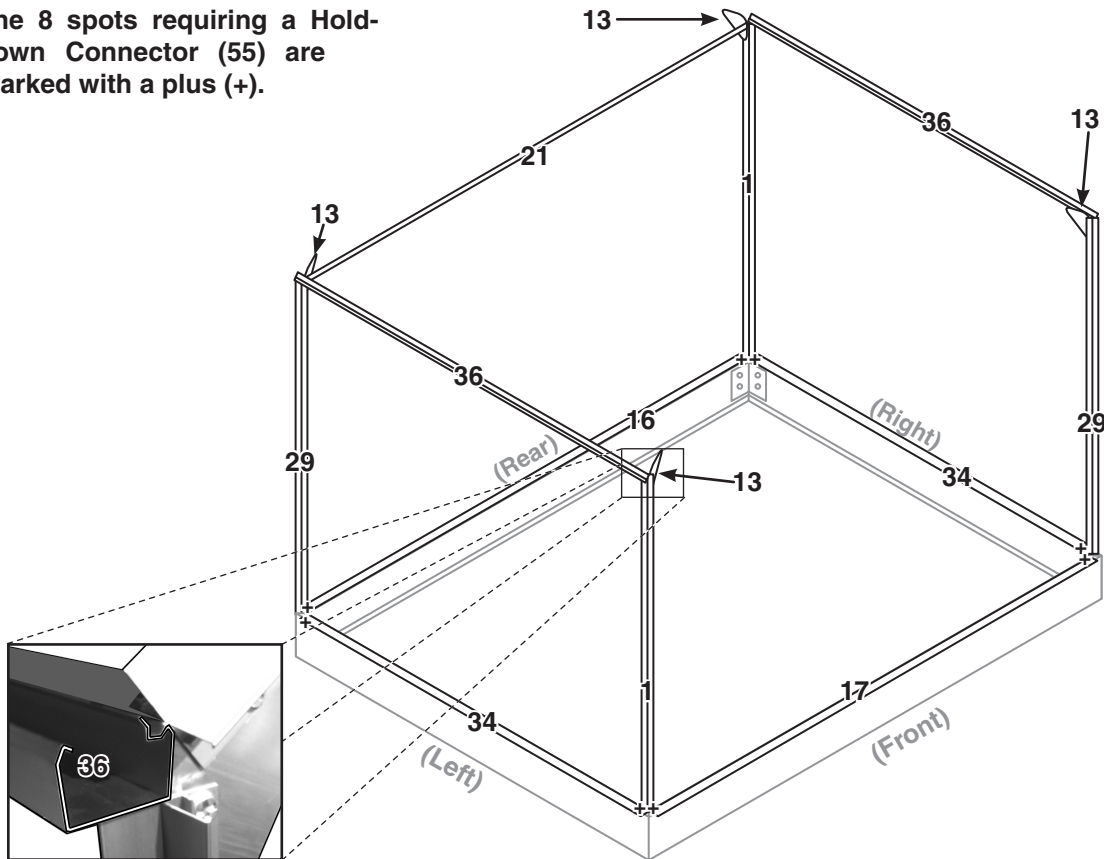
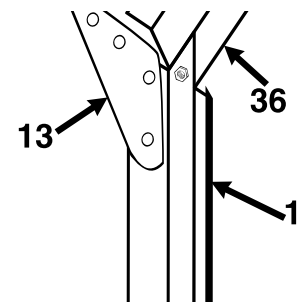


Figure A

- Attach a Side Ceiling Plate (36) flat against the inside of two Corner Studs (1,29). Make sure that the gutter on the Side Ceiling Plate is oriented correctly, see **Figure A inset**. At this point, the completed section of the frame will likely need support. Attach the second Ceiling Plate the same way.
- Attach a Corner Bracket (13) at the inside top of each Corner Stud (1,29) so that the bracket faces upwards, see diagram to the right. Leave the upper holes of the two rear Corner Brackets (13) empty to allow the rear brace to be attached to those holes in the next step.
- Attach the Rear Brace (21) to the inside of the two Corner Brackets (13) that are over the Rear Floor Plate (16). The flange on the Rear Brace should face inward. Attach each end to the upper hole on the Corner Bracket (13). (**See Figure A.**)



Assembling the Roof Frame

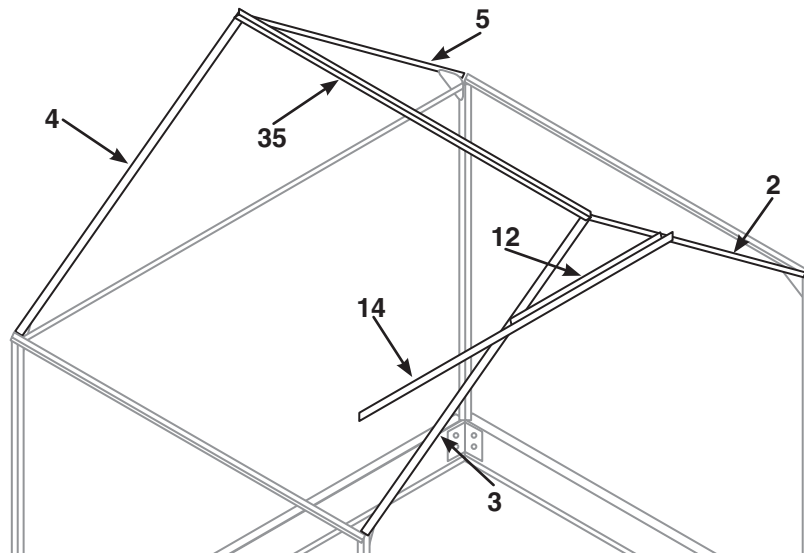
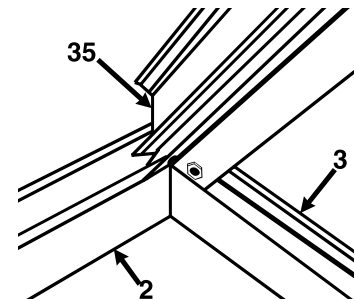


Figure B

1. Assemble the roof frame to the side of the greenhouse first. Attach the Front-Right and Front-Left Crown Beams (2, 3) to the outside of the Crown (35) with the angled edges towards the top. See diagram below right, viewed from under the Crown, facing forward.
2. Attach the Top Doorway Beam (12) and Door Rail (14) assembly to the outside (opposite the Crown) of the Front-Right and Front-Left Crown Beams (2, 3). The rounded edge on the Door Rail should face upward.
3. Attach the Rear Crown Beams (4,5) to the Crown (35) in the same fashion as the Front Crown Beams in step 1.
4. Attach a Corner End Cap (47) onto the outer end of each Crown Beam (2-5). Cover the gaps between the Crown Beams (between 2-3 & 4-5) with a Peak Cap (54) in each. You may desire to use some silicone (not included) to secure the Peak Caps (54) in place.
5. With an assistant, lift the Crown Assembly and place the Crown Beams (2-5) on top of the Corner Brackets (13). **(See Figure B.)** Secure each corner in place with the Crown Beams on the outside of the Corner Brackets.



Assembling the Studs and Braces

The 8 spots requiring a Hold-down Connector (55) are marked with a plus (+).

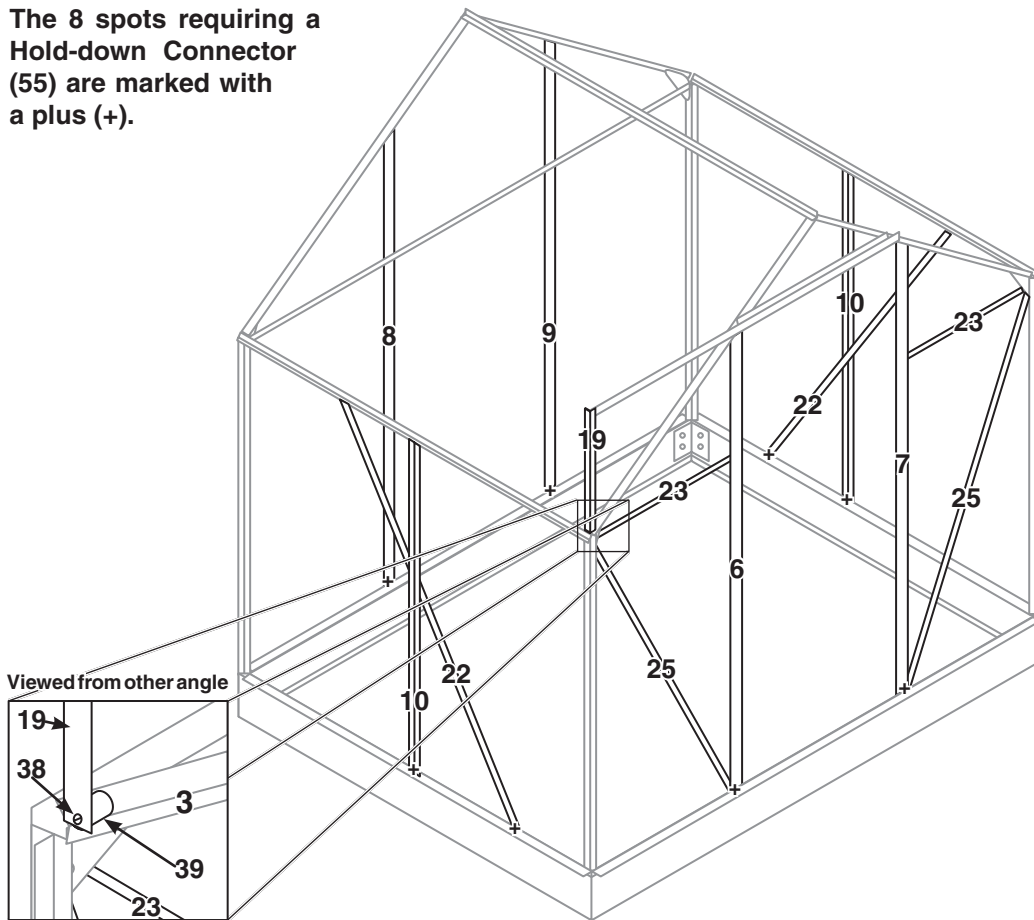
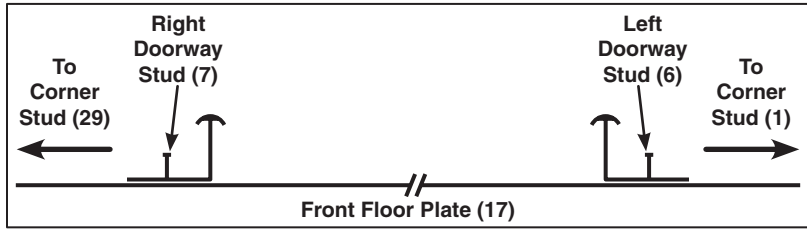


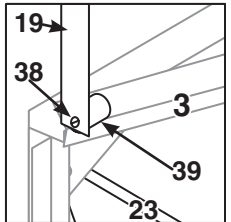
Figure C

1. Attach the Rear-Left and Rear-Right Studs (8, 9) to the outside of the Rear Floor Plate (16) and Rear Brace (21). Slide a Hold-Down Connector (55) under the base and over the Bolt at each Floor Plate (16) connection.
2. Attach the tops of the Rear Studs (8, 9) to the Rear-Right and Rear-Left Crown Beams (4, 5).
3. Attach a Side Stud (10) in the center of each side to the outside of the frame with an extra Bolt (43) in the slot. Slide a Hold-Down Connector (55) under the base and over the Bolt at each bottom connection.
4. Attach a Side Diagonal Brace (22) from the hole on the Side Floor Plate (34) to the hole on the Side Ceiling Plate (36) on the inside as shown in **Figure C**. The flange on the Brace should face inward. Attach the center hole of the Brace to the Bolt (43) in the center of the Side Stud (10). Attach the other Side Diagonal Brace (22) to the other side in the same manner as the first.



View from above

5. Install the Left and Right Doorway Studs (6, 7) to the outside of the frame so that they rest flat against the frame. Their orientation should be the same as shown above. Slide a Bolt (43) into each slot for later Front Brace (23) assembly. Slide a Hold-Down Connector (55) under the base and over the Bolt at each bottom connection, do not secure with a Nut (52) until the next step.
6. Remove the bottom Bolt from the Corner Brackets (13) at the front of the greenhouse. Install the Front Diagonal Braces (25) with their flanges facing inward to the bottom hole of the Brackets on the inside using Bolts (43). Attach the bottom of the Front Diagonal Braces (25) to the Bolt left exposed on the Floor Plate (17) from the last step. **(See Figure C.)**
7. Remove next bolt up from the front Corner Brackets (13). Connect the Front Braces (23) to the exposed hole. Connect the loose ends of the Front Braces (23) to the Doorway Studs (6, 7), using the Bolts (43) included in the Doorway Studs (6, 7) in step 5, above. **(See Figure C.)**
8. Attach the Door Slide Support (19) to the Front-Left Crown Beam (3) using the Long Door Support Bolt (38) and Nut (52), with the Door Support Spacer (39) between the Support and the Stud. **(See Figure C, inset, and diagram to the right.)**
9. The frame should now rest square. Measure diagonally from corner to corner at the top. If the measurements are not equal, adjust the frame as needed until square. Some Nuts (52) may need to be temporarily loosened to adjust the frame properly.
10. Place the Gutter End Caps (48) onto the ends of the Side Ceiling Plates (36) oriented with a gap in the bottom to allow water to drain out of the gutters.



Assembling the Roof Studs and Braces

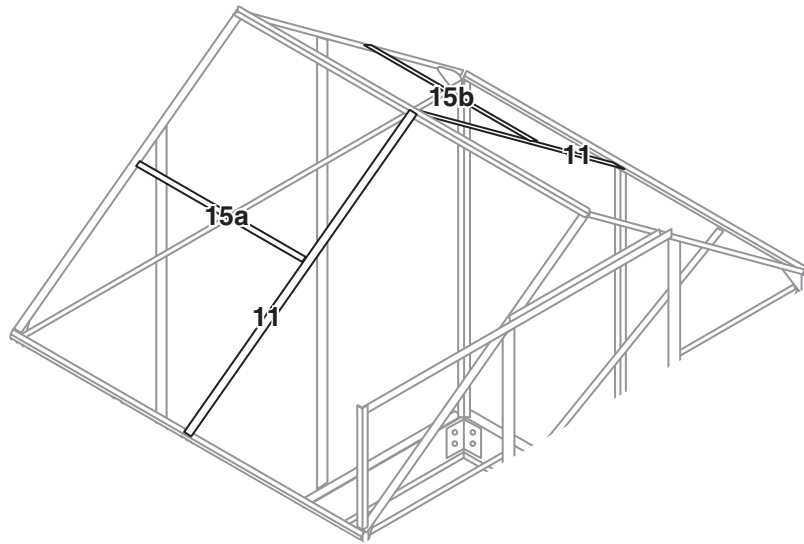
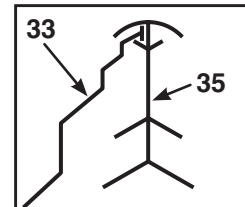
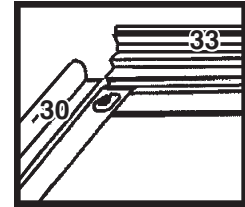


Figure D

1. Attach both Roof Studs (11) to the outside of the Crown (35) and slide one Bolt (43) into each. Secure the ends to the outer top edge of the Side Ceiling Plates (36) using another Bolt (43).
2. Slide a Left Window Support Beam (15a) onto two Roof Studs (11) on the left side of the greenhouse, with the predrilled holes on the underside and the flat side fac- ing the Crown (35). Use the extra Bolts (43) to secure the Beam loosely in place. Repeat for the Right Window Support Beam (15b) on the right side.
3. At this time, verify that the Door Rail (14) is oriented correctly, with the rounded edge facing up – see number 3 on page 7.

Assembling the Windows

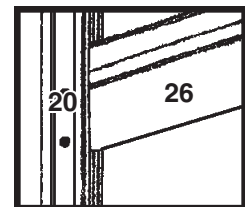
1. Attach a Side Window Frames (30) to each end of the Top Window Frame (33), as shown below to the right.
2. Insert Bolts (43) into the holes at the bottom of the Side Window Frames (30), so that the threads stick out the bottom of the window.
3. Remove the protective film from both sides of the Window Pane (66). Slide the Window Pane (66) into the three-sided frame.
4. Slide the Bottom Window Frame (32) onto the two Short Bolts (43) and the Window Pane (66). Secure it in place with Nuts (52). You may need to apply some pressure to the heads of the Bolts through the Window Pane to allow the Nuts to thread on properly.
5. Attach the Window Brace (51) to the Bottom Window Frame (32) using two Window Screws (45). The holes on the Window Brace (51) should face away from the window.
6. Slide the top edge of the Top Window Frame (33) into the slot at the top of the Crown (35), see illustration to the right. The window should be aligned with the Window Brace (51) underneath it. Slide the window into place over the Window Support Beam (15a/15b). Gradually lower it into place.
7. Using two Window Screws (45), attach the Window Stop (18) to the Window Support Beam (15a/15b) with its tab pointing towards the Crown (35). It should be on the underside of the Window Support Beam, inside the greenhouse.
8. Loosen the Nuts (52) holding the Window Support Beam (15a/15b) in place and slide the Window Support Beam (15a/15b) up to touch the window. Secure it in place.
9. Repeat steps 1-8 for the other window.



Assembling the Door

The door is assembled using the Door Screws (44). The Screws thread directly into the rounded portions of the parts in the center of the doors.

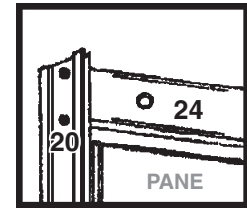
1. Place the Left Door Frame (20) with the door seal side down. Attach two Center Door Frames (26) to the Left Door Frame (20). Assemble them with the rounded portion facing the front, as shown to the right.
2. Attach a Right Door Frame (28) to the other side of the Center Door Frames (26) in the same way.



Front view

3. Orient the assembled door frames so that the Left Door Frame (20) is on the left, and the Right Door Frame (28) is on the right.

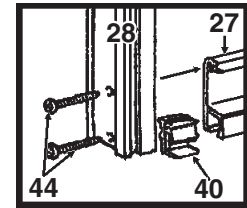
4. Attach the Top Door Frame (24) to the top of the Left/Right Door Frames (20, 28). Make sure that the rounded portion faces the front and that the flange where the pane will sit faces down towards the center of the door, see the diagram to the right.



Front view

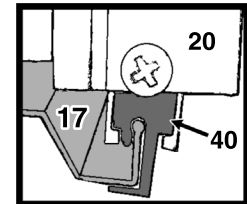
5. Using two Bolts (43) and two Nuts (52), attach the Door Slider (31) to the Top Door Frame (24) with the rollers on the top of the door.

6. Insert a Door Bottom Slider (40) into each end of the Bottom Door Frame (27). Make sure that the Sliders are assembled the correct way, with the gap facing the back of the door – see diagram to the right. Attach the Bottom Door Frame (27) to the Left/Right Door Frames (20, 28) using two Screws (44) on each side – the one on the top into the Bottom Door Frame (27) and the bottom one into the Door Bottom Slider (40).



View from behind

7. Raise the assembled Door up and insert the first roller of its Door Slider (31) onto the Door Rail (14). Carefully align the first Bottom Door Slider (40) over the edge of the Front Floor Plate (17) – see illustration to the right. Carefully slide the door over and align the other top Roller and bottom Slider as you did the first ones.

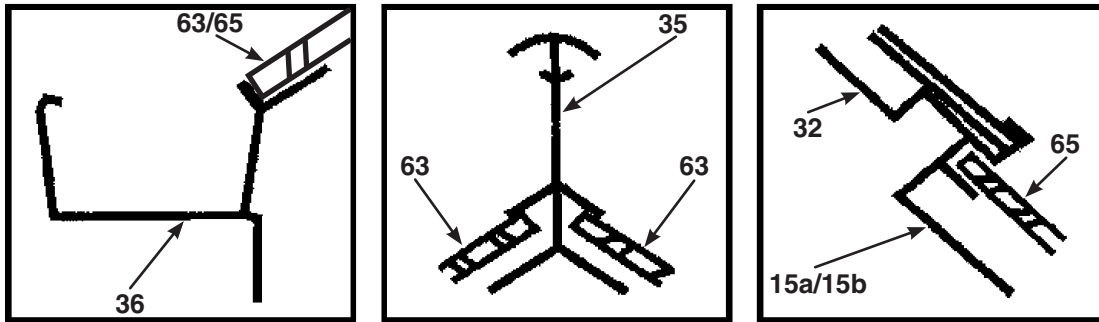


Side view

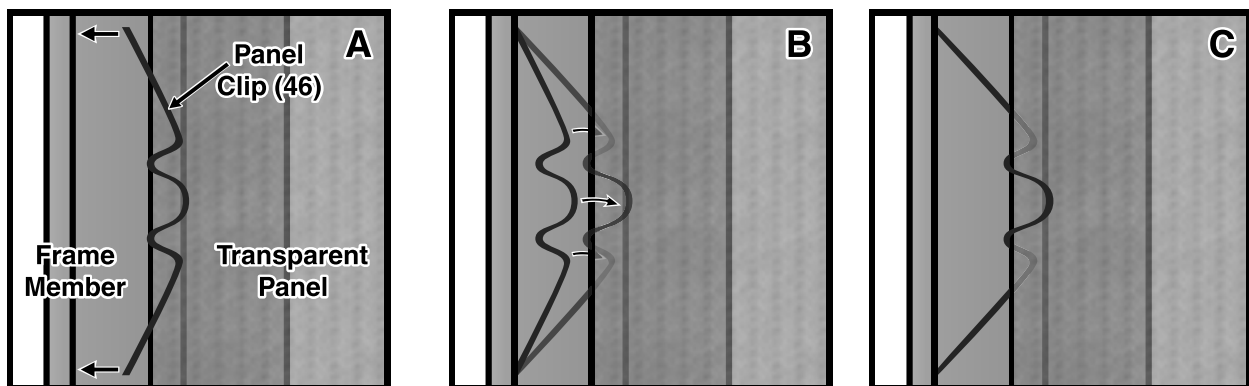
8. Once the door is installed, install Bolts (43) and Nuts (52) into the holes on the ends the Door Rail (14) to prevent the door from sliding off the rail. Attach the Right and Left Rail End Caps (49,50) onto the ends of the Door Rail.

Installing the Transparent Panels

1. Panel Clips (46) are used to secure the Transparent Panels in place on the Greenhouse.
2. Remove the protective film from both sides of all panels.



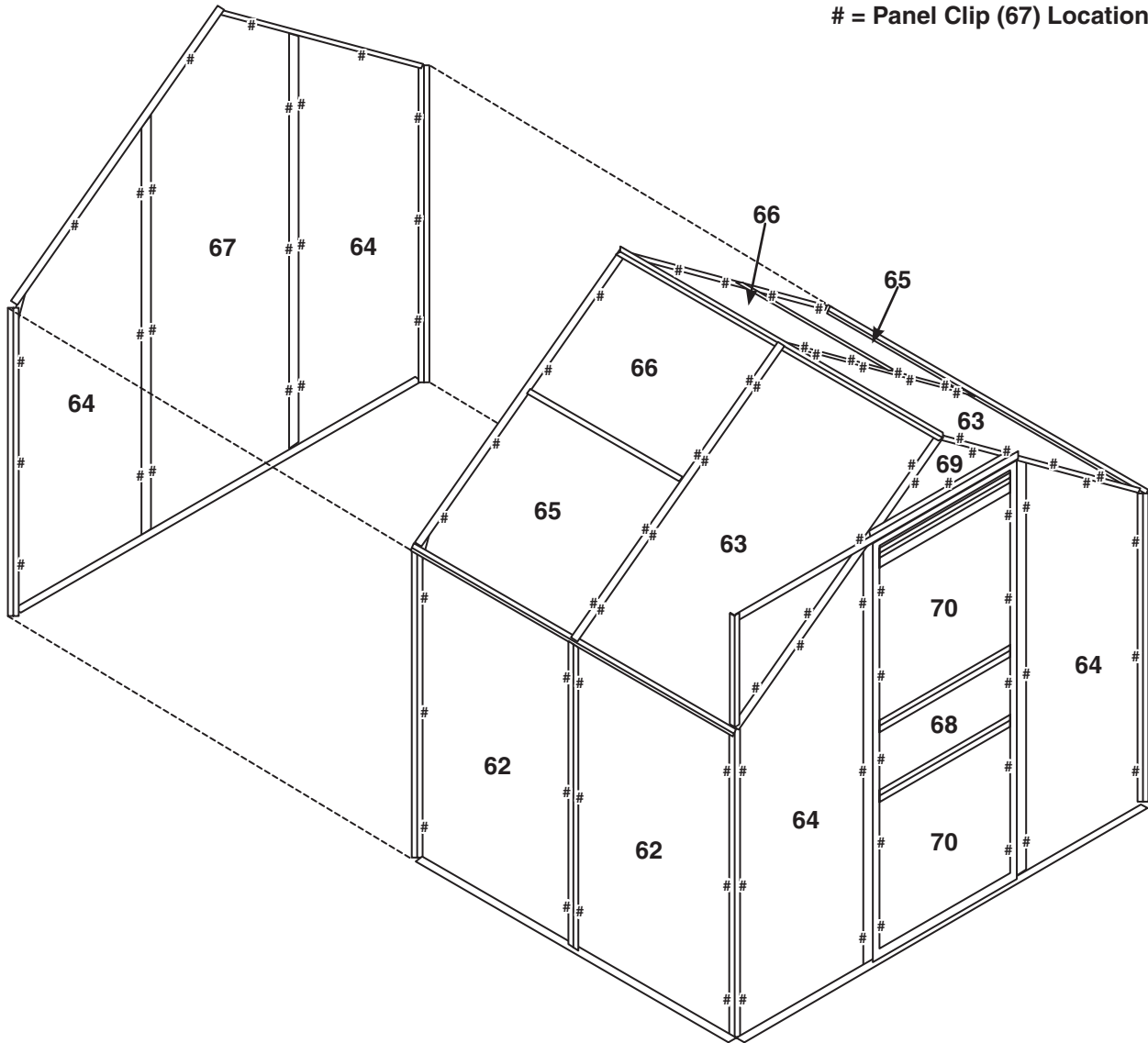
3. The Roof Panels (63) and the Roof Window Panels (65) will need to be placed as shown in the illustrations above. The top edges of these panels need to be placed up under the edge of the Crown (35) or the Window Support Beam (15a/15b).
4. One at a time, place each Transparent Panel (62–70) in its proper location on the Ceiling, Frame, and Door of the Greenhouse. Then, secure the Transparent Panel in place, using the quantity and location of Panel Clips (46) as shown in the Panel Installation Diagram, next page. Also, refer to the panel clip installation instructions in step 6.
5. If the Door Top/Bottom Panel (70) does not fit properly, turn it 90° and try refitting it.



6. **Be careful, Panel Clip (46) ends may be sharp and may spring back!**
To attach Panel Clips:
 - a. Place the two loose ends of the Clip into the groove in the frame.
 - b. Swing the center portion of the Clip up against the panel.
 - c. Two edges of the Clip swing under the edge of the panel and the center edge holds the panel in place.

Panel Installation Diagram

= Panel Clip (67) Location



INSPECTION, MAINTENANCE, AND CLEANING

1. **BEFORE EACH USE**, inspect the general condition of the Greenhouse. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, and any other condition that may affect the safe operation of the Greenhouse. If a problem occurs with the Greenhouse, have it corrected before further use.
Do not use damaged equipment.
2. **TO CLEAN**: Wipe with a damp cloth, using a mild detergent.
Do not use cleaners that are combustible, corrosive, or not compatible with aluminum.
3. **WHEN STORING**: Keep the Greenhouse in a box and in a clean, dry location.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.


PARTS LIST

Lengths given are approximate and most are rounded to the nearest inch.

PART	DESCRIPTION			Q'TY	PART	DESCRIPTION			Q'TY
1	Left-hand Corner Stud	4'		2	19	Door Slide Support	1' 3"		1
2	Front-Right Crown Beam	3' 9"		1	20	Left Door Frame	5' 3"		1
3	Front-Left Crown Beam	3' 9"		1	21	Rear Brace	6'		1
4	Rear-Left Crown Beam	3' 9"		1	22	Side Diagonal Brace	4' 3"		2
5	Rear-Right Crown Beam	3' 9"		1	23	Front Brace	1' 11"		2
6	Left Doorway Stud	5' 5"		1	24	Top Door Frame	2'		1
7	Right Doorway Stud	5' 5"		1	25	Front Diagonal Brace	4' 3"		2
8	Rear-Left Stud	5' 6"		1	26	Center Door Frame	2'		2
9	Rear-Right Stud	5' 6"		1	27	Bottom Door Frame	2'		1
10	Side Stud	4'		2	28	Right Door Frame	5' 3"		1
11	Roof Stud	3' 8"		2	29	Right-hand Corner Stud	4'		2
12	Top Doorway Beam	2'		1	30	Side Window Frame	1' 9"		4
13	Corner Bracket			4	31	Door Slider	2'		1
14	Door Rail	4' 2"		1	32	Bottom Window Frame	1' 11"		2
15a	Left Window Support Beam	2' 1"		1	33	Top Window Frame	2'		2
15b	Right Window Support Beam	2' 1"		1	34	Side Floor Plate	4'		2
16	Rear Floor Plate	6'		1	35	Crown	4'		1
17	Front Floor Plate	6'		1	36	Side Ceiling Plate	4'		2
18	Window Stop			2	37	Door Roller Bolt	M4 x 8		2

PARTS LIST (continued)

Part lengths are approximate and most are rounded to the nearest inch.

PART	DESCRIPTION		Q'TY	PART	DESCRIPTION		Q'TY		
38	Long Door Support Bolt	M6 x 38		1	55	Hold-down Connector		16	
39	Door Support Spacer			1	56	Hex Wrench		1	
40	Door Bottom Slider			2	57	Front/Rear Base Plate		2	
41	Spanner Wrench			1	58	Side Base Plate		2	
42	Door Seal			2	59	Base Plate Connector		4	
43	Bolt	M6 x 10		88	60	Base Bolt		16	
44	Door Screw	ST4.5 x 19		16	61	Base Nut		16	
45	Window Screw	ST4.5 x 7.5		8	62	Wall Panel	2' x 4'		4
46	Panel Clip			105	63	Roof Panel	2' x 3' 8"		2
47	Corner End Cap			8	64	Front/Rear Side Panel	2' x 5' 5"		4
48	Gutter End Cap			4	65	Roof Window Panel	2' x 1' 11"		2
49	Right Rail End Cap			1	66	Window Pane	2' x 1' 9"		2
50	Left Rail End Cap			1	67	Rear Center Panel	2' x 6' 2"		1
51	Window Brace			2	68	Door Center Panel	2' x 9"		1
52	Nut	M6		89	69	Front Top Panel	2' x 9"		1
53	Door Roller			2	70	Door Top/Bottom Panel	2' x 2'		2
54	Peak Cap			2					

Note: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

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