

Building Amphibia

A guide to constructing the happiest place on the playa.



Surveying

To survey where Amphibia goes, start at the street, about in the middle of our allotted frontage and measure back 40 feet and pound a pin (rebar stake?) into the ground to mark the center of Amphibia. Get a rope or tape measure, hook it to the pin, and mark a large circle on the ground 26 feet from the pin. This will be roughly where the perimeter posts will go. To mark where the feet of the central tower go, use the setting triangle.

Assemble Steel Structure

Building Amphibia has a specific sequence. Some pre-assembly can also be done, too, to keep people busy.

Assemble and raise bottom of tower.

Bolt a white banana to a central hub section at the side connector plates **ONLY**. Do not bolt through the base of the banana yet. Use $\frac{1}{2}$ " bolts, nuts and lock washers. Attach feet to the bananas using 1" x 6" bolts.

Put together two pairs of banana assemblies by connecting the central hub sections. Leave the remaining banana assembly as it is.



Attach two guide ropes to the central hub sections opposite from the winch. Have people on these ropes make sure that we don't pull the assembly too far. Put a chain through the web of the central hub sections and attach the winch rope to the chain, not the structure. Winch up a pair of bananas and prop in place with one of the propping poles.

Do this again with the next pair of bananas and, with the 14-foot ladder in place at the center attach the hub sections together with $\frac{1}{2}$ " bolts. Now the structure should be stable without extra support.

Winch up the last banana and bolt in place. Make sure, especially with this single banana, to have guide ropes to keep it from falling to the side or toward the winch.

Assemble and attach roof trusses.

There are 15 roof trusses. Each one consists of two 12-foot long pieces that bolt together with 3/8 bolts. This could be done while the bottom of the tower is being assembled. Attach 10 of the roof trusses to the central hub using 3/4" bolts and nuts. Leave five spaces open approximately equidistant from each other around the hub. This is so we can attach, temporarily, the tripod we use to raise the upper tower. The end of the roof truss with the tube goes up and the end with a flat, slotted plate is on the downhill side. It works best to get someone set on top of the central hub with a rope to pull the upper end of the truss up for attachment.



Raise and attach the top of the tower.

Set the tripod up on the top of the central hub by attaching it where three roof trusses would go. Before raising the tripod, attach either a block and tackle or an electric hoist to the eye bolt at the top of the tripod. Make sure the rope or cable reaches the ground.

Put a chain through the web of the top of an orange banana about 6 feet down from the top. Hoist the banana, skinny end up, through the hole in the central hub and high enough so that a couple people on top of the ring can maneuver it into a slot on the central hub.

Bolt to the hub side plates and through the base of the banana all the way through the lower banana. Use 1/2 " bolts, lock washers, and nuts. Do this procedure five times, until all the upper bananas are attached.

Attach main guy cables to eyebolts at the top of the bananas. The rear banana gets two cables attached to it for a total of 6 cables.

Remove the tripod.

Raise and attach upper platform sections

Build at least part of the upper deck canopy structure so we have bars to hoist the platform sections from. These orange "bars" are lengths of 1 1/2" square tubing with flattened ends. They go between the bananas and attach at the top. Put a long 3/8" bolt up through the hole in the top of each banana so you can slide the bars over the bolt threads.

There are a couple of metal support brackets that attach to the outside of the orange bananas about 3 feet up from the ring. Attach them at the same height to two bananas and lay a 2 x 12 across the supports. This creates a place to stand while bolting the platform pieces on.

Attach a block and tackle or electric hoist to the center of one of the orange bars at the very top of the structure.

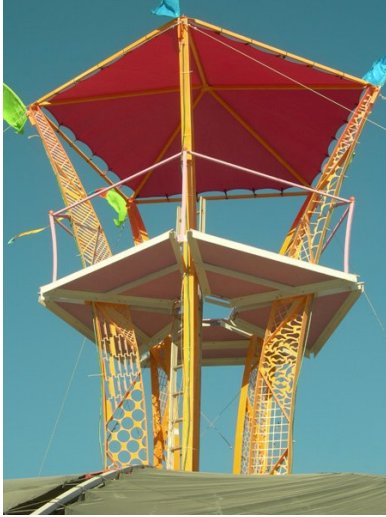


Hoist up each section. It will take two people up high to position the platform section and bolt it to the side of the bananas. The sections actually hook over the side bars on the bananas so you only have to balance them to position them.

Move the hoist and support brackets to raise each platform section to its place.

Once all sections are in place, mount the upper ladder support to the central hub ring. It hooks on to provide a place for the bottom of the ladder to the platform to rest.

Install upper ladder.



Build railing and upper canopy structure.

There are five pink triangular railing support plates that bolt onto a short section of angle iron attached to the outside of each of the orange bananas about 3 feet up from the upper platform. Attach these triangles to the bananas using 5/16" bolts and nuts.

Bolt the five guard rails to the outboard hole on the railing support plates. Overlap the ends of the rails and put a 5/16" bolt up through both railing ends and the support plate. There are some cool fluorescent pink balls that serve as the nuts. Work your way around until all five railings are attached.

Finish the upper canopy structure. There are five perimeter pieces, which should already be attached. There are five pieces that go from the bananas to the center of the roof of the upper deck. Haul up the 8-foot ladder to support all the pieces while you assemble them.

Build the Perimeter of the tent.

There are 15 posts, 15 horizontal beams and 15 three way connectors. The post goes into the bottom of the connector. The corresponding roof truss attaches to the top. The horizontals slide into the side openings on the connectors. Several of the elements are slotted to allow for adjustment of the perimeter. Don't tighten the set-bolts until all the perimeter pieces are installed. Then go around and tighten everything up.

Attach truss spreaders.

There are 15 sections of 1" tubing that connect the roof trusses at the middle of each truss. Slot the ends of the tubing over the threaded bolt mounted on each roof truss. Put a nut on each one but do not tighten it yet.

Wait until all of the spreaders have been attached before tightening all the nuts.

Install main guy cables.

For 4 of the bananas twist the long screw anchors into the ground in line with the center of Amphibia and 8 to 10 feet out from the perimeter of the tent. Once the screw anchor is in, attach the guy cable to a come-along and attach the other side of the come-along to the ring on the screw anchor.

For one of the bananas, there are two cables. Pull the cables to the side and attach them to screw anchors, too. This pair of cables will prevent the tower from twisting. The other cables prevent the tower from blowing over in a high wind.

Once all the cables are connected, tighten them evenly using the come-alongs.

Install perimeter anchors.

Pound a big nail through one of the holes in the base plate of each perimeter post to keep the bottom of the post from moving side-to-side.

Pound a rebar j-stake into the ground 5 feet out from each post and tie a rope from the perimeter connectors to the j-stake and tighten it up using trucker's knots.

Install stabilization cables on tower.

There are several short cables that create X's between the bananas both top and bottom. These cables stabilize the structure against twisting. Connect them through holes in the bananas using shackles and quick links. Tighten them using the turnbuckles. You don't need to use all of the cables. Just do enough to make the tower really rigid.

Yay! The structure is built! Celebrate and attach the flags.



Install the non-steel stuff

Attach five flags to the top of Amphibia. Slide the flags over 10-foot sections of ½ inch PVC and slide the PVC into the tubing receiver at the top of each banana. Hook a ball bungie through the grommet at the bottom of each flag and attach it to the banana somewhere. This prevents the wind from pulling a flag off its flexible pole.

Install the canopies.

The dome canopy is in five sections. Attach to the top chord of the roof trusses using ball bungies. Use as many ladders as possible to make this go fast.

The upper deck canopy is bright fuchsia and is one piece. Hook the central reinforced hole over the bolt at the top of the canopy support structure and bungie the sides to the perimeter.

Install side walls.

There are 13 8' x 10' white tarps that serve as walls. Attach them to the perimeter horizontals using ball bungies. Use regular bungies to attach the bottom corners of the tarps to the j-stake that secures the perimeter of the structure. Leave the front entrance open and leave another opening at the back of the tent.

Install inner shade parachute.

Find the center of the chute and wrap it around the central tower. Raise it up and attach the inner ring of the chute to the central hub of the structure or to the upper part of the roof trusses. Attach both sides of the slit in the parachute to the bottom chord on one of the roof trusses using ball bungs.

Using clamps, work around the underside of the structure clamping over the chute material and over the bottom chords of all the roof trusses. Use 5 to 6 evenly spaced clamps per truss.

Install floor tarps and carpeting.

The floor tarps go in first and can be nailed to the ground using 16p nails. Unroll the carpets over the tarps. Tarp the whole floor. There is not enough carpet to cover the whole floor so be creative with that.

Lighting.

There are five green rope lights that get attached to the outside of the orange bananas above the roof level. All the plugs on the lights must meet at the center hub.

Three are at least five white rope light strings that will run through the clamps that hold the shade parachute onto the bottom of the roof trusses. Make sure that all the plugs for these meet at the central hub. Zip tie or bungee two power strips to the central hub to plug in all the rope lights. Plug these power strips into another power strip that is also attached up there. Run an extension cord up one of the legs of the bottom part of the tower.

Power will be back behind the kitchen. Run a big extension cord from there, under the carpet and to the bottom of the tower and plug it all in.

Furnishings

You can figure out the furniture and decorations.



That's about it. Big, but not too terribly difficult. Have fun!

Royce