

# Industrial Line |

## Build Instructions—Task Light



### Component Requirements

- (3x) 1'x1'x3/4" Plywood Pieces
- (8x) #9x3" Construction Screws
- (2x) 36" X—Rail (<https://www.servocity.com/36-00-x-rail/>)
- (2x) Servo City Wheel Kit—B (<https://www.servocity.com/v-wheel-kit-b/>)
- (2x) 2—Hole Plates (<https://www.servocity.com/2-25-x-1-5-pattern-plate-2-hole/>)
- (1x) Pulley From Home Depot (<https://www.homedepot.com/p/Everbilt-2-in-Nickel-Plated-Fixed-Pulley-42994/205887785>)
- (1x) Lightbulb ST19 LED (<https://www.homedepot.com/p/EcoSmart-75-Watt-Equivalent-ST19-Antique-Edison-Dimmable->

## Clear-Glass-Filament-Vintage-Style-LED-Light-Bulb-Soft-White-2-Pack-FG-03367/311581560)

- (1x) Hanging Pendant Light Plug — In (<https://www.homedepot.com/p/Globe-Electric-1-Light-Vintage-Edison-Matte-Black-Plug-In-Mini-Pendant-60844/205441880?>)

\*Note that most of the components above can be replaced for equivalents but these are the components we used.

\*Note that you might need to cut the 1'x1'x3/4" pieces of wood, also note that if you choose to build the Industrial Line Sawhorse Table you can use the "extra scrap" for this.

## **Assembling the Main Base**

The main base of the lamp is essentially (3x) 1'x1'x3/4" pieces of plywood screwed together in a "C" shape. It's assembly is fairly straight forward.

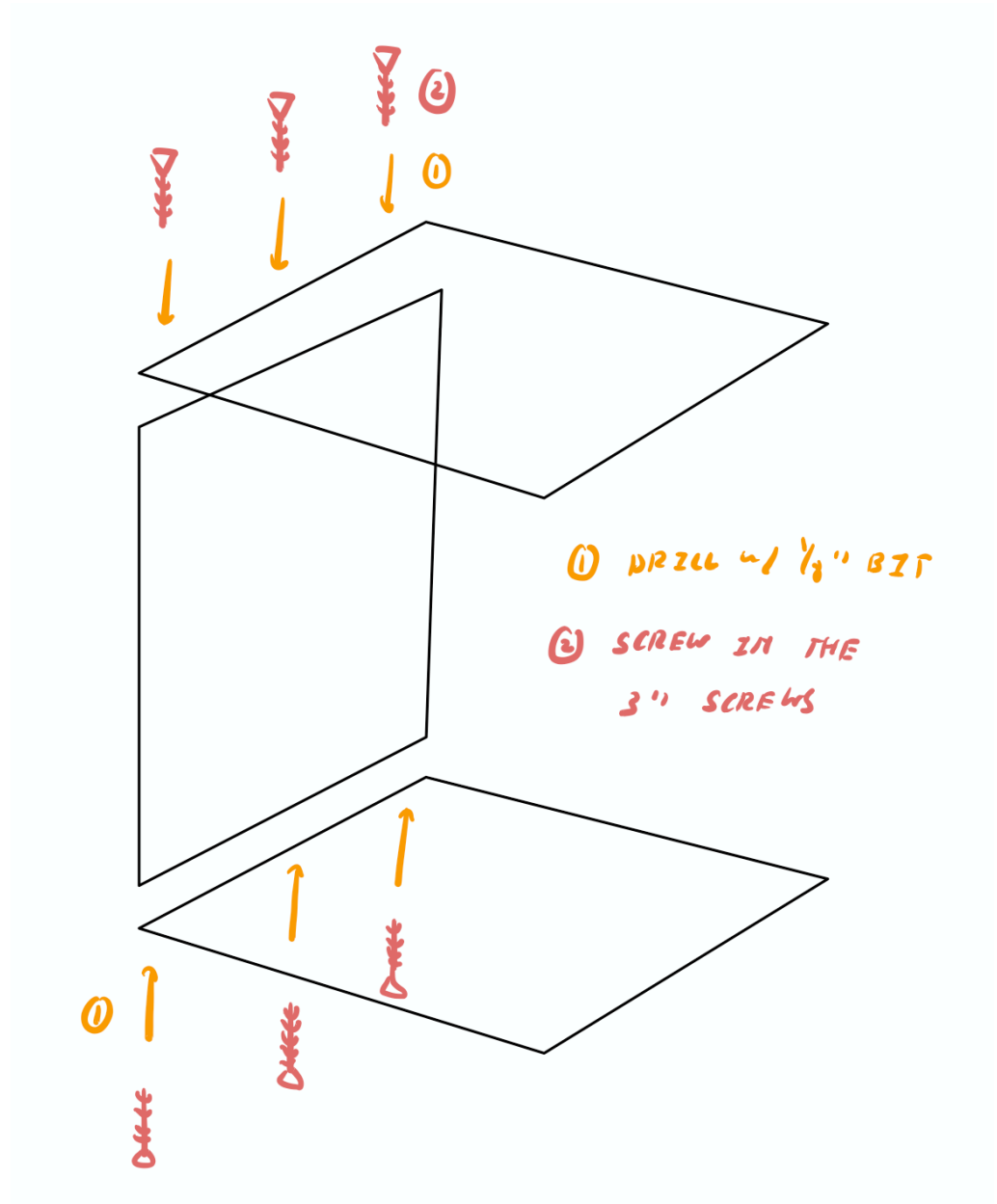


The steps to assemble this are simple, to form the "C" we will place the back panel in—between the top and the bottom panel:

- First, use a 1/8" drill—bit to drill (3x) equally spaced holes in the three panels (see the diagram on the next page).
- Ensure you drill slowly into the "thin" side of the back panel or you risk splitting the wood.

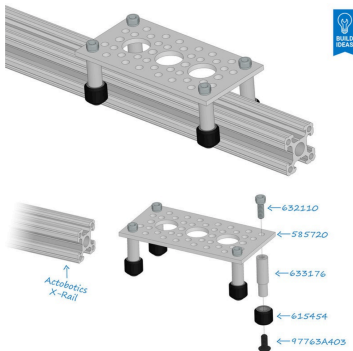
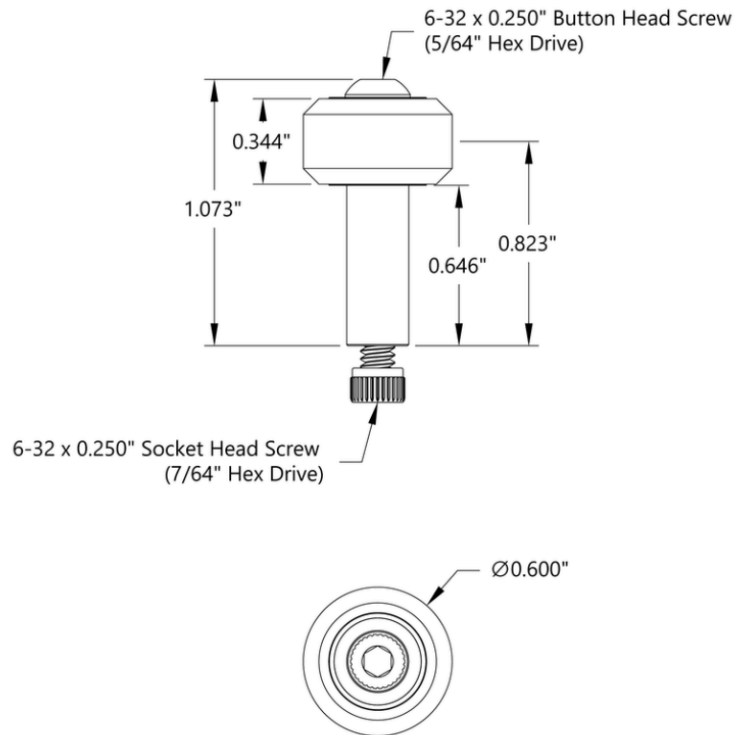


- Then use an impact driver to drive the screws into the assembly to hold the whole thing together.



## Assembling the Carriages

The next step is to put together the carriages from servo city. The first thing is to take the V-Wheel kit and assemble the system like below, the socket head screw on the bottom holds the V-Wheel assembly onto the actual double-hole plate.

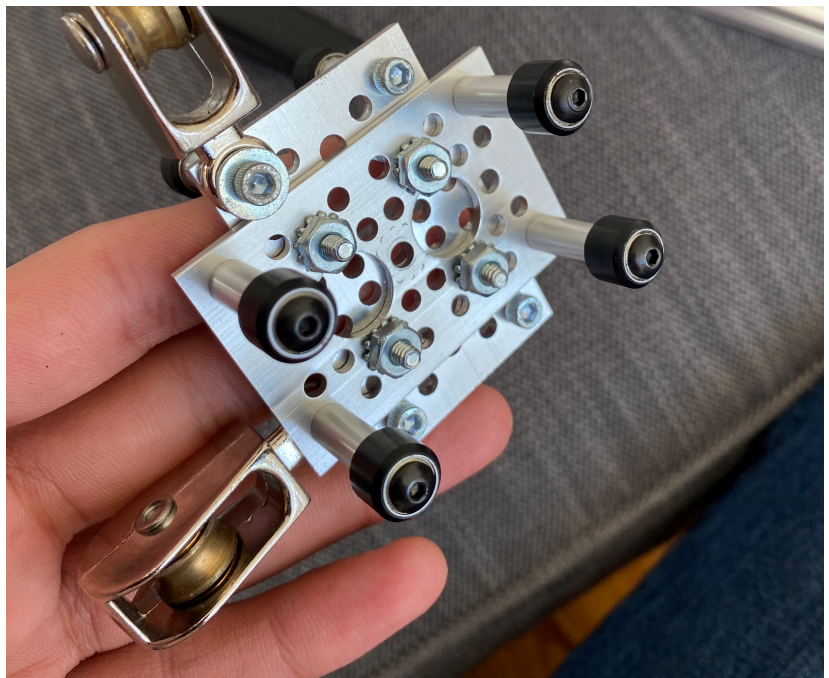
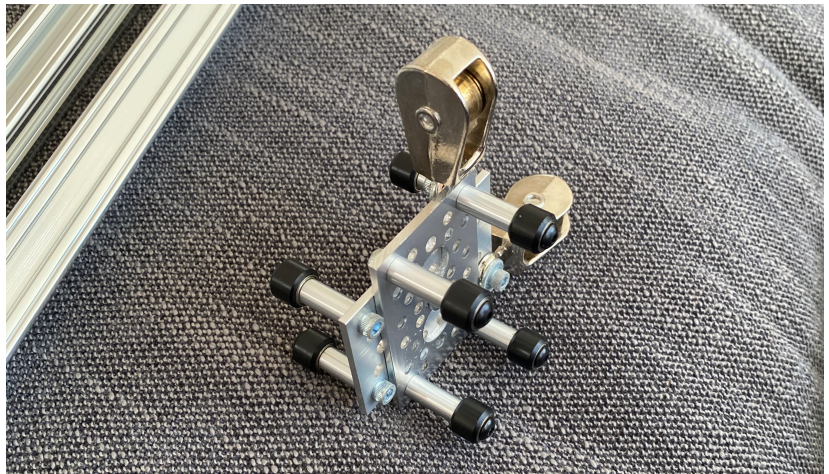
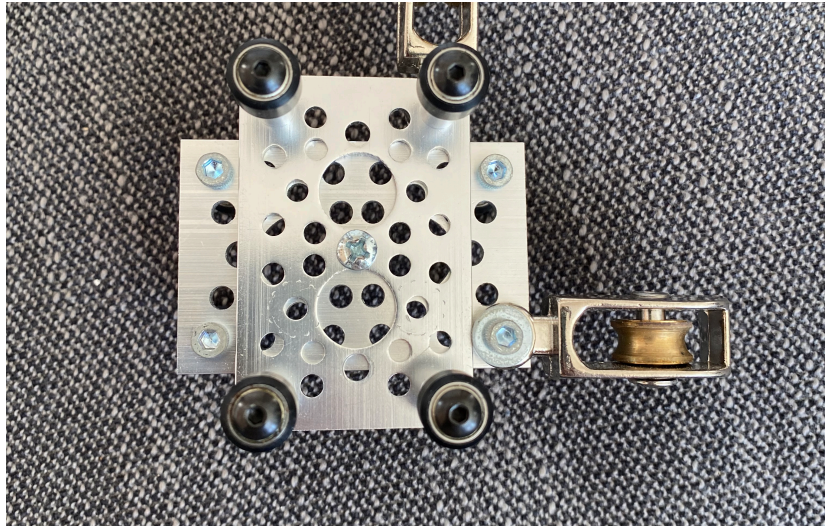


The finished assembly looks like the one to the left. Both the left and the above image come from Servo City itself. The next steps are below:

- On one of the carriages, between the socket head screw and the plate, mount the pulley as shown below.
- Then take the two plates and screw them together with some #6-32 screws and nuts.

See the assembly on the next page for images that will help you put together the carriage.

**\*Note that the below images have two pulleys on the carriage assembly, you only need one for this design.**





## Assembling the X—Rail

The next steps involve assembling the actual “+” frame that makes the system work. That involves the rigging and then mounting the vertical rail to the “C” frame.



**Step 1**—Take some string and tie it through one of the holes at the top of the frame. You can get the “end—cap” parts here: <https://www.servocity.com/replacement-end-plates-for-637211-cascading-x-rail-slide-kit/>

**Step 2**—Pass the rope through the pulley on the carriage. And then pull it back to the top of the X—Rail system.



**Step 3**—Use the “slots” in the top to wind the rope around and secure it. Don’t tie the rope so you can adjust the height of the lamp later.

The steps on the next page will be about mounting the vertical X—Rail to the actual “C” frame.





**Step 5**—Lie the “C” frame on it’s side and align the X-Rail against the frame. Ensure the side of the frame that has been aligned is the side opposite the “face” of the carriage. It’s not a bad idea to clamp this thing in place.

**Step 6**—Use a drill w/ a 1/8” drill bit to drill through the X—rail and into the “C” frame’s side. Make the holes 4” from the top and the bottom of the “C frame.

**Step 7**—Use the wood screws to secure the X—Rail to the “C” frame’s side.





## Final Assembly of the System

Right now we have something that looks like the image to the left. With the carriage on, we can slide the second rail onto the second carriage and come up with the finished “frame.” All that’s left is the lights.

**Step 9**—Take the “hook” included in the pendant light kit and screw it into the end of the X—Rail (our suggestion, you can use any method you want to attach the pendant light to the end of the horizontal rail).



**Step 10**—Pass the wire through the carriage and down along the vertical frame. Use velcro to hold the wire on, one velcro on the vertical frame, one velcro on the horizontal frame near the light (the second velcro can also be used to hold up the light). Make sure when you’re passing the wire it doesn’t interfere with the motion of the structure.

**Step 11**—Enjoy your new task light! Really, that’s it!





## Task Light—Reference Pictures

Use these pictures to help finish the final version. We left some “slack” in the cord so the light could easily slide in and out. For a video on the light and frame check out: <https://www.adim.io/post/my-version-of-the-lightcycle-lamp-fun-projects>. Also note we added a lazy—susan to our design but you don’t have to add one to yours.

