



Assembly Instructions RV Style 14 x 42 x 15

ASSEMBLY INSTRUCTIONS RV HOUSE STYLE 14x42x15

Congratulations!

Congratulations on your purchase of a RV House Style Portable Building by MDM Products, LLC. With proper installation, use and maintenance, your new unit will provide many years of good and suitable service. Your new portable building is a combination of excellent engineering and well thought out design. The unit is comprised of a rigid tubular frame, covered with a long life polyethylene cover and double door ends.

The multiple part frame assembly is pre-drilled for easy installation. The tubing is made from high-grade galvanized steel to resist moisture and oxidation over the life of the shelter. The main cover and doors are made from ASTM-5 approved polyethylene materials. The cover is UV protected for continuous exposure to sunlight.

SAFETY WARNING

The installation of this unit must conform to the requirements of all authorities having jurisdiction in your specific local area. In the absence of such requirements, the assembly and installation must conform to the provided assembly and installation instructions. MDM Products, LLC will not be responsible for failure to comply with any requirements in a given local area. Damages, consequential damages, or injuries caused by improper installation, alteration, improper use, or damages caused by snow, wind, or any acts of nature are strictly that of the user. Unit is not intended for occupancy for any length of time. NO running of internal combustion engines, open flames or contact with heated surfaces is allowed.

Cartons should be inspected upon delivery from carrier, and any evident damages should be noted on the bill of lading before signing. If upon opening the cartons hidden damage is discovered, contact carrier or it's agent

immediately. Claims for shipping damage MUST be made with the shipping company by you as he consignee. In the event of damage, an inspection of the goods will be required. Do not discard packing or any components before the freight company inspection. All claims for freight damage must be made within 15 days of receipt of the goods in accordance with ICC regulations.

ASSEMBLY PROCEDURE

The proper sequence and steps to install this unit will produce a proper and good installation. Failure to read and follow these guidelines may result in an improper installation and will void all warranty and protection the owner is entitled to with the product. The steps to be undertaken are:

1. Perform an inventory check before beginning, to be certain all components are available for installation.
2. Prepare location and place all unit boxes near site unit will be located.
3. Assemble Eleven (11) arches of unit.
4. Assemble end arch, first interior arch, and wind braces with the first top, base and side rail sections.
5. Add additional arch assemblies with each section of base rails and side rails.
6. Level and square unit.
7. Anchor frame assembly to ground with provided anchors, U-bolts and drive rod.
8. Install Doors (2) on ends of frame assembly.
9. Install Main Cover over frame assembly.
10. Install Door Roll-up mechanism

TOOLS REQUIRED

The following hand tools will be needed for proper installation of your new Rhino Shelter Building:

- 9/16 Open End Wrench**
- 9/16 Socket or Box Wrench**
- Large Flat Head Screwdriver**
- 2lb maul or Sledgehammer**
- 2 Foot Level**
- 12' Foot Step Ladder**
- Stakes & string for squaring area**



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INVENTORY CHECK

Start installation procedure by removing all components from packaging to ensure all components are present. Inventory chart is on the last page and parts descriptions appear on the next page of this manual.



#1 / CT-8006 (33)
Top Crest and Side Bend
 plain ends
 use to construct arches



#2 / RP-8007 (22)
Rafter Pole
 swedged both ends
 used to construct arch



#3 / UP-8008 (22)
Upper Leg Pole
 swedged one end
 upper portion of leg pole



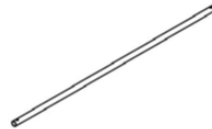
#4 / EUL-8002 (8)
Lower Leg Pole w/foot
 swedged one end
 lower portion of leg poles
 #1, #4, #8, & #11



#5 / EUL-8003 (14)
Lower Leg Pole plain
 swedged one end
 lower portion of leg poles
 #2, #3, #5, #6, #7, #9, #11



#6 / CW-8005 (4)
Corner Wind Brace
 flat ends
 use on 4 corners of unit



#7 / ECR-8003 (7)
End Cross Rail Piece
 plain ends
 use as the first or last
 piece of the cross rail
 assembly.



#8 / ECR-8004 (63)
Cross Rail Piece
 swedged one end
 connect to end cross
 rail piece and together
 to form cross rail.



#9 / EP-1001 (14)
1" End Plug
 use on ends of cross
 rails.



#10 / EP-1003 (22)
2-3/8" End Plug
 use on open ends
 of arch feet.



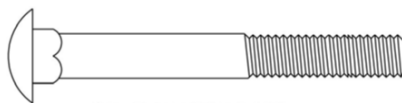
#13 CBN-7005-CW (55)
Curved Washer



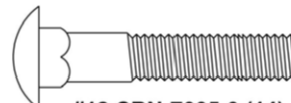
#15 CBN-7005-N (63)
3/8" Locknut



#14 CBN-7005-W (8)
Flat Washer



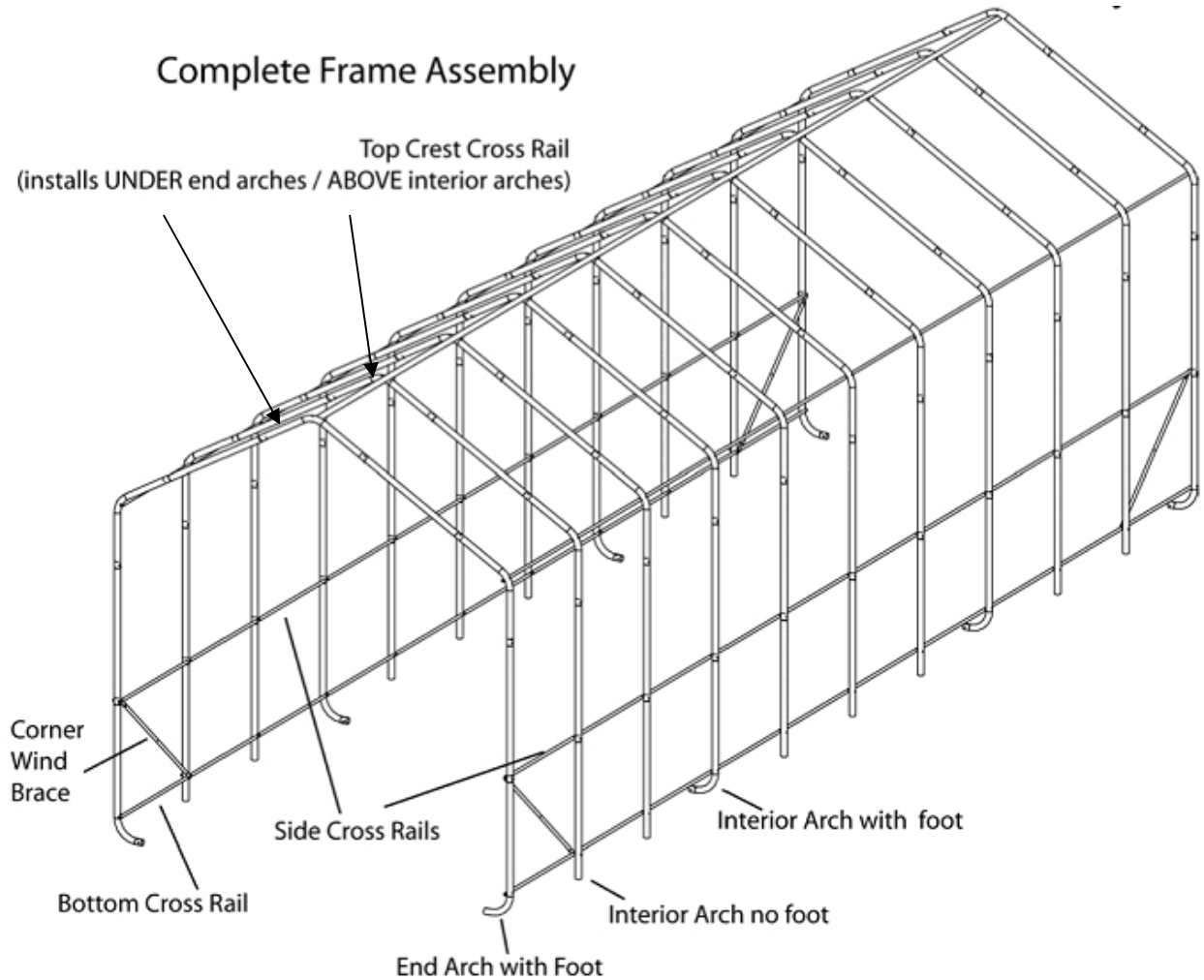
#11 CBN-7005-4 (49)
3/8" x 4" Carriage Bolt



#12 CBN-7005-3 (14)
3/8" x 27/8" Carriage Bolt

Complete Frame Assembly

Top Crest Cross Rail
(installs UNDER end arches / ABOVE interior arches)

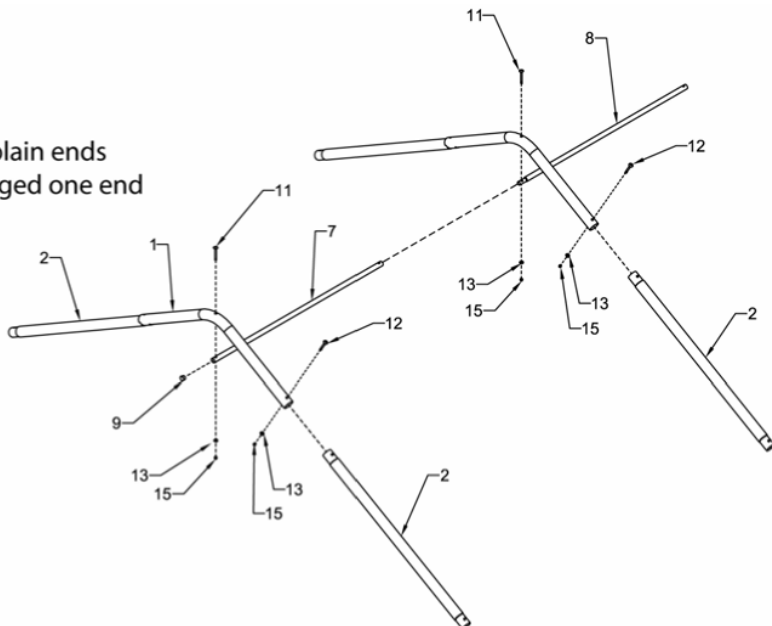


Top part of Arch Assembly (detail)

- #1 - CT-8006 / Top Crest piece
- #2 - RP-8007 / Rafter Pole - swedged
- #7 - ECR-8003 / End Cross Rail piece - plain ends
- #8 - ECR-8004 / Cross Rail piece - swedged one end

Hardware

- #9 - 1" end plug
- #11 - CBN-7005-4 / carriage bolt 4"
- #13 - CBN-7005-CW / curved washer
- #15 - CBN-1-7005-N / Locknut



SITE PREPARATION

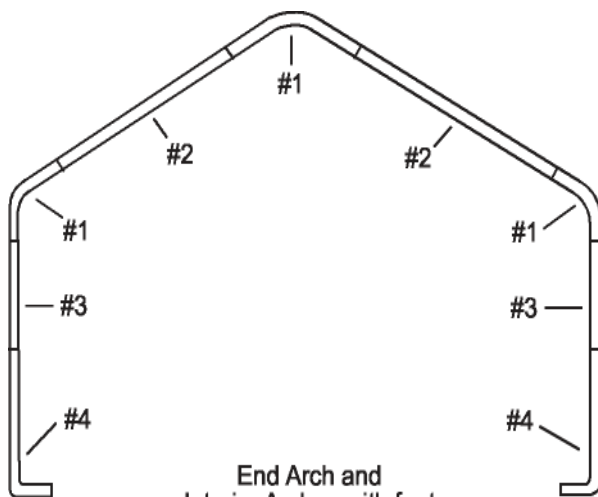
Select a level or as close to level as practical location for your Rhino Shelter Building. The building should be placed on a base of materials suitable for the storage load to be protected. The unit should not be located under trees, which will shed hard fruit such as apples, walnuts, or heavy pinecones. The cover of your unit will protect against normal falling leaves and light debris, however large branches or other falling items may cause a puncture or tear in the cover material. Take notice of drainage around your intended location. Water draining from the surrounding terrain should be considered so that it does not run into the unit. As well, rain or melting snow that comes off the unit should be drained away rather than accumulate and pool around the unit. Check to be certain that adequate clearance is allowed for entry and exit from ends of the unit. As unit has doors on both ends, ideally RV, boat, or equipment can be inserted or removed from either end.

Using the stakes and string, measure off and square area for intended installation. Level the ground as best as possible. A properly leveled frame yields maximum strength.

FRAME ASSEMBLY

Step 1. Assemble the Front & Rear End Arch Assemblies and two intermediate arches with feet (4 arches total)

Each Arch Assembly consists of:



3 - #1 CT-8006 Crest Tube/Side Bend

2 - #2 RP-8007 Rafter Pole - swedged

2 - #3 UP-8008 Upper leg pole

2 - #4 EUL-8002 Lower leg pole with foot

Use 4" Carriage bolts #CBN-7005-4 with curved washers #CBN-7005-CW and locknuts #CBN-7005-N through pre-drilled holes in frame members. Be certain to insert carriage bolts from the outside into the interior of the unit, with the washers and nuts on the inside of the frame. This will prevent the bolts from puncturing through the cover material. Do not tighten down the nuts completely until frame is fully assembled and set in place.

Step 2. Attach Corner Wind Braces #6 CW-8005 to the INSIDE of EACH side of the End Arch assemblies you assembled in Step 1 with 4" carriage bolts CBN-7005-4, flat washer #CBN-7005-W, and nuts #CBN-7005-N. Do not tighten completely.

Step 3. Assemble the remaining two arches.

Each Interior **ARCH ASSEMBLY** consists of:

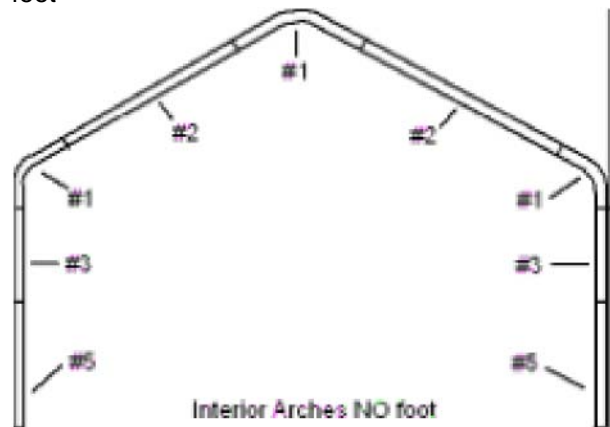
3 - #1 CT-8006 Crest Tube/Side Bend

2 - #2 RP-8007 Rafter Pole - swedged

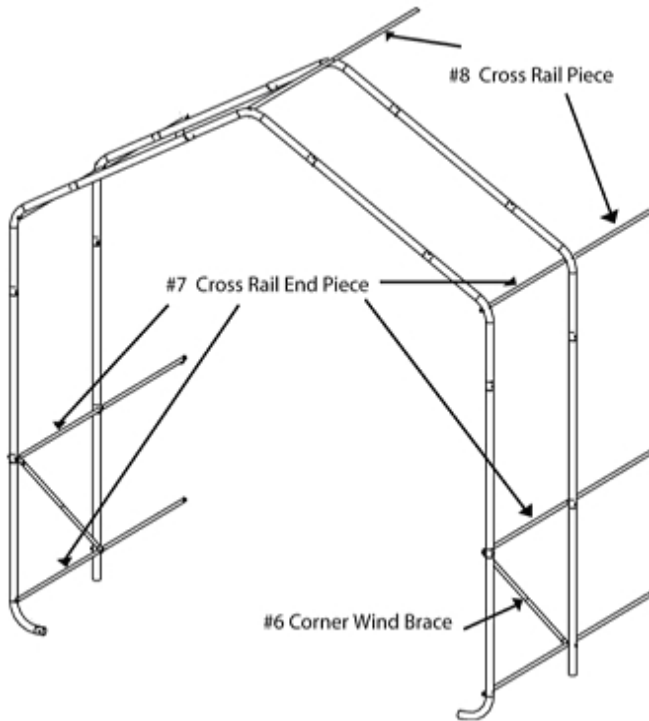
2 - #3 UP-8008 Upper leg pole

2 - #5 EUL-8003 Lower leg pole no foot

foot



Use Carriage Bolts with Washers and Nuts through pre-drilled holes in frame members. Be certain to insert carriage bolts from the outside into the interior of the unit, with the washers and nuts on the inside of the frame. Do not tighten down the nuts completely.



Step 4. Stand first End Arch Assembly up in place, supported with the Wind Brace temporarily on ground. Attach #7 ECR-8003 PLAIN END CROSS RAILS to the INSIDE of the END ARCH in the Side Rail positions with the Carriage bolts, washers and nuts in the pre-drilled holes of the frame arch. Again do not tighten down completely. Always remember to insert bolts from the outside into the interior to prevent damage to cover.

Stand the first INTERIOR ARCH (without feet) assembly into place. Align holes in interior arch with ECR-8003 Cross Rails from End Arch. Using carriage bolts, with nuts and washers from frame assembly, connect the Side Cross Rails between the arches. Insert the next piece of ECR-8004 Swedged End Cross Rail into ECR-8003 Plain End Cross Rail before inserting bolt for next arch section

Attach Wind Brace #CW-8005 between end arch and first interior arch as shown in each corner. This will make assembly self supporting once in place.

Step 5. Begin the Top Crest Cross Rail by placing the last ECR-8003 PLAIN END CROSS RAIL as the first end UNDERNEATH the END ARCH. Secure loosely with carriage Bolt # CBN-7005-3, with washer and nut facing interior of unit.

Step 6. Continue connecting each arch section in the same manner. NOTE: The Top Crest Cross Rail (only) will be UNDER the END ARCHES and OVER the INTERIOR ARCHES. All the other Cross Rails will be on the inside of the frame. Washer and Nuts must always face towards the interior of the unit. Please note that Arches #4 and #8 have the FEET, like the End Arches. DO NOT completely tighten down bolts that connect the Cross Rails to the END ARCHES, they must be removed for End Panel Zippered Door Installation.

Step 7. The key to a successful installation is getting the frame placed properly and secured in place. The steps to accomplish this are:

- Align one side of frame members with string along length of base.
- Measure each arch side to side and adjust to be 14' outside to outside of base uprights.
- Measure diagonally from inside corner to inside corner of frame. Both diagonal measurements should match.



Failure to square frame will result in poor cover fit and reduced strength and rigidity. Frame should be 14' side to side and 42' front to back – Outside Dimensions.

ARCH BASE SUPPORT

The weight of your Rhino Shelter will rest on the base of each arch assembly. Add additional leveling and strength to the unit by placing cement blocks under Leg Poles, or under any leg pole where ground is soft and not suited to support weight well.



SECURING FRAME ARCHES HORIZONTALLY

To help hold the frame in place and square, you can insert a piece of rebar or a stake into the hole in the corner feet and the center arch feet, into the ground. This will help keep the frame in place, and prevent the ends from spreading and straining the zippered doors.



TIGHTEN DOWN FRAME CARRIAGE BOLTS

Once frame is square and leveled and properly supported at each arch base, tighten down carriage bolts. Do not tighten carriage bolts on End Arch Assemblies, as these will be removed to put on doors. Do NOT over-tighten bolts to crush or egg tubing members. Only tighten with hand wrench.

After tightening, re-check dimensions both side to side and cross end to end. Then insert PLASTIC END PLUGS #EP-1000 & #EP-1 001 into all open ends of frame members.

V 2.2

ANCHORING FRAME TO GROUND

NOTE: Frame must be anchored before installing any doors or cover.

Each Rhino Shelter 14x42 building comes with 22 EARTH CABLE ANCHORS #DBA-3000 with U-bolts and nuts. These versatile anchors allow the frame to be secured to almost any surface. In addition you have also been provided with a 36" Drive Rod # DR-3001 used to drive the anchor heads into the earth.

If the location where you are placing the building has very hard ground or any rock in it, pre-drill the holes before inserting anchors. Hitting the anchors into rock will cause the drive rod end to mushroom inside the anchor head, and prevent the drive rod from coming out of the hole.

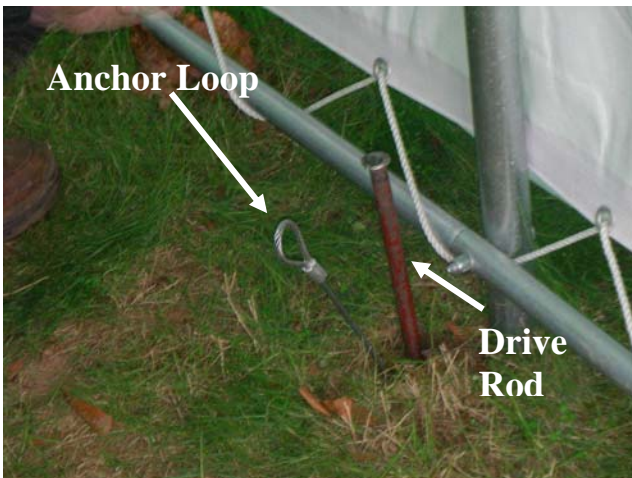


Anchor placement should be on the inside of the unit, at each corner and at the base of each upright leg pole. Angle the anchor placement to prevent the frame from spreading out over time.



ANCHOR STEP 1

Place DRIVE ROD into the cup of the anchor head. Using a heavy hammer or sledge, drive the anchor into the ground until 6-8 inches of cable remain above the ground. Remove drive rod.



ANCHOR STEP 2

Place the Drive Rod through the loop in the anchor lanyard. Pull upward to set anchor in the ground.



ANCHOR STEP 3

Slip one side of the U-bolt through the eyelet at the end of the anchor cable. Attach the cable to the leg upright with the U-bolt and tighten. Ensure there is no slack in the cable. Slack can be removed by wrapping the cable around the tie-down rail.



END PANEL/ZIPPERED DOOR INSTALLATION

NOTE: End Panel/Doors MUST be installed BEFORE Main Cover.

END DOOR STEP 1

Remove the Carriage Bolts holding the Top Crest Cross Rail and Side Cross Rails to the End Arch. (these are the ones you left loose). Bring the Door Panel up to the outside of the frame arch, keeping the white side in, grey or green side out. Align the material evenly over the arch.

END DOOR STEP 2. - ATTACH END DOOR

Wrap the edges of the panel around the frame arch, bringing the slits in the panel, to the inside of the frame. End Panel / Doors have pre-cut slits that allow Cross Rails to pass through, so material can wrap around arch with rope pocket inside unit



Thread the Cross Rails through the slits and re-attach to the frame arch using carriage bolts, with nuts and washers facing inward as always. End Panel/Door will also require removal of Wind Brace bolts, and placement of Wind Brace through slits in End Panels. Remember to reconnect Wind braces with carriage bolts and tighten down, once End Panel is in place.



END DOOR STEP 3. TIGHTEN AND SECURE END PANEL DOOR

Tie off one end of the rope coming out of the end panel to a TURNBUCKLE (turnbuckle should be loosened all the way), and attach the turnbuckle to **V 2.2**

the hole in the Corner Foot of the End Arch. Grab the other end of the rope and apply downward pressure with your foot to tighten the fabric around the arch and remove excess slack. Distribute excess fabric along door rope pocket to keep door centered on frame.

NOTE: Adjust the end panel door by turning the turnbuckles or repeating step 3 till taut.

Repeat for other End Panel / Door



STEP 10 – MAIN COVER

The Main Cover should only be installed after the frame is entirely secured to the ground and the end doors are already in place.

MAIN COVER STEP 1.

To elongate the life of Main Cover, put a small square of duct tape (field supplied) over each bolt head on frame that comes in contact with cover. The tape acts as a cushion to avoid rubbing damage to the cover over years.



Unpack the Main Cover #MUC-8000 from the protective plastic packaging. The line of grommets on the inside (white) of the cover on the tie down Flap run parallel to the sides of the frame assembly for positioning.

Pull Main Cover over frame with rope threaded through one of the grommets on the end flap. Be careful not to snag or rip the cover on any exposed bolts or rough ends.



MAIN COVER STEP 2. TIGHTEN COVER DOWN

The Main Cover will tighten down at the end of the frame in the same manner as the End Panel/Doors. Take the remaining turnbuckles, fully loosened and place into the holes in the Corner leg Feet, FROM THE OUTSIDE. Tie off one end of the rope to the turnbuckle, take up extra slack, tie off that end temporarily to hold it's position. Go to opposite end **V 2.2**

of unit, do the same. Adjust gathers in material evenly around arch. Keep repeating until Main Cover is taut and gathers are evenly distributed. It is important to work evenly from end to end, this will keep the cover from pulling to one side more than the other. Cover can be tightened further by adjusting the turnbuckles.



Turnbuckle on Main Cover goes on the Outside of the End Panel/Zipper Door



Inside Corner view showing Main Cover and End Panel Door properly laced and secured with turnbuckles.

Pay close attention to how tight the cover is put onto the frame. It should be tight enough so it does not flap around in the wind, but not so tight that it tears the material cover. The fabric backed PE fabric of Rhino Shelter units does not stretch. If you pull it so tight that the fabric is stretched, a small amount of additional stress from wind or contact can cause premature tears and failure. Only tighten cover

enough to remove valleys between arch assemblies. Do Not over tighten.

MAIN COVER STEP 3. LACE MAIN COVER TO FRAME

Once cover is completely aligned and secure, you will lace each side of the cover to the BOTTOM CROSS RAIL. Start at one end and tie off the ROPE #R-7003 to the Lower CROSS RAIL. Lace the rope through the grommets in the cover flap, and back under the Cross Rail.



Repeat down length of unit, tie off at Cross Rail. Do the same for the other side.

MAIN COVER STEP 4. RECHECK COVER & DOORS

Retighten or readjust Main Cover and Doors if needed by adjusting the turnbuckles. Retighten the laced rope.

BOTH THE COVER AND END PANELS SHOULD BE CHECKED AND TIGHTENED ON A MONTHLY BASIS.

MAINTENANCE AND CARE

Annually or more often, the unit should be completely inspected internally and externally to make certain the unit remains properly installed and secured. Particular attention should be paid to:

Hardware – check all carriage bolts and hardware connectors to be certain they are in place and tightened.

Anchors – during normal weather trends, the unit will strain against the anchors under windy conditions. Anchor hardware connection to frame members should be maintained tight and depth of anchors should be checked to be certain they remain deeply and firmly set.

Snow Accumulation – all snow accumulation on the main cover should be removed as soon as practical. The most damage from snow weight can occur the days following a snowfall when the snow melts. Unit is not designed for any amount of accumulated snow or ice. Tap the main cover from the inside with a broom end to knock off any accumulated snow.

Main Cover Lacing – the poly rope that secures the main cover to the bottom rail of the frame assembly should be checked, and adjusted as needed. The tension on the main cover should be uniform from end to end and side to side. Rope ends must be tied off onto the frame members at the ends on each side.

Turnbuckle Adjustment – during normal wind conditions and load, the doors and main cover adjustment points at the turnbuckle should be checked and tightened as necessary. The turnbuckles should be neither completely extended nor taken up, so that turnbuckle should be tight when in the mid range of overall adjustment. If necessary, readjust rope tie off on turnbuckle as needed to tighten or loosen as needed.

Cleaning – cover and doors can be cleaned with a mixture of light detergent and water. A soft bristle brush with the mixture can be used to loosen any hard dirt, mold, or buildup on the cover. After cleansing, the cover should be rinsed thoroughly to avoid any chemical reaction from residual detergent. Allowing dirt and debris to sit on cover over an extended time will damage cover irreparably.

Severe Weather – in preparation for inclement weather, completely secure the doors on both ends of your Rhino Shelter building. Allowing wind to enter either end lifts the building and puts undue stress on the anchoring system. This also shortens the life of the doors, zippers, and main cover.



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CUSTOMER SERVICE & ASSISTANCE

Care and attention to a proper installation will add many years of life and function to your Rhino Shelter unit.

Please retain purchase documentation for your Rhino Shelter unit. All warranty claims must include purchase documentation for verification. All parts on your Rhino Shelter unit are available for replacement as needed. Protect your purchase by completing warranty registration card and mail/fax as soon as practical after installing your unit.

RV 14X42X15 INVENTORY CHART

Item Number	Part Number	Description	Quantity
1	CT-8006	Top Crest and Side Bend	33
2	RP-8007	Rafter Pole – swedged both ends	22
3	UP-8008	Upper Leg Pole	22
4	EUL-8002	Lower Leg Pole with Foot	8
5	EUL-8003	Lower Leg Pole plain end	14
6	CW-8005	Corner Wind Brace	4
7	ECR-8003	End Cross Rails – Plain Ends	7
8	SCR-8004	Cross Rail Pieces – swedged one end	63
9	EP-1001	End Plug 1”	14
10	EP-1003	End Plug 2-3/8”	8
11	CBN-7005-4	Carriage Bolt – 3/8”X 4”	77
12	CBN-7005-CW	Curve Washer – 3/8”	135
13	CBN-7005-3	Carriage Bolt – 3/8”X 2-7/8”	66
14	CBN-7005-W	Flat Washer- 3/8”	8
15	CBN-7005-N	Locknut 3/8”	143
16	TB-3004	Galvanized Turnbuckles	8
17	R-7003	3/16” Rope	2
18	DBA-3 000	Earth Cable Anchors	22
19	UB-3002	U Bolt w/ Nuts	22
20	DR-3001	36” Steel Drive Rod	1
21	**	Door Bottom Pipe 1” X 72” Plain End	2
22	**	Door Bottom Pipe 1” X 72” Swedged One End	1
23	**	Roller Pulley	4
24	**	Rope for Door ¼“ X 49’	2
25	**	Bolt ¼”X 1-3/8”	4
26	**	Self Tapping Screw ¼”X ½”	4
27	**	Tie Off Rope Cleat	2
28	MUC-8000	Main Cover	1
29	DZD-8000	End Panel Door – Double Zipper	2

** - Designates Parts in Roll Up Door Kit