Spider Hill's Leering Skeleton

Please read all directions first!

Materials Needed:

1) Compact Prop Turner – SHPW item #CPT-2
1) Prop Power Kit – SHPW item #PPK-1
1) 5 foot poseable skeleton (mfg varies)
5 feet of ½ inch schedule 40 PVC pipe
4) 5ft x 5.5" dog ear fence pickets (Depot or Lowes)
Approx 20 feet of 1" x 3" lumber
¼ inch thick plywood (approx 2x3 feet)

Cut List:

A. **4) Box Uprights 1" x 3" x 20" long**
B. **4) Box Front/Rear Rails 1" x 3" x 16" long**
C. **4) Box Side Rails 1" x 3" x 12.5" long**
D. **2) Lid Frame Rails 1" x 3" x 15 7/8" long**
E. **1) Plywood Top Panel 16" x 14"**
F. **1) Plywood Bottom Panel 14" x 13"**
G. **12) Pickets cut to 20 5/8" long (ears removed)**

Questions? info@spiderhillpropworks.com

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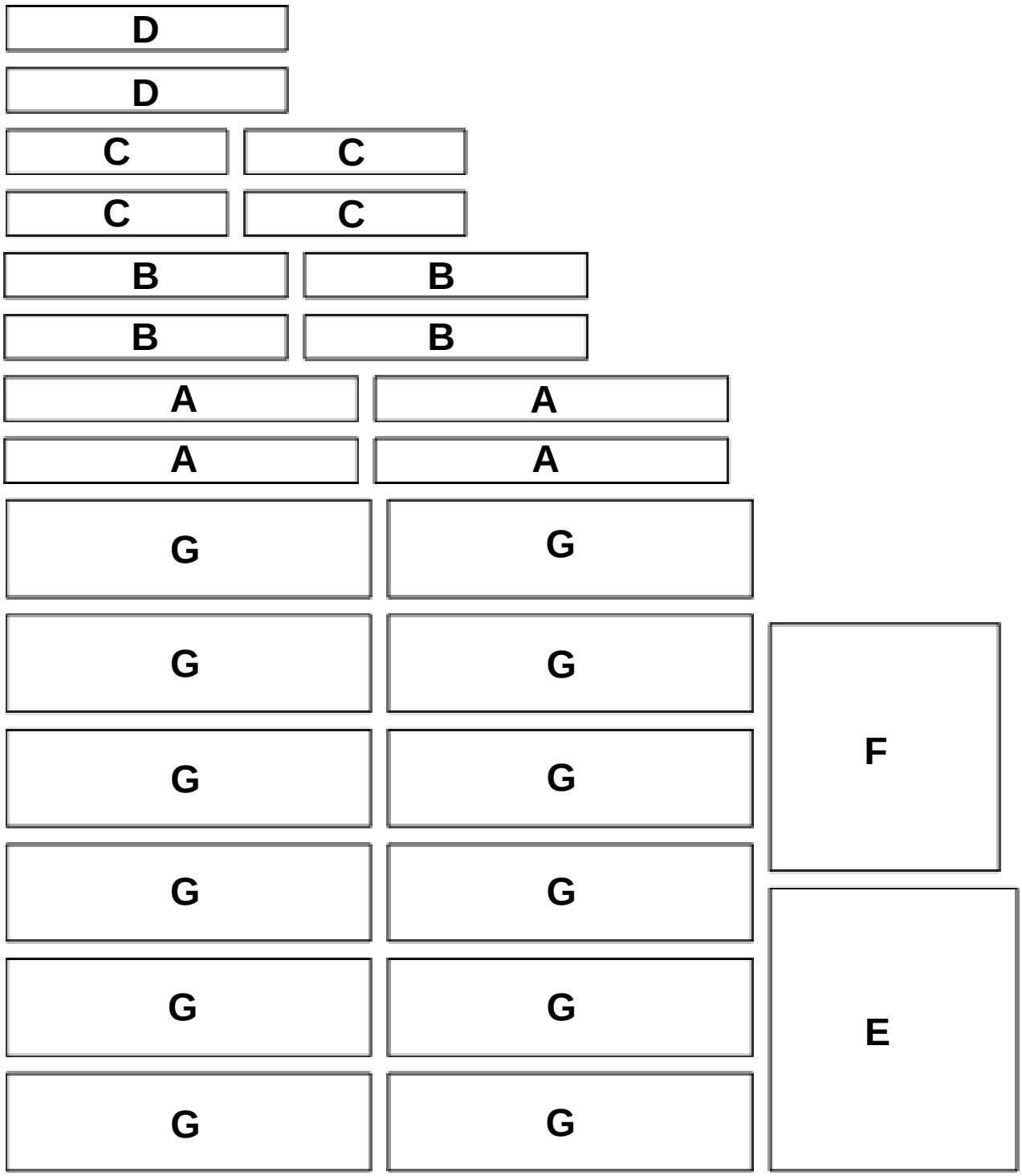
Box Parts:



BOX ASSEMBLY PART 1

Assemble the top and bottom box frames using (2) B and (2) C rails.

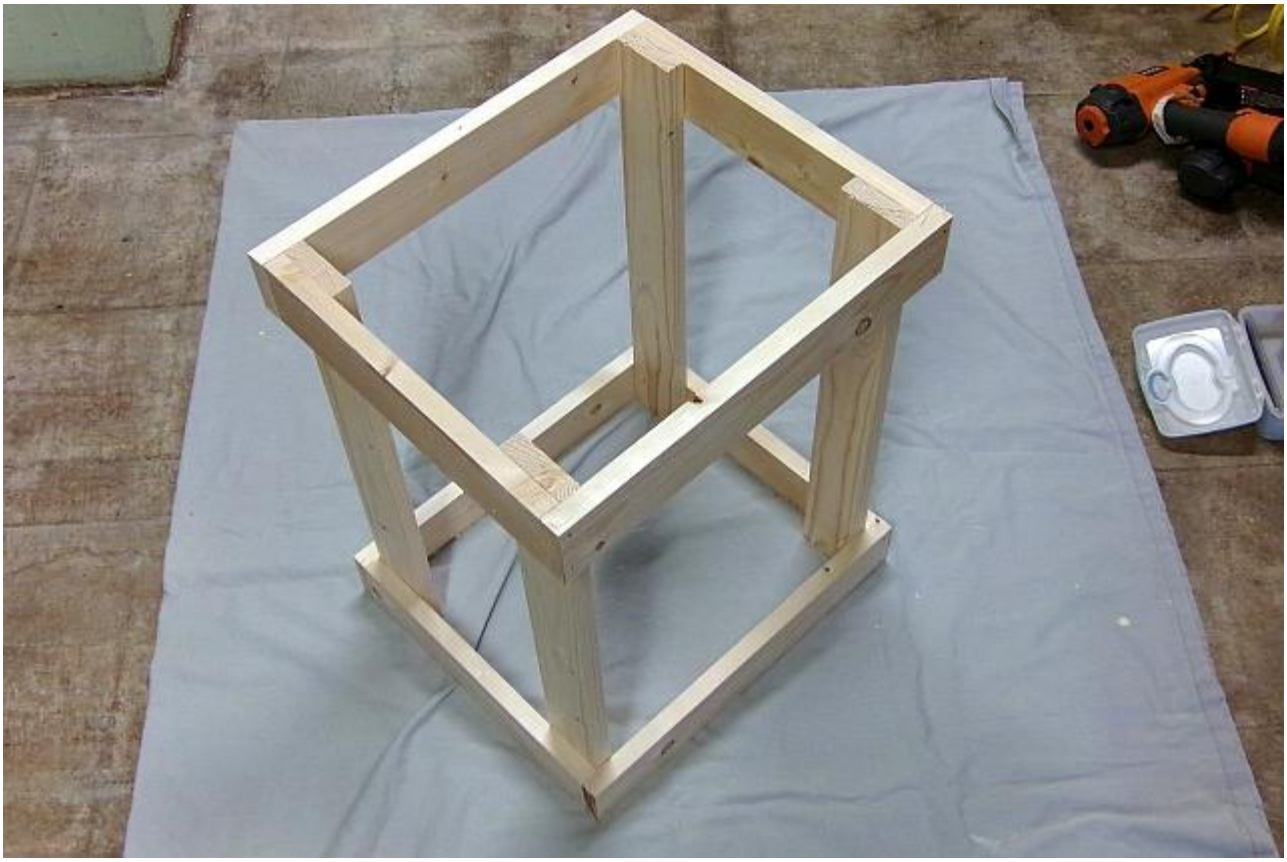
The frames should measure 14” x 16” on the outside.

Make sure your frames are square.

BOX ASSEMBLY PART 2

Assemble the frame using (4) box uprights (A).

The uprights (A) should be mounted on the inside of the upper and lower frame on the left and right sides. Overall height should be 20 inches.



BOX ASSEMBLY PART 3

Install the upper and lower panels (E and F)

The lower panel (F) should be running front to rear within the frame

Make sure your frames are square.

BOX ASSEMBLY PART 4

Install the box front pickets using G.

The pickets on the front of the box should extend far enough past the edges of the frame to cover the thickness of the pickets on the side of the box.

Start by installing the outer pickets first using full width pieces and then rip down the remaining pieces as needed to fill it in.

BOX ASSEMBLY PART 5

Install the box side pickets (G) .

The pickets on the side of the box should extend far enough past the edges of the frame to cover the thickness of the pickets on the rear of the box.

Start by installing the outer pickets first using full width pieces and then rip down the remaining pieces as needed to fill it in.

BOX ASSEMBLY PART 6

Assemble the rear panel using 2 lid frame rails (D) and 3 pickets (G).

The lid rails should be mounted 4 inches from the top and 4 inches from the bottom of the rear cover.

Rip down the pickets to width as needed. The overall width should be no wider than the rails.

BOX ASSEMBLY PART 7

Make a mark at the middle of the top panel on the rear of the box.

Measure 4 inches forward and make a mark.

Drill a 1 inch hole in the top panel for the PVC spine.

BOX ASSEMBLY PART 8

Place the CPT-2 inside the box as shown.

Place a piece of ½ inch PVC down through the hole in the top panel. Place it into the top of the mechanism.

Make sure the pipe is level front to back and side to side. Move the turner as needed. Once it is level, mark the mounting holes of the turner onto the bottom panel.

Mount the turner to the bottom panel.

SKELETON PREPARATION

We have built a few of these using various skeletons. I have found that Sunstar skeletons work very well for this project. I have had good luck with skeletons from Walgreens and Walmart. I have inspected Home Depot skeletons and while very sturdy, I have found that the internal construction of them will create a lot of extra work to get the skeleton ready to accept the PVC spine.

There are 3 parts of skeleton preparation for this project.

1) **Cutting your skeleton in half.**
2) **Prepping and mounting the lower section.**
3) **Prepping and mounting the upper half.**

CUTTING THE SKELETON IN HALF

We typically cut just above the first vertebrae .

Try to cut in an area where the top half is wider than the bottom (this helps hide the joint).

Use a file or abrasive cloth to clean both cut ends.

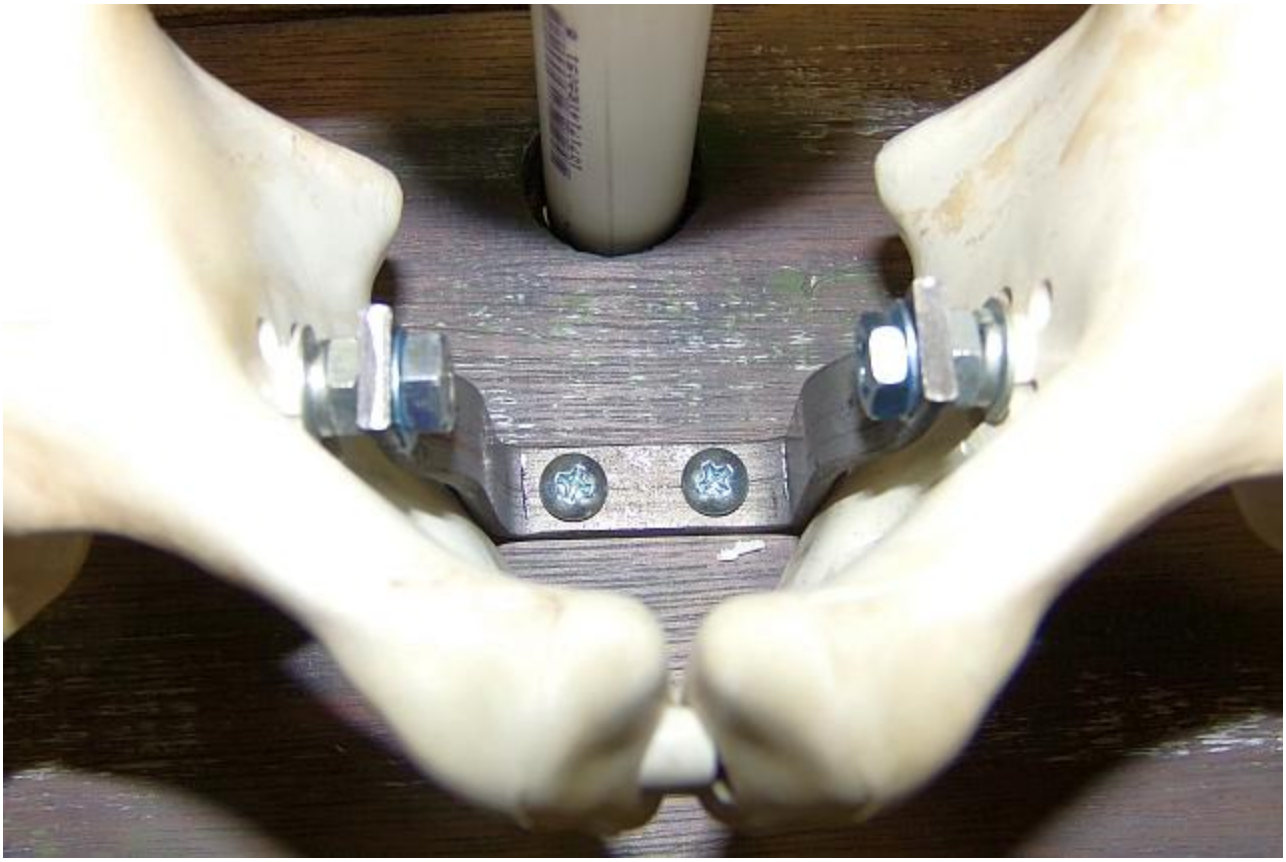
PREPPING AND MOUNTING THE LOWER SECTION

Place a length of PVC into the turner so it is sticking up through the box.

You will need to drill a hole large enough for the PVC to come up through the pelvis. You might also need to trim away additional plastic as needed depending on the skeleton.

Make sure the lower half can slide down over the spine and sit on the box naturally and that the spine has room to spin freely.

Mount the lower half of the skeleton to the box. If your skeleton has bolts in the hips, we have found making a bracket like the one shown is an easy and secure method that is easily hidden.



PREPPING AND MOUNTING THE UPPER HALF

This part will vary depending on the skeleton chosen. The goal is to be able to get the PVC spine as far up into the skeleton as possible to provide the most support.

Remove the length of PVC from the box as it will be fitted to the skeleton first and then the height will be trimmed later.

Every one of these skeletons I have encountered comes apart. Find and remove all of the screws that hold the front of the rib cage on and the ones that will allow you to split the spine.

Once you have gotten it dismantled, you'll have a better idea of what needs done. Starting at the bottom of the spine, remove any and all obstructions that are preventing the pipe from sliding up inside the spine. I have found that a Dremel, razor knife, and tin snips are helpful for this step. You want to get the pipe as far up the spine as you can including the neck if possible.

Once the path is cleared, you might find that the skeleton is bent (or you may want to add a bend.) We suggest using a heat gun to bend the skeleton spine and PVC as needed. Do not heat or bend any of the pipe below the spine! You want a straight run back into the box and turner.

When this has been completed, assemble your skeleton back together with the PVC spine inside it. Once you have that completed, we suggest adding a couple of screws going through the neck and spine into the PVC to keep it together and give it strength. Insert the screws from the rear.

PREPPING AND MOUNTING THE UPPER HALF

Now you are ready to start test fitting the skeleton to the box.

Take a measurement from the inside of the reducer fitting on the prop turner (where the pipe stops) to the top of the pelvis where it was cut. Add 3/4 inch to that measurement. Measure from the cut end of the upper half of the spine down the pipe and cut to the length measured above.

Place the top half onto the box making sure the spine is all the way down into the PVC reducer below. Observe and measure the space left between the 2 cut ends of the spine.

Trim the bottom of the spine until you get the 2 halves as close as possible without them touching. Rotate the upper half back and forth to make sure nothing is rubbing. Trim any high spots as needed until it turns smoothly.

Look at the position of the drive arm on the turner. It turns equally left to right so make sure it is centered and that the skeleton's upper half is in alignment. Plug in the turner and run it at a slow speed to make sure you have the skeleton positioned where you would like it and are happy with the movement.

Drill a small hole in the side of the mounting base on the turner. Make sure it goes through the reducer and spine. Place a screw into the hole to secure the assembly. Make sure it goes through all 3 pieces.

TESTING AND FINISHING

Plug the prop in and let it run. Make sure it moves smoothly and there is not any excessive rubbing or binding.

The rear cover can be attached using a couple of screws or Velcro.

If you are placing the speed controller and power supply inside the box, make sure the wiring cannot interfere .

We paint the exposed portion of the PVC spine, mounting brackets, and any exposed screws to match the skeleton so they blend in.

If you are going to have your skeleton holding a lantern, you may need to heat bend its fingers. I have also found the need to add bracing within the rib cage to support the additional weight.

We finish our crates in 3 layers. First we flash burn the outside of the pickets with a propane torch to give it color and depth. Second step is stain. It is applied in sections and then wiped off quickly so some of the natural color still shows through and then we finish it with some dry brushing with 3-4 additional colors.

QUESTIONS? INFO@SPIDERHILLPROPWORKS.COM

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