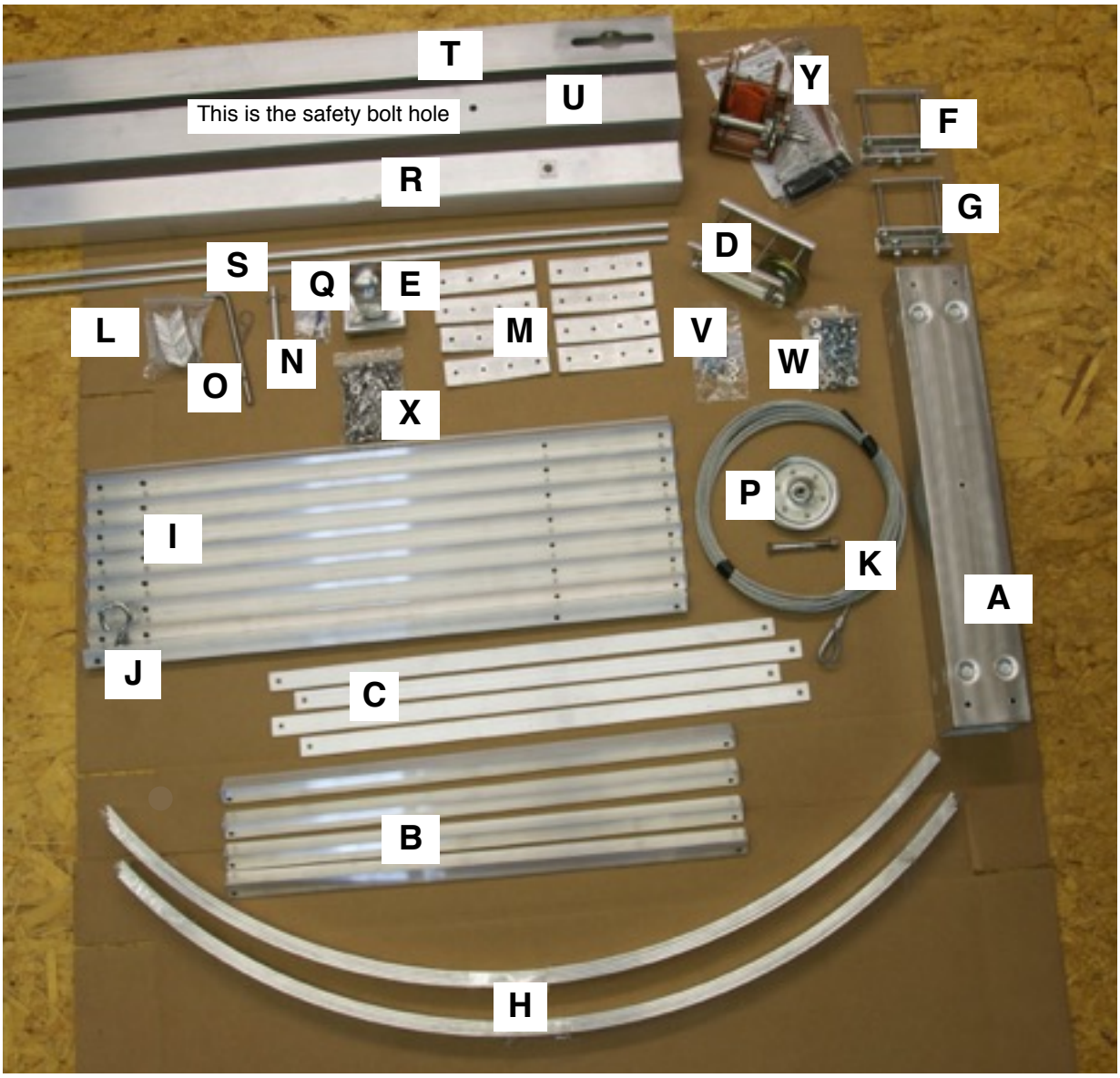
# Gemini Gourd Rack




Hub Box
A) Hub
B) 4 angle arms with a single hole at each end
C) 4 Flat bars with holes at each end
D) 3" Pulley Guide
E) Ball Top
F) Winch Bracket 3 bolt
G) Winch Bracket 4bolt
H) 8 ring sections
I) 7 Aluminum angle arms,
J) aluminum angle arm with eyebolt installed
K) 33, of ' 7 x 19 stainless cable
Y) Brake Winch

Hardware Bag:
L) 16 small "L" shaped brackets
M) 8 connector plates
N) Stop pin with hitch pin
O) Safety bolt with hitch pin
P) 4" pulley with bolt and lock nut
Q) Allen wrench with 4, 10-24 x 3/8" set screws
V) 4, 1/4-20 x 3/4 stainless bolt w/ 4 stainless nuts
W) 16, 5-16-18 x 3/4 stainless bolt t with stainless nuts
X) 48 1/4-20 x 3/4" stainless bolts with nuts

Pole Box:
R) Aluminum ground stake
S) Top perch rods
T) Top of Pole (has slot on one end and splice at opposite end)
U) Bottom of Pole (has a safety bolt hole 6' from ground up)

Generation 2 Instructions updated 11/16

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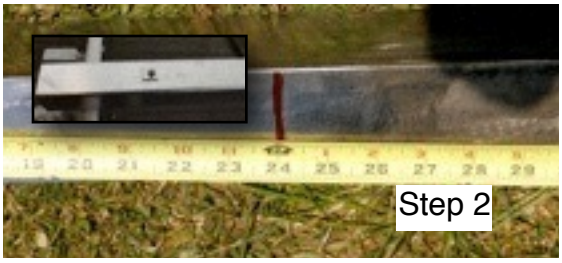
**The installation of a ground stake is as vital as the foundation of your home. Both need to be done correctly in order to support the housing.**

**Step 1)** Installing the Ground Stake (R). Using a post hole digger dig a hole with a minimum depth of 32-36" by 12" in diameter. *Poor soil conditions may warrant a larger hole and more concrete.*


**Step 2)** Measure and mark your ground stake at 24" from the top down. This will help keep your ground stake at the proper installed above ground height. Note, place the end with the stop bolted on into the ground.




**Step 3)** You will need at least 4 bags of Ready to Use Concrete Mix, 80 pounds each.


**Step 4)** Empty contents of the Ready Mix into an old wheel barrow. *Mix and handle the concrete according to the directions on the bag.*

**Step 5)** Place about 4 inches of gravel into the hole.


**Step 6)** Fill your newly dug hole with concrete, right up to the top of your hole.


**Step 7)** Holding your ground stake vertically over the cement insert your aluminum ground stake into the concrete by pushing downward and pulling upward in a firm and steady motion. Stop inserting the stake when your ground stakes 24 inch mark is level with the cement. Did you remember to place the end with the removable stop piece into the cement? Next fill the hollow tube with your left over cement. Compact the cement by using a piece of rebar inside the tube and bring it up and down, compacting the cement. Wipe off any cement from the exterior of the stake. Finish by sloping the concrete at the base of the stake. Check for level on two sides of the stake. Let your cement harden at least 2 days before you continue with the installation.


**Step 8)** Assemble the pole. Take your bottom section (U) and lay over an upturned 5 gallon bucket or similar object. Lay the top pole piece (T) next to it. Rotate the pole till you see 1 hole facing upward on the bottom piece; 6 feet up from the the bottom of the pole, and 2 holes facing upward on the top piece Insert the top piece into the bottom piece keeping the holes aligned. Lay pole back down on bucket, holes facing up.

**Step 9**) You need to insert all the bolts into the top, bottom and middle of hub. You will need your (16) 5/16 x 3/4" bolts and 16 stainless steel whiz nuts (W). Insert the bolt from the inside of the hub and thread the whiz nut on. Do not tighten. Do this to all 16 of the holes. Then using the 4, 1/4-20 x 3/4 hex flange bolt and 4 stainless

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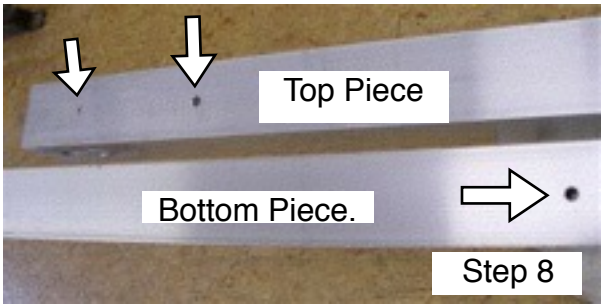
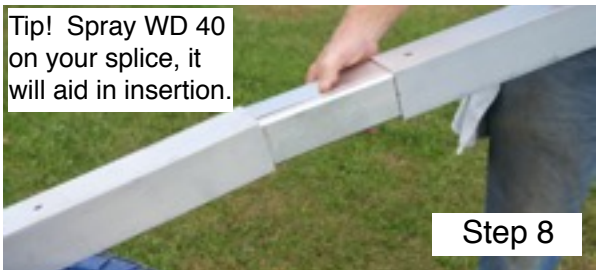
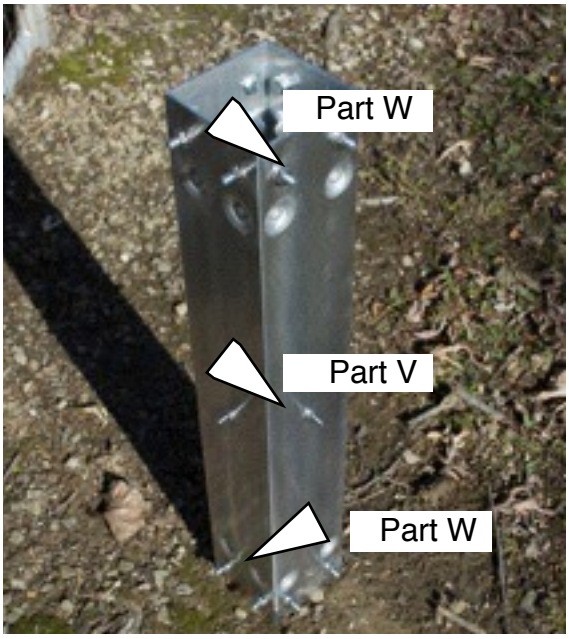


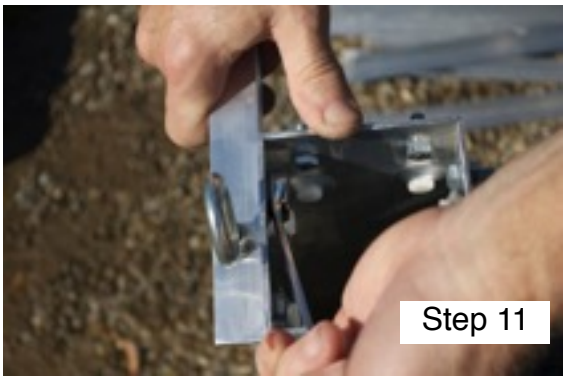


whiz nuts (V) Insert the bolt by inserting arm into the aluminum hub and push the bolt thru the hole in the center of the hub, one bolt for each of the 4 sides of the hub, and thread the whiz nut on so your bolt wont fall off. Do not tighten the nuts.




**Step 10)** Attaching the angle arm that has a the eyebolt assembled on it (J). Take your hub and remove one set of nuts from the bolts you placed at the top and bottom of hub. Note, it does not matter which set of bolts you choose to start at.

**Step 11)** Align the holes on the angle arm to the bolts, your eyebolt is facing upward and in the center of the 2 bolts. Replace the two nuts onto the bolts and lightly tighten. Using your small speed square make sure your angle is square to the hub and then tighten the nuts. It is best to tighten the bolt head.



**Step 12)** You will need to slide the hub with the one angle attached onto the pole. Rotate the pole till you have the side up that has the pulley slot facing you., then slide the hub, arm facing you onto the pole.

**Step 13)** You will need your 4" pulley, bolt and lock nut (P). Insert the pulley into the slot and

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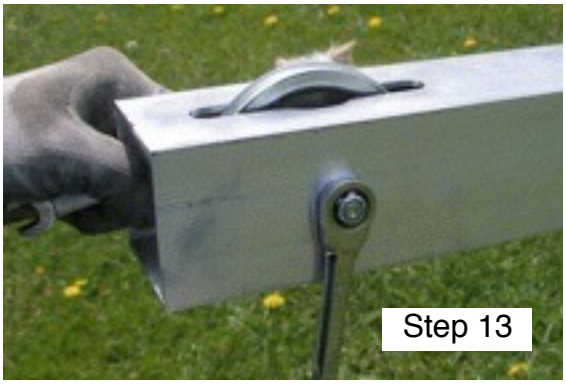
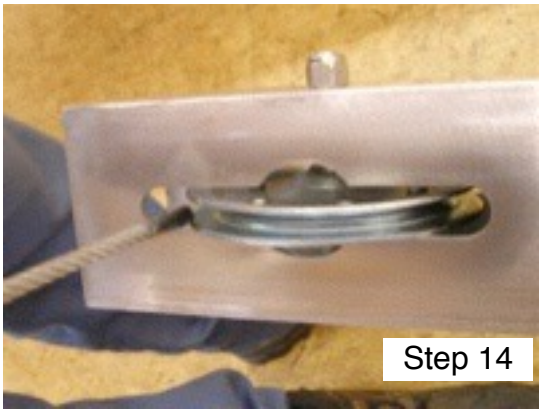
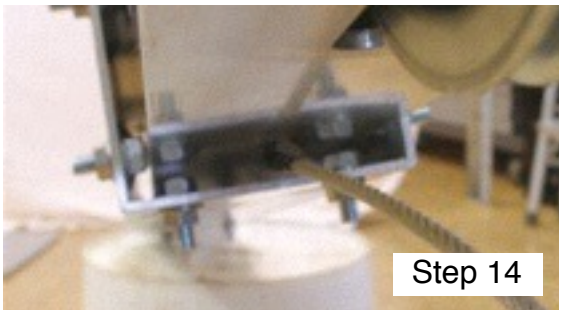
hold it there while you take the bolt and insert it the the hole on the pole, thru pulley and out the opposite hole on the opposite side of the pole. Place lock nut and tighten using 2, 9/16" wrenches (one to hold the bolt, the other to tighten)




**Step 14)** Slide your hub a few feet down the pole. get your cable. Undo any wrapping on the cable and straighten the cable out by laying it on the ground at walking it the 33 feet remove any kinks in the cable. Place the rounded end of the cable which has a thimble installed onto the open end of the eye bolt. Get the other end of cable with the stop nut and slip the cable above the pulley, still inside the slot. Flip the pole over. Take this cable end and slide it down the pole and in between the glide buttons of the hub. The cable MUST be between the glide buttons of the hub and the pole. Let the cable hang.



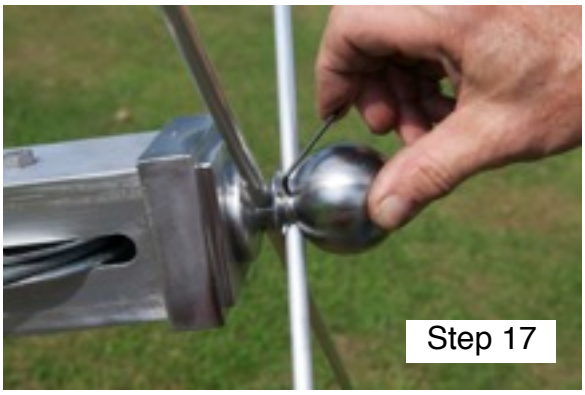

**Step 15)** Insert the stop pin (N). Remove 1 of the hitch pins from the pre assembled stop pin,




insert into the hole below the pulley, place other hitch pin in.

**Step 16)** Ball top (E) and top perch rods (S). Retrieve your 4 10-24 x 3/8" set screws (Q) and allen wrench. Use 2 of the set screws for the top perch rods. the other 2 for holding the ball top on the pole.

**Step 17)** Thread the set set screws into the drilled and tapped holes on the ball. Insert the lower top perch rod (S) first into the ball top. Find the center at 36" and tighten set screw. Repeat for the upper top perch




**Step 18)** Place the ball cap on the top of your pole. You may need to use a rubber mallet to gently tap the ball top so that it is fully seated onto the top of the pole. Insert the remaining set screws into the tapped holes on the square portion of the ball top and tighten to the pole using the provided allen wrench.

**Step 19)** With the assistance of a helper, you should slide the hub down the pole till it is about 3 1/2 to 4 feet from the ground up. Place a c clamp under the hub. Stand your pole up and with the assistance of your helper you will place the entire pole, with hub and 1 attached arm over the ground stake. The c clamp will hold the hub in place while you finish the assembly.

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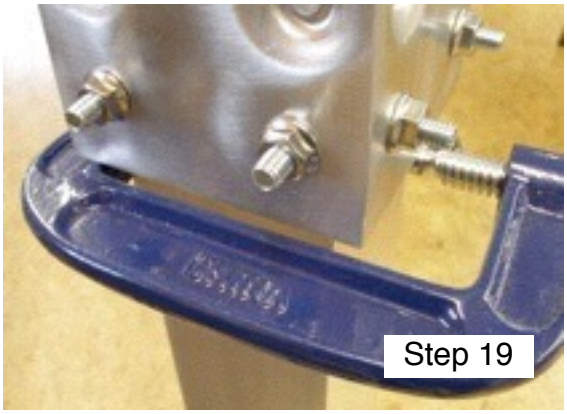
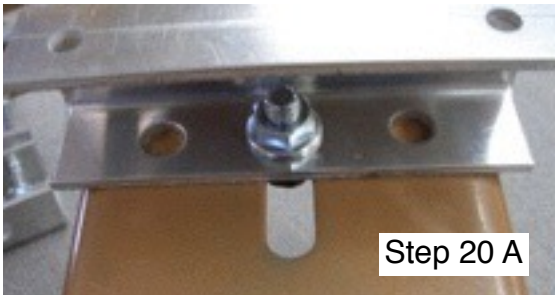
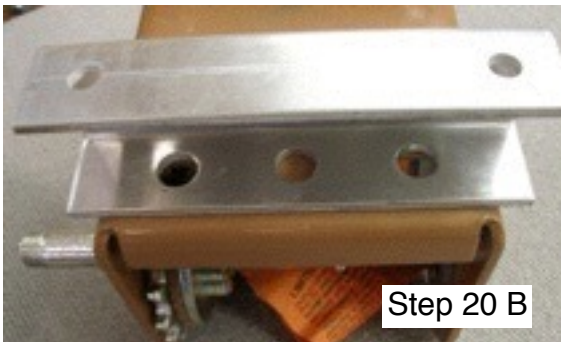
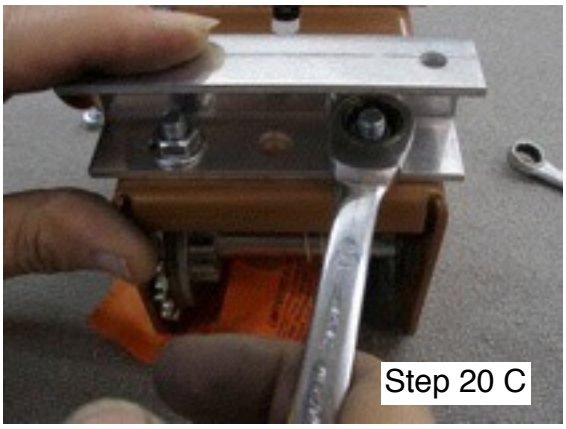


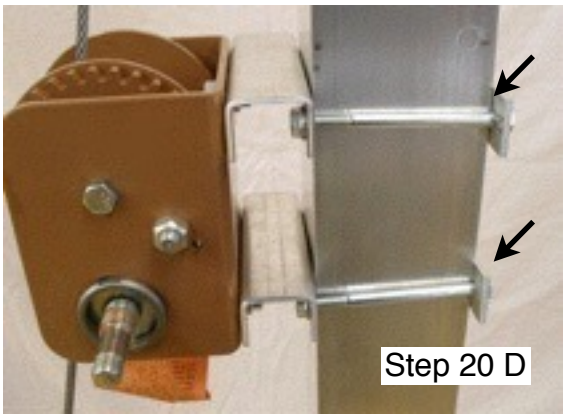

**Step 20)** Get your winch and the pre-assembled winch mounting hardware kits (F&G). Remove the bolt on the bracket (F) that is in the center hole and align the bracket to the inner hole on the winch. Insert the bolt from inside the winch and attach nut. Tighten the nut. Get your other bracket, (G) align the 2 outer holes of the winch bracket to the winch, insert bolts from inside the winch, and tighten nuts using your 1/2" wrench. See photos Step 20 A, B, and C. You want your brackets to have the open side face towards the ground as seen in the photos 20 D.



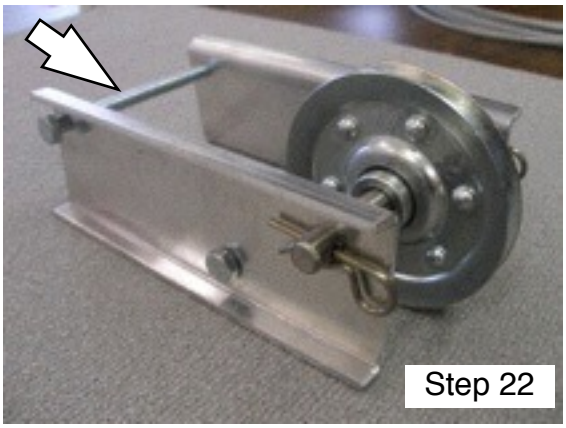

**Step 21)** Assembling the winch to the pole. Your winch bracket unit has a back plate pre assembled. Remove one whiz nut and bolt from the upper bracket and one from the lower bracket, same side. Have your helper hold the winch at your desired height (approximately 19-23" above ground) while you attach the back plates on the back side




of pole and tighten whiz nuts. See photo Step 20 D.

**Step 22)** Approximately 6 inches above the winch you will want to place the 3 inch pulley assembly (O). The 3 inch pulley assembly has been completely pre-assembled. Pull the entire assembly apart. It should look like the photo step 22.




Remove the bolt and nut from the bolt furthest from the pulley. Stand directly to the front of your mounted brake winch and slide this entire unit so that the brackets encase the pole. Replace the bolt and nut, make sure the bracket is square to

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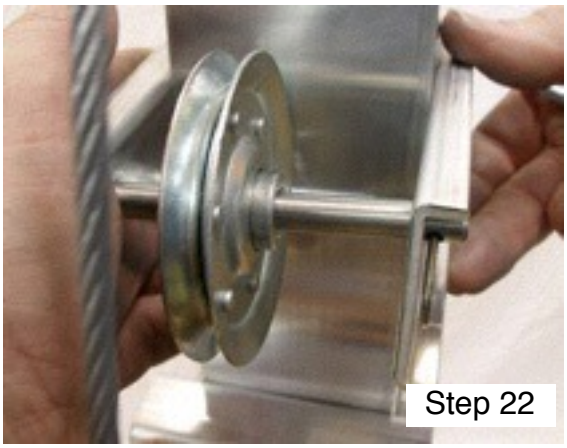




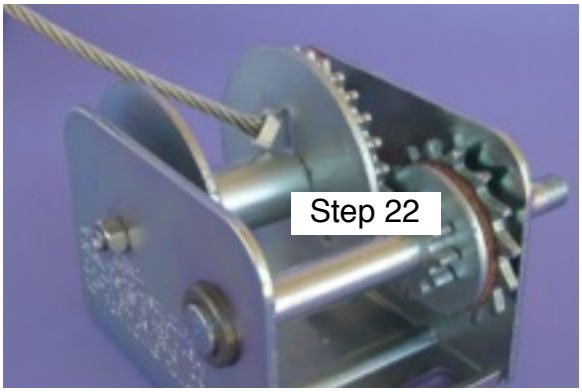


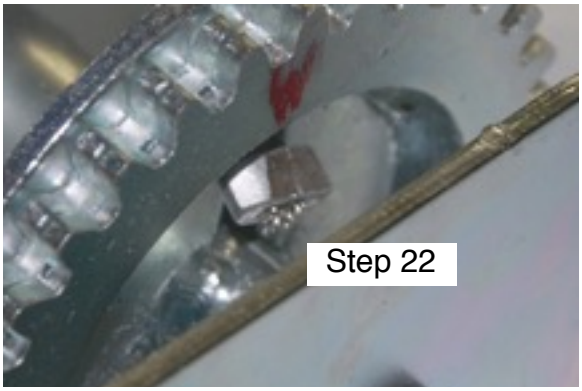


the pole and tighten the nuts. Find the end of your cable and run it so that it falls behind the 3" pulley and then drape the cable to the front of the brake winch. Its now time to attach the cable to the brake winch. We have installed a stop nut on to the end of the cable. Insert the end of the cable with the stop nut into the OVAL hole on the gear side of the brake winch. Insert the stop nut from the inside of the winch so that it goes thru the oval hole and out. Turn the cable so that the stop nut is horizontal to the hole and when you pull on it, it wont come back out thru the oval hole. Attach the handle of the winch following the instructions provided with the brake winch

Its time to finish the hub assembly. Raise your hub to a comfortable working height. You may need to pull down on the arm applying weight to the hub in order to meet the minimum weight load of the winch.

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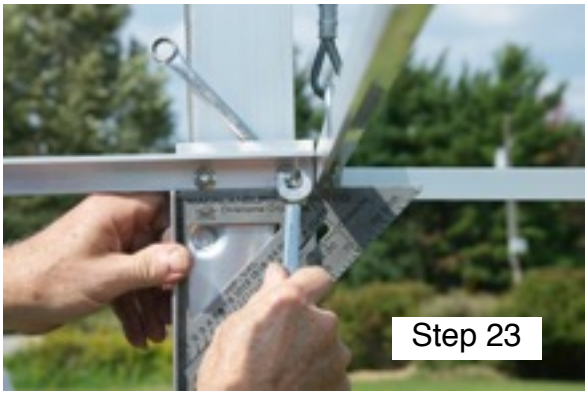
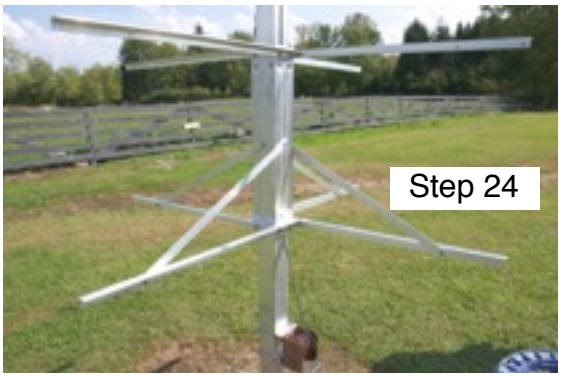
**Step 23)** Working clockwise from the arm that is already on the hub. Remove the next set of nuts attach angle arm (I) in the same manner you did in Step 11. Make sure each angle arm is square to hub before tightening bolts. Remember when tightening the bolts its best to place one wrench inside hub to keep the bolt from rotating. Finish the upper tier then do the lower tier of arms (I)

**Step 24)** You will need your 4 flat aluminum pieces (C). Remove the nut from the center bolt

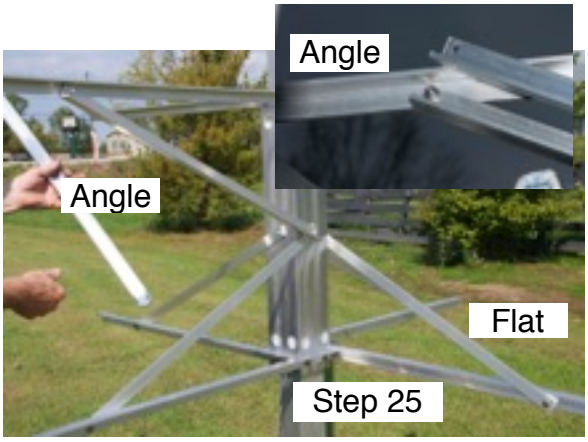



on your hub. Locate the hole on the ends of the flat piece. Install the flat piece on first, (doesn't matter which end) Place one end of the flat piece thru the center bolt found on one side of the hub and bring it down towards the angle aligning it to the flat side and the punched hole about 7" from the end of the angle arm. Insert a ¼ x 20 x ¾ bolt and add the nut. Do not tighten yet. Repeat for all 4 of the flat pieces. Note that the center bolt on the pole we have not replaced the nut back on, wait till you finish the next step.

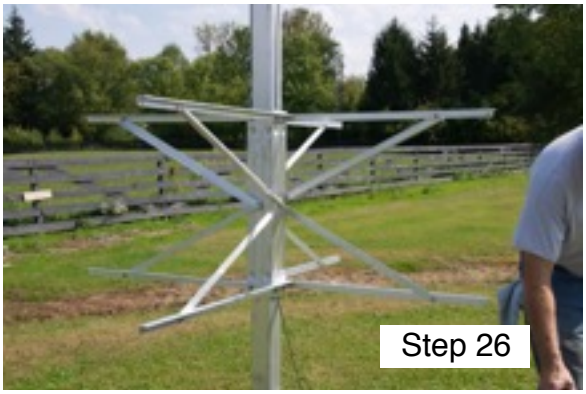
**Step 25)** Next we will use the 4 angle pieces that




have a hole punched at each end (B). We will be attaching this angle so that the corner of the angle is facing the ground. Match the hole on the end of the angle (B) with the hole on one of the upper ring support about 7" in from the end. Insert a ¼ - 20 x ¾ bolt add the nut. Place the opposite end on top of the flat bar that is being held in place by the bolt at the center of the hub. Repeat for all 4 angles.




**Step 26)** Tighten all nuts and bolts that you have used to this point.




**Step 27)** Attaching the rings. Place the small angle bracket pieces (L) on to the end of each of the 8 arms. You will need your brackets (L) and 4 1-4-20 bolts and nut (X). The small angle bracket pieces have no right or wrong way, so simply align the brackets so that one bracket goes left and one right and sandwich the bracket pieces around the end of the angle arm (where you still have an unused hole) Insert one of your bolts, being sure that you bolt is facing the same direction as the one that is used for the mitered arm. DO NOT TIGHTEN THE BOLTS. Repeat the process till you have all 8 arms done.

**Step 28)** Adding the ring. The rings have a right and wrong way (see photo). You want each of your 4 sections per ring to have the pre-punched hanging holes face toward the ground. Begin by getting 2 of your ring sections (H) and 4 of the connecting plates (M) and 16 1/4-20 bolts and nuts (X). On 2 of the ring section you will want to

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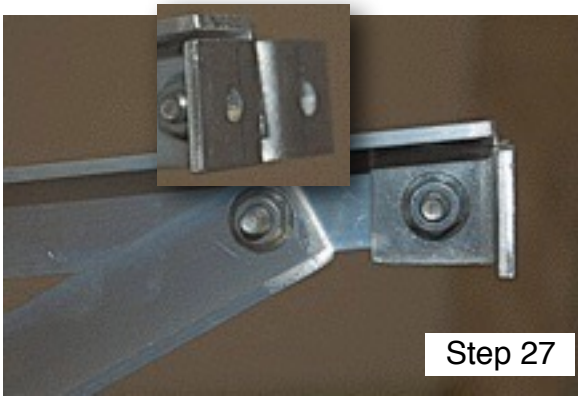
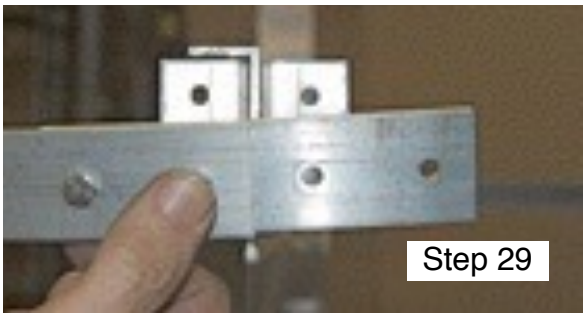



bolt the connecting plate on. Using one of your 1/4-20 x 3/4" bolt, (X) one of the connecting plate (M) and one whiz nut (X) you want to bolt the the connecting bracket on to the end of the ring section. Notice that your connecting plate has 4 holes in it. Align the connector so that the 2 sets of holes match the end of the ring section. Place the bolt into the inner hole of the ring section, with the connecting bracket to back side of the ring, place on a whiz nut. DO NOT TIGHTEN the bolts yet. You will want to repeat this process on both ends of the ring section you are working on as well as a second ring section.

**Step 29** It's time to mount the ring sections on to


the support arms. Using one of your rings you just added the connecting plate, hold the ring section up to the end of the angle arm which has the small brackets attached loosely to it. Hold up the ring section and align the the holes as seen in the photo step 29. Insert 1 bolt next to the bolt that holds the connecting plate on the ring thru the corresponding hole of the small angle brackets. Thread on the nut. Repeat the process on the other side of the ring section you just attached. DO NOT tighten the bolts just yet.




**Step 30** Go to the opposite side of the rack. Attach the other section of the ring that has the pre-assembled connecting plates. Assemble it onto the the angle arms in the exact same manner you just attached the first ring. Did you double check to make sure your ring sections pre punched holes are facing toward the ground? Next attach the last two ring sections. The rings will attach to the front of the connecting brackets. Align the holes from the ring to the connecting plates insert the bolts and thread on the nut (X) Remember not to tighten the bolts yet. Once all the ring sections have been attached its time to tighten ALL the bolts. Do this by tightening the bolts at the bolt head. Don't forget to tighten the bolts that hold the small angle pieces on too! When you have completed the upper ring repeat for the lower



ring.

**Step 31** Double check that all 48 of your bolts (X) are nice and tight. Adding gourds. This rack has holes pre-punched every two inches. Your Gemini Gourd rack includes Gourd Mounting Arms. Depending on the size of gourds you use you should be able to place a minimum of 12 gourds per ring. Please read the accompanying Gourd Mounting Arm instruction sheet on how to mount your gourds.

Thank you for purchasing this gourd rack. Should you have any questions about the assembly of this rack, please don't hesitate to call.

**Troyer's Birds' Paradise**

**814-587-2756**