

# Scratchbuilding a 1/72 Scale B-4 Maintenance Stand

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Photo courtesy of Omega Aviation <http://omegaaviation.com/index.html>

The B-4 stand was a versatile and rugged tool that was developed back in the 50s for working on US Air Force aircraft. Many of these stands are still in use today. I built this stand as part of my B-52D Arc Light diorama. It was not a main objective so its construction and detail is not necessarily complete or totally accurate. However, I did make every effort to build the stand as close to scale as possible with the information I had.

If you find any errors in or have any suggestions concerning this document, please email me at [striker8241@yahoo.com](mailto:striker8241@yahoo.com).

## Terminology

Many of the descriptive terms used for the various parts in these instructions were assigned by me in the absence of finding the correct term.

## Measurements in this Document

I used metric measurements throughout this document because I find them much easier to work with. The following are the metric conversions I used for this scale:

25.4 mm = 1 in = 72 scale inches (sin) = 6 scale feet (sft)

4.2 mm = 1 scale foot (1 sft)

0.35 mm = 1 scale inch (1 sin)

All measurements are rounded to the nearest 0.5 mm

Drawings are not to scale except where noted.

## **Materials you will Need**

0.5 mm/.020 in. rod (Plastruct # 90851)  
0.9 mm/.035 in. rod (Plastruct # 90854)  
0.2-0.3 mm/.008-.012 in. sheet plastic (I used clear 0.25 mm/.010 in. PETG plastic sheet but thin card stock will also work)  
0.5 mm/.020 in. sheet plastic (Plastruct # 91102)  
1 mm round stock (you can use the 0.9 mm rod)  
1.5 mm round stock (sprue or commercial equivalent)  
2 mm round stock (sprue or commercial equivalent)  
strainer mesh (0.5 mm openings or smaller)  
0.5 mm/.020 in. diameter soft wire or equivalent material

## **Painting your B-4 Stand**

In the 60s, especially for stateside units, maintenance stands and ground equipment were almost always painted a bright yellow color (FS 13538) to make them more visible on the flightline. Here are some representative paints courtesy of TarnShip on the FSM forums  
[http://cs.finescale.com/fsm/modeling\\_subjects/f/19/t/147816.aspx](http://cs.finescale.com/fsm/modeling_subjects/f/19/t/147816.aspx)

1707 Gloss Yellow Enamel  
1708 Flat Insignia Yellow Enamel  
4683 Gloss Yellow Acrylic  
4721 Flat Insignia Yellow Acrylic

The hydraulic actuator and line, and the hand pump were usually a gray color when new or recently replaced but were eventually painted the same yellow as the stand. The rubber bumper around the bottom of the platform was normally black when new but frequently was painted the same yellow.

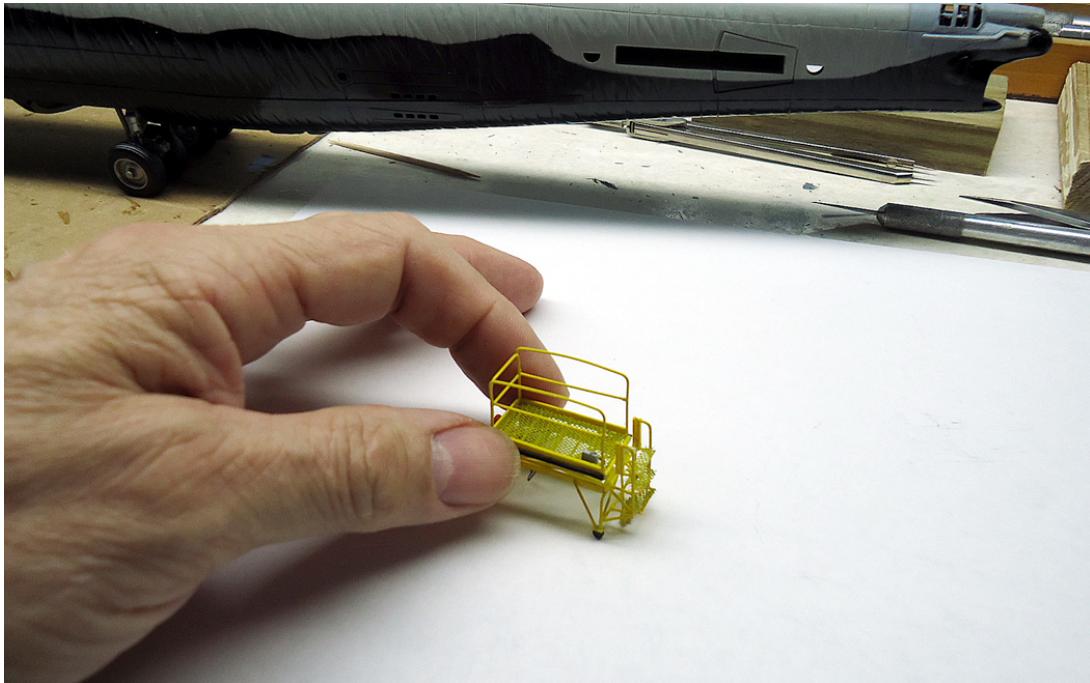
The tow ring was painted a red color, possibly FS 11120 (OSHA Red), but any safety-type red color, gloss or flat, will do.

## **List of Changes from Version 2**

- Minor grammatical and parenthetical changes.
- Added "Materials You Will Need" section.
- Added "Painting Your B-4 Stand" section.
- "Constructing the Platform and Base Frames" section, first sentence - Corrected .05 mm to 0.5 mm.
- "Attaching the Grid to the Platform Frame" section, Step 10 - Corrected .05 mm to 0.5 mm.
- "Constructing the Ladder Assembly, Building the Fourth Step Assembly" - Changed Step 4 to read " Paint the *rods and the mesh material* the color of the stand. If you choose not to support the mesh, go to Step 6."

## Description

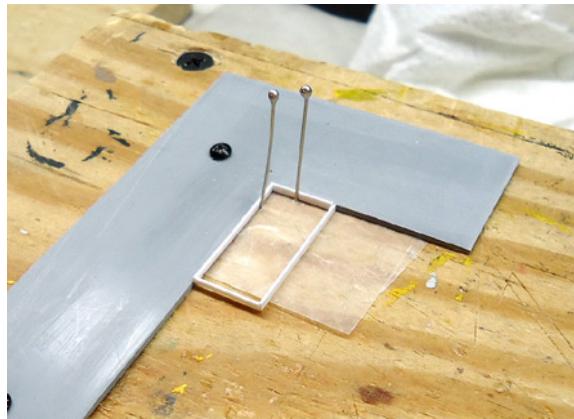
My B-4 stand model consists of three major assemblies: the Platform Assembly, the Lift Assembly, and the Base Assembly. The platform assembly provided the workspace for the technicians. The lift assembly provided the means to raise and lower the platform assembly. The base assembly provided a stable yet mobile support structure for the platform and lift assemblies.



## Constructing the Platform and Base Frames

Both the platform and the base assemblies are built around the same size frame, so we begin construction with the frames. Both frames are the same size rectangles, and are built from 0.55 mm styrene sheet cut into 1.5 mm strips.

- 1) Cut 4 end pieces 1.5 x 13 mm long and 4 side pieces 1.5 x 27 mm long to make two frames.
- 2) Assemble the two frames with the end pieces capping the side pieces. Be sure the corners are square. **NOTE:** I put a strip of waxed paper under my parts to keep the glue from sticking to the work surface.



## Building the Platform Assembly

The platform assembly consists of a frame, the platform grid, the hand rails, and a hand pump to raise the platform.

### Constructing the Platform

The actual surface where the technicians stood was an open metal grid. The open grid construction allowed rain and snow to drain away and provided a safe non-slip work surface. The actual grid had raised bumps that provided even better traction in icy conditions.

I replicated the grid (without the bumps) using a fine metal strainer that I bought at a local store. Look for the finest (smallest size) mesh available. Below is a picture of the type of strainer I bought.



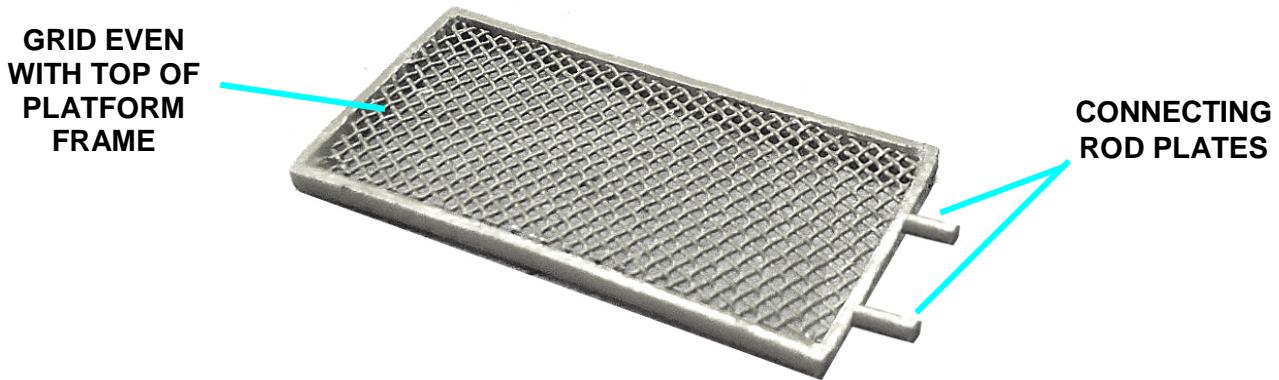
You will need a pair of tin snips or strong scissors to separate the mesh from the holder.

- 1) Cut the mesh away from the holder. **DO NOT** flatten the mesh hemisphere as this can dislodge or distort the individual metal threads. Cut out sections as you need them and then flatten them.
- 2) For the platform grid, cut out a square about 50 x 50 mm and carefully flatten it. Some of the strands on the ends or sides may come loose but that's ok.
- 3) At this point, I recommend you coat the mesh thinly with superglue or you can use a hard acrylic or enamel paint. This will keep the weave from coming apart when you cut it to its final shape.

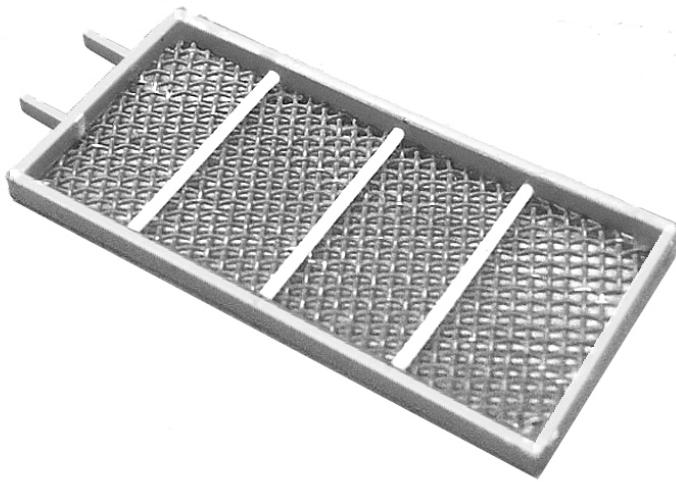
- 4) Be careful not to spray too much paint at one time or use too much glue to prevent clogging the openings in the mesh.

## Attaching the Grid to the Platform Frame

- 1) Once the grid material is thoroughly dry, lay it on a flat surface.
- 2) Place one of the frames on the mesh so the mesh pattern is at a 45 degree angle to the sides of the frame.
- 3) Carefully mark a fine line on the mesh along the inside of the frame, then cut out the grid.
- 4) Lay the frame on a flat surface and place the grid rectangle inside it. Be sure the grid is all the way to the bottom and as flat as possible.
- 5) Glue the grid to the inside of the frame. Use glue sparingly to avoid clogging the openings of the grid around the edges.
- 6) Allow the assembly to dry thoroughly. When you turn the frame over, the grid will be even with what is now the top of the platform, as shown below.



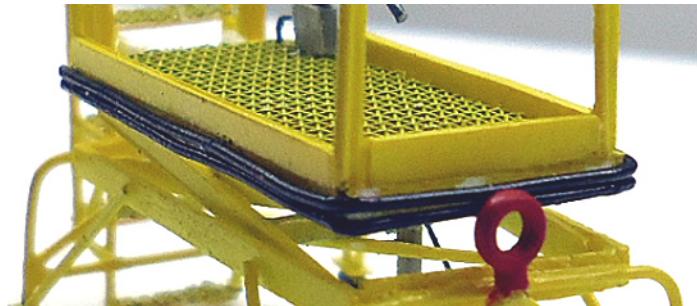
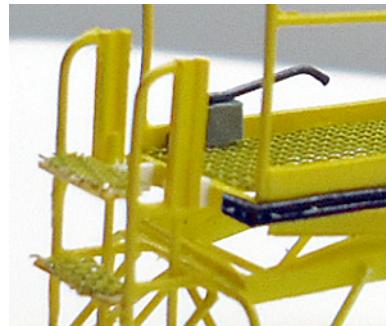
- 7) Locate the center point of one end of the platform frame and lightly mark a point 3 mm out on both sides.
- 8) Cut two pieces of 0.5 mm sheet stock to 1.5 x 3 mm in size for the connecting rod plates.
- 9) Glue the plates to the end of the frame where marked. The plates should be parallel with the sides of the frame.
- 10) The next step is to add some 0.5 mm grid supports. You can use round or square stock. I used Plastruct round rod #90851.
- 11) Cut 3 pieces 12 mm long.
- 12) Turn the frame over and position the three supports evenly across the bottom of the grid as shown below (about 6.5 mm spacing), then glue them to the sides of the frame.
- 13) Once the assembly is dry, it is ready for painting. **NOTE:** When painting the platform, use multiple passes of light spray to avoid clogging the gaps in the mesh.



## Attaching the Bumper

The B-series stands had a bumper that was basically two rubber tubes bonded together and wrapped around the platform frame to prevent damage to the aircraft. I used two pieces of 1 mm diameter copper wire (including insulation) painted black for my bumper. You could also use 0.5 mm plastic rod if you make the bends slowly so as not to break the plastic.

- 1) Turn the frame over so the grid is on the top.
- 2) Start at the end of the frame with the two connecting plates.
- 3) Glue the first piece to the top of the frame about 3 mm from the corner, as shown below  
**NOTE:** The models in the following examples are more complete than your model will be at this stage..

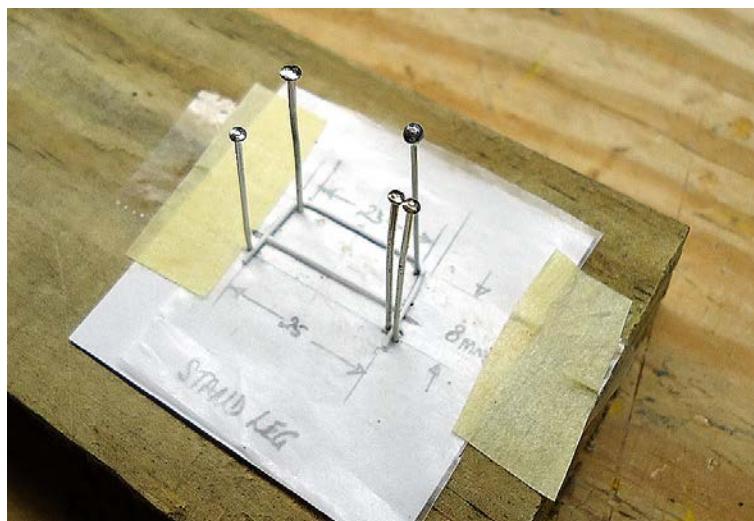


- 4) Hold the wire tightly against the frame as you bend it around the first corner, then tack it to the frame in several places on the side and end.

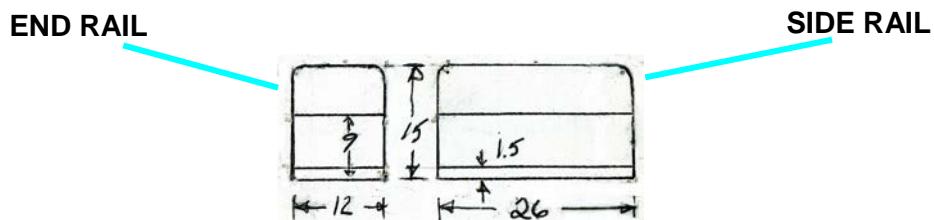
- 5) Bend the wire around the second corner and lay it tight against the opposite side.
- 6) Bend the wire around the end and cut it off about 3 mm from the side.
- 7) Glue the wire in place on the end then glue the wire to the frame along the sides.
- 8) Allow the glue to dry and then repeat the procedure for the second bumper. You may need to touch up the paint on the bumpers.

## Building and Attaching the Hand Rails

You will need to make a simple jig to form the hand rails. I used individual wooden blocks for each jig as shown in the sample below. I made the drawings to scale then attached them to the blocks with scotch tape. I then covered the drawings with a layer of wax paper to protect them from the glue.



You can make a forming jig for the side and end hand rails from the scale drawing below. Simply print out this page and cut out the drawing to make your jig.



- 1) When you're ready to begin construction, start with the side rails. These are made from 0.5 mm rod. You will need to make two of these.
- 2) Place pins at each of the bend points and along the sides of the rail to hold it straight.
- 3) Then cut a section of rod slightly longer than that required for the rail - about 60 mm.
- 4) Lay one end of the rod between the side rail pins so that the end protrudes beyond the bottom of the drawing at least 3-4 mm and carefully bend the rod around the first pin to form a right angle. You will need to bend the plastic tighter than the bend in the rail to force it to remain at a right angle. Go slowly and bend the plastic a little at a time to avoid breaking it. Place pins along the top to hold the rod straight.
- 5) Bend the rod around the second pin until it remains straight and hold it in place with pins on the outside.

- 6) Cut a piece of rod 26 mm long for the middle brace, then glue the brace in position as shown in the drawing.
- 7) Cut a piece of 1 mm styrene to 1.5 x 26 mm for the bottom piece and glue in place. **NOTE:** On the real stands, this bottom piece was welded to the platform with tubular receptacles at each end and the handrails were inserted into them. It was just easier to build this way.
- 8) Once the side rails are done, you need to build the end rail. Use the end rail jig to build the end rail.
- 9) Allow the rails to dry thoroughly and then paint them. Once the paint is dry, scrape some paint off the bottom of the rails and glue them to the platform, as shown below (**NOTE:** Your model will already have the platform grid installed and be painted).

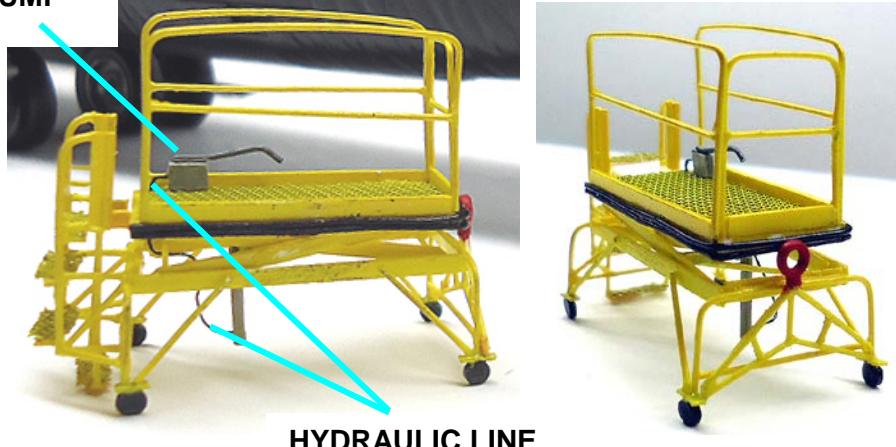


## Building the Hand Pump

The actual platform was raised by operating a small hydraulic hand pump that was mounted to the platform on the left side as you climbed the ladder. The pump consisted of a body and a handle, and was connected to the hydraulic actuator on the lift assembly by a hydraulic line.

Most pumps were gray or black in color when the stand was new or a new pump was installed but they usually got painted yellow when the stand was repainted. The handles were gray or silver depending on the type of tubing used. Again, they were often repainted yellow. I painted my pump assembly gray so it stands out better.

**HAND PUMP**



**HYDRAULIC LINE**

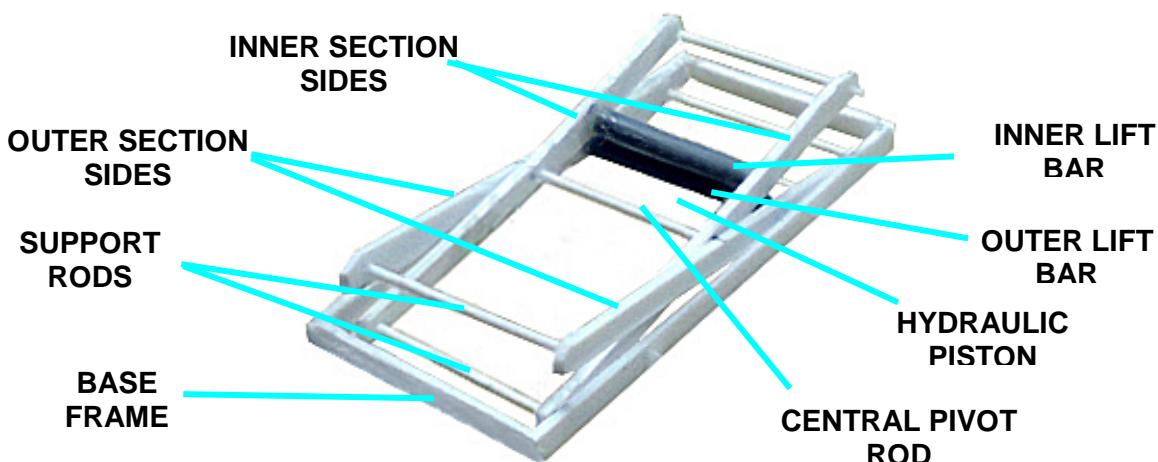
- 1) To make the pump body, cut a 1 mm thick piece of sheet styrene into a 2 x 3 mm rectangle.
- 2) Make the handle from a 0.5 mm piece of styrene rod 8-9 mm long. The actual handles were made from metal tubing and were sometimes straight or bent as shown - either shape is ok.
- 3) Glue one end of the handle to a long side of the pump body and paint as desired.
- 4) For the hydraulic line, I used a single strand from a piece of 22-gauge stranded copper wire. Cut your line about 15 mm long and make a small right angle bend in one end.
- 5) Trim the bent section to about 2 mm long.
- 6) Paint the wire black or dark gray.
- 7) Drill a small hole in the end of the pump opposite the long handle and insert and glue the bent section to the pump.
- 8) Thread the other end of the line down through the platform grid as shown above and glue the pump to the platform.

This completes the construction of the platform assembly. The other end of the hydraulic line will be connected during final assembly of the stand.

## Building the Lift Assembly

The lift assembly is a scissors mechanism and is one of the most inaccurate parts of the model. Most of the pictures I could find were at extreme angles and it was very difficult to get accurate measurements. I finally left off several braces because it was just too difficult to determine how they were attached.

The scissors mechanism consists of two sections that I'll call "inner" and "outer". The inner section fits within the outer section and the whole mechanism is attached to the base frame, as shown below. A hydraulic cylinder is attached to the outer lift bar and its piston is attached to the inner lift bar.



On a real B-4 stand, the upper end of the inner section and the lower end of the outer section are pinned at the ladder end of the stand. The upper end of the outer section and the lower end of the inner section ride in slots in the platform and base frames. The two scissor sections are tied together by the central pivot rod in the middle. When the hand pump is operated, the hydraulic piston forces the two lift bars apart (the lever) and the upper ends of the two sections are forced toward each other by the pivot bar (the fulcrum) which raises the platform. A small hand-operated valve on the pump body could be turned to release pressure and lower the platform.

The scissors mechanism in my model is not functional and must be glued into position once the amount of extension is determined



Photo courtesy of Omega Aviation <http://omegaaviation.com/index.html>

## Constructing the Scissors Mechanism

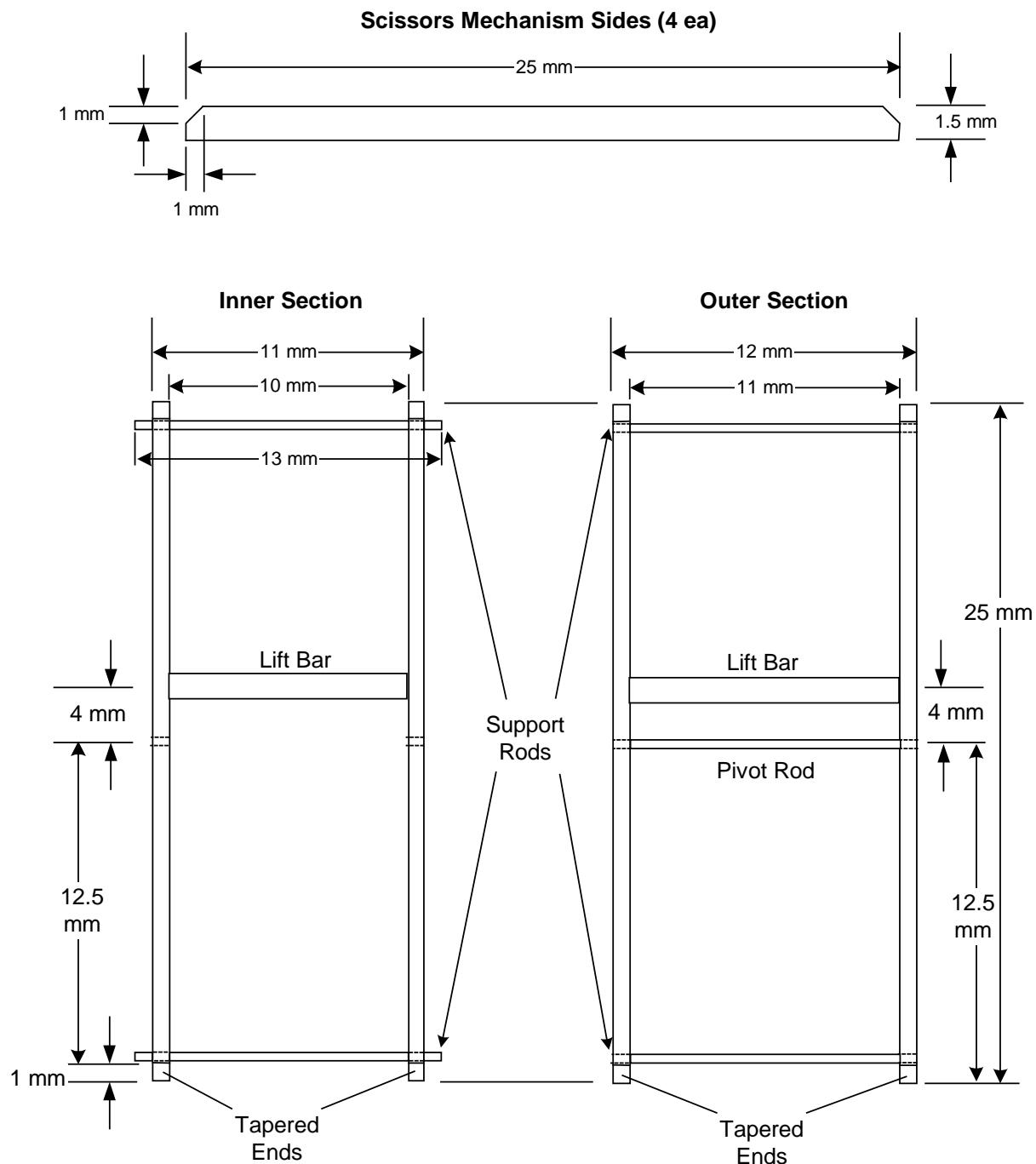
At this point, you need to determine how high you want the platform to be above ground. This height needs to be measured to the top of the platform frame. Once you have this measurement, you can determine the maximum extension of the lift mechanism. Keep in mind the platform will only extend about 15-20 mm, so the maximum height above ground is about 32 mm. I have not built a model fully extended so I don't know how well the design will work.

The height of the base frame will be about 12 mm above the ground so subtract 12 mm from the desired height of the platform. This will give you the separation between the platform frame and the base frame, which will determine how far the lift mechanism needs to be extended.

Record this measurement. You will use it when you assemble the scissors mechanism.

The drawing below provides the dimensions for the scissors mechanism.

Cut out 4 sides using 1.5 mm styrene sheet or strips. Taper the tops of all four ends as illustrated.



## **Inner Section**

- 1) Using 0.5 mm rod, cut two support rods 13 mm long.
- 2) Drill holes for the support rods just inside of the tapered sections at the ends of the side pieces, as shown above.
- 3) Insert the support rods, leaving 1 mm extending past each side on all four corners.
- 4) Glue the support rods to the side pieces.
- 5) Mark the center points of the two sides (12.5 mm from the ends).
- 6) Drill holes in both sides at the center points to accept a 0.5 mm rod.
- 7) Measure 4 mm from the center points in the same direction on both sides and make a mark for the inner lift bar.
- 8) Construct the lift bar using 2 mm diameter round stock (I used sprue again) cut to 10 mm in length.
- 9) Glue the inner lift bar to the sides at the 4 mm marks.

## **Outer Section**

- 1) Using 0.5 mm rod, cut two support rods 12 mm long.
- 2) Drill holes for the support rods just inside of the tapered sections at the ends of the side pieces, as shown above.
- 3) Glue the support rods to the side pieces.
- 4) Mark the center points of the two sides (12.5 mm from the ends).
- 5) Measure 4 mm from these center points in the same direction on both sides and make a mark for the outer lift bar.
- 6) Construct the lift bar using 2 mm diameter round stock cut to 11 mm in length.
- 7) Glue the outer lift bar to the sides at the 4 mm mark.
- 8) Cut a 12 mm piece of 0.5 mm rod for the pivot bar.

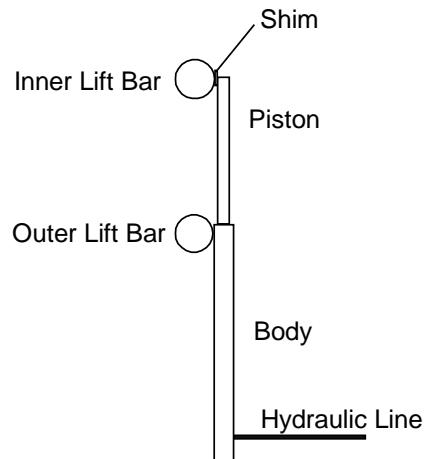
## **Assembling the Scissors Mechanism**

- 1) With the tapered ends of both sections facing up, insert the inner section through the outer section to form an "X" and line up the center holes.
- 2) Insert the pivot rod through both the inner and outer sections. Make sure no part of the pivot rod extends beyond the outer section on either side.
- 3) Lay the assembly on its side with the tapered ends pointing away from you and the lift bars to the right of center.
- 4) Select the left ends of the two sections and gently pull them apart until the separation between the ends equals the measurement you recorded earlier based on your desired height of the platform.
- 5) Verify the separation is the same for the right ends of the sections.
- 6) Glue the two sections together at the center points.

- When thoroughly dry, paint the scissors mechanism.

## Building and Attaching the Hydraulic Actuator

The body of the hydraulic actuator is a cylinder that attaches to the outer lift bar while its piston attaches to the inner lift bar, as shown below.



- Make the actuator body from 1.5 mm diameter round stock and cut it to a length of 8 mm.
- Drill a hole about 1 mm from one end the actuator to accept the hydraulic line you attached to the hand pump during the building of the platform assembly (you will not attach the line yet).
- The piston is made from 1 mm round stock. Determine its length by measuring the separation between the inner and outer lift bars then cut a piece to the measured length.
- If you plan to spray paint the actuator parts, do so now. The actuator body was gray or black when new but usually ended up painted yellow with the rest of the stand. The piston should be painted a silver color.
- When dry, attach the actuator body to the outer lift bar as shown above on the side toward the pivot bar.
- Measure the distance from the top of the actuator body to the outside curve of the inner lift bar.
- Fashion the hydraulic piston from 1 mm diameter round stock and cut it to the length determined in Step 6.
- Glue the piston between the actuator body and the inner lift bar. **NOTE:** You may need to add a small shim between the piston and the inner lift bar to keep the piston straight relative to the actuator body.

**NOTE:** The hydraulic line will be attached to the actuator during final assembly.

This completes construction of the lift assembly.

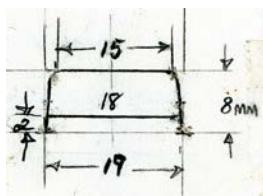
# Building the Base Assembly

The base assembly consists of the base frame, two leg assemblies, the ladder assembly and the tow bar assembly.

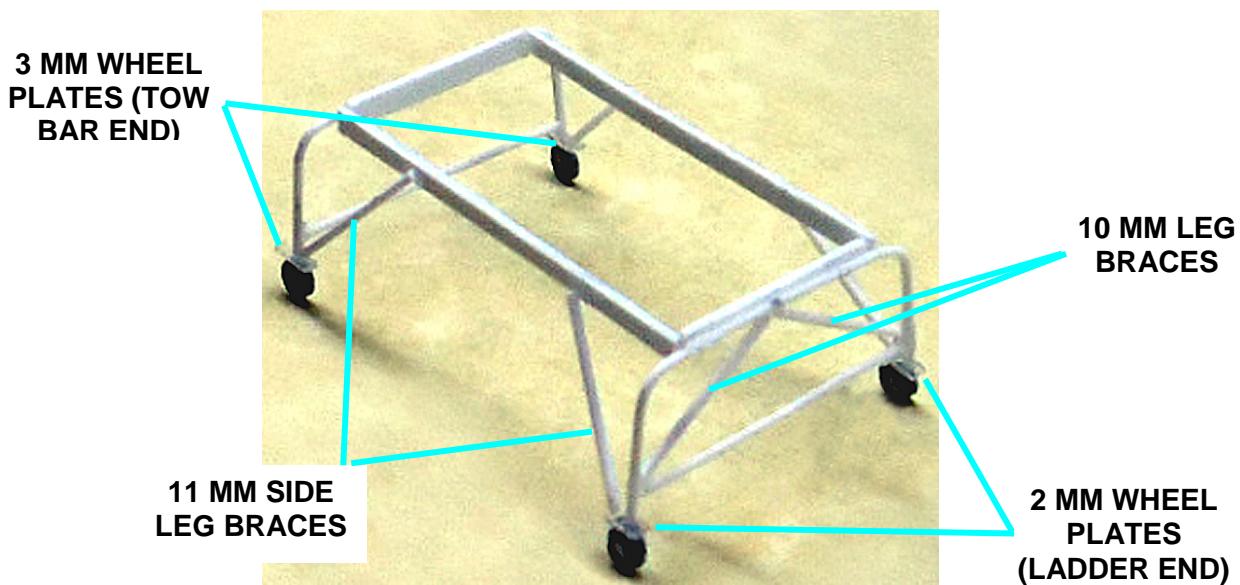
**NOTE:** The ends of some braces on the real stands were flattened at attachment points. I wasn't concerned with that level of detail so my model does not include flattened ends. If you are working in a larger scale, study pictures of real B-4 stands to determine the correct shapes at attachment points.

## Constructing and Attaching the Leg Assemblies

You will need to make a jig to form the leg assemblies. Print out this page and cut out the drawing below to make your jig.

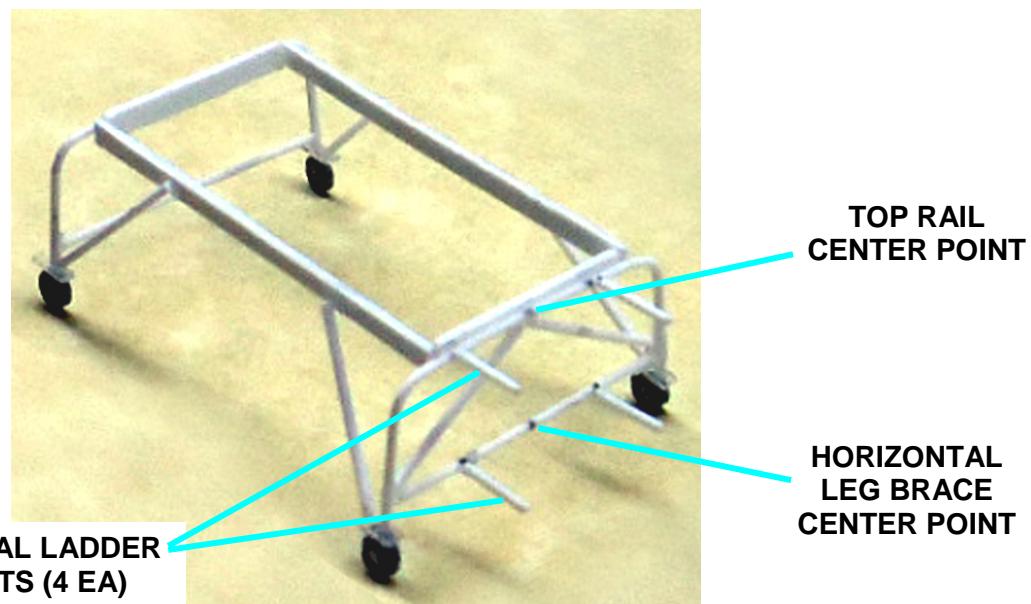


- 1) Construct two leg assemblies from the drawing above following the same procedures as you did for the platform hand rails.
- 2) Select one leg assembly and add two 10 mm end braces as shown below.
- 3) Glue the leg assemblies to the ends of the base frame (the second frame you made), centering the top of the legs on the frame ends both horizontally and vertically, as shown below. Make sure the legs are at right angles to the frame.



- 4) Using thin sheet plastic (0.3 - 0.2 mm, make two wheel plates 1.5 x 2 mm, and two wheel plates 1.5 x 3 mm.
- 5) Center the 2 mm wheel plates on the ladder end leg assembly with the long sides of the plates parallel to the sides of the frame and glue in place (see picture above).
- 6) Repeat Step 5 with the 3 mm plates on the tow bar end leg assembly.

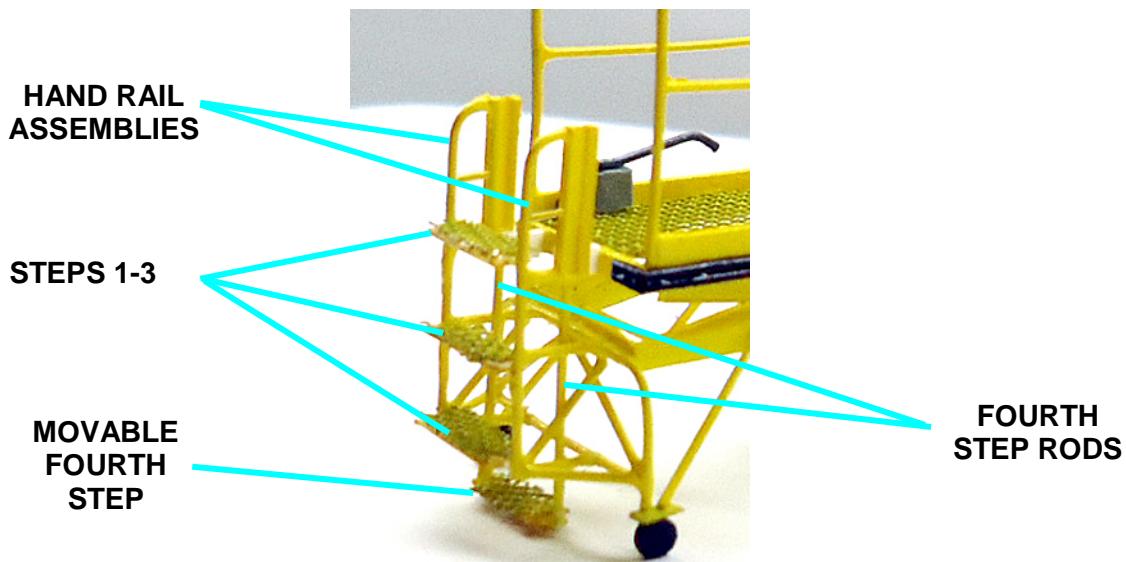
- 7) Cut four pieces of 0.5 mm rod to a length of 11 mm to form the side leg braces.
- 8) Glue one end of each brace to a wheel plate and center the other end on the side of the frame, then glue in place as shown above.
- 9) On the ladder end leg assembly, mark the center of the top rail (center of the platform end), as shown below.
- 10) Measure 5 mm from the center mark on both sides of the top rail and make a mark.
- 11) Repeat Step 10 for the horizontal leg brace.
- 12) Cut four pieces of 0.5 mm rod to a length of 5 mm for the horizontal ladder supports.
- 13) Glue the supports at the four marked points as shown below. Ensure they are horizontally parallel with the base frame.



- 14) Allow the frame assembly to dry thoroughly, then paint it.
- 15) Use a piece of 2 mm round stock and cut off four 1 mm thick slices to form the wheels.
- 16) Glue each wheel to the bottom of the wheel plates.
- 17) Paint the wheels black or dark gray.

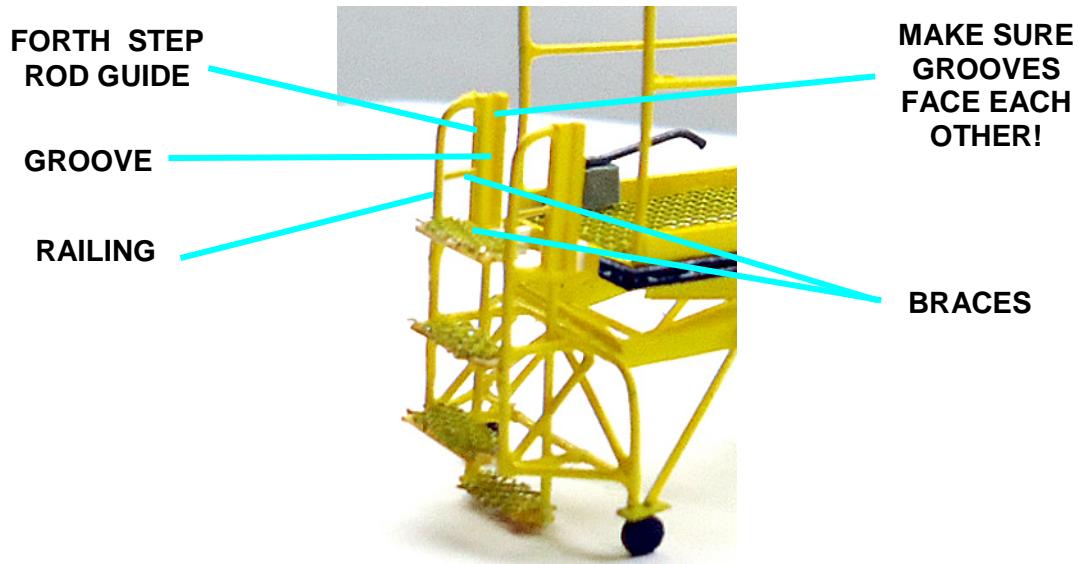
## Constructing the Ladder Assembly

The ladder assembly consists of two hand rail assemblies, three ladder steps, a pair of vertical braces, a pair of sway braces and a movable fourth step that is attached to the platform by two rods. When the platform is fully raised, the movable step is at the top of the hand rail assemblies and acts as a fourth step. **NOTE:** The models in the following examples are more complete than your model will be at this stage.



## Building the Ladder Hand Rail Assemblies

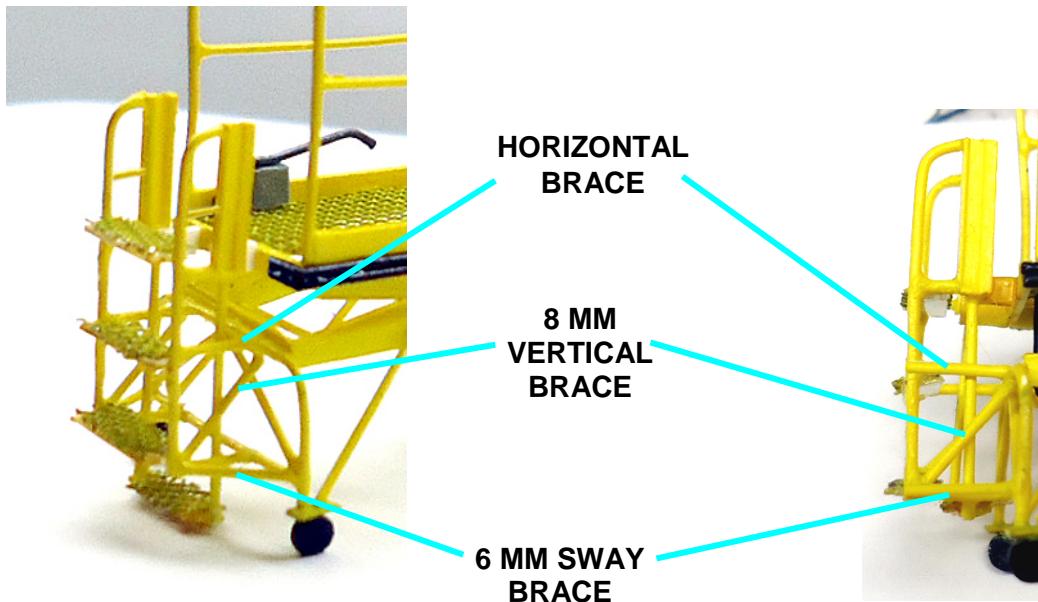
Each hand rail assembly consists of a railing, two braces and a guide piece for the fourth step rod, as shown below.



The drawing below can be printed out and used in a jig to form the rail assembly. The finished hand rail assembly is 4 mm wide by 19 mm long.



- 1) Cut two railings from 0.5 mm rod and pin one in place on the jig. **NOTE:** These railings are cut slightly longer than the final size to compensate for slight variations in bend radius - they will be trimmed to 19 mm after the hand rail assemblies are formed.
- 2) Using 0.5 mm rod, cut four 1.5 mm braces. Glue two of these braces to the railing in the jig.
- 3) From 1 mm sheet stock, make two guide pieces 1.5 x 8 mm (I made my guides from 1.6 mm I-beam stock (Plastruct #90511) or you could use channel stock (Plastruct #90041)).
- 4) Cut/file a shallow 0.5 mm groove down the center of each guide piece to accommodate one of the fourth step rods.
- 5) Glue a guide piece to the railing in the jig.
- 6) Allow the hand rail assembly to dry thoroughly, then trim the end of the rail to match the drawing (19 mm in length).
- 7) When the assembly is thoroughly dry, remove it from the jig.
- 8) Construct the second hand rail assembly making sure the groove in the guide piece will face the groove in the first hand rail guide piece when the ladder is assembled.
- 9) Paint both hand rails the same yellow color as the stand.
- 10) Glue each hand rail assembly just inside the horizontal ladder supports at the end of the base assembly.
- 11) Cut two vertical braces from 0.5 mm rod to a length of 8 mm.
- 12) Glue each brace from the junction of the horizontal brace with the leg rail to the bottom of the hand rail as shown below. Trim to fit.
- 13) Cut two sway braces from 0.5 mm rod to a length of 6 mm.
- 14) Glue each brace between the bottoms of the handrails to the leg rails as shown below. Trim to fit.



## Building the Fourth Step Assembly

The fourth step assembly consists of two support rods and a mesh step. Unfortunately, I didn't take a picture of the fourth step assembly by itself so the pictures above and below with the assembly installed are the best I can provide.

**NOTE:** The steps on the real B-4 stand were made of the same open-grid material as the work platform. However, cutting the metal mesh to the necessary small size for the model will likely result in pieces of the mesh coming loose. Further handling at this point can result in the step crumbling.

To prevent this, I cut pieces of .010/0.25 mm clear PETG stock slightly smaller in width than the steps. After I painted the mesh steps, I glued them to the clear plastic. Once the steps are installed on the model, the clear plastic supports can barely be seen.

- 1) Cut two rods from 0.5 mm stock to a length of 12.5 mm.
- 2) Cut a rectangular piece of the mesh material 2.5 mm x 8 mm in size for the step.
- 3) If you want to support the step with clear plastic, cut a piece 1.5 mm x 8 mm.
- 4) Paint the rods and the mesh material the color of the stand. If you choose not to support the mesh, go to Step 6.
- 5) Glue the mesh material to the clear plastic.
- 6) Glue the ends of the two rods to the center of the sides of the step, ensuring the rods are above the top of the step and perpendicular to it.
- 7) Set the fourth step assembly aside. You will install it during final assembly.

## Building the Ladder Steps

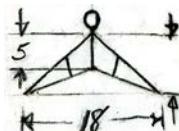
- 1) Carefully cut out three rectangular pieces of the mesh material 3 mm wide x 8 mm long.
- 2) Paint the mesh material.

- 3) If you want to support your steps with clear material, cut three pieces 2.5 mm x 8 mm (The smaller width makes it more difficult to see the edges of the clear plastic under the steps).
- 4) Center each step on a clear plastic support and glue them together.
- 5) Set the ladder steps aside - you will install them during final assembly.

This completes construction of the base assembly.

## Constructing the Tow Bar

The drawing below can be used as a jig for forming the tow bar.



- 1) Build the tow bar frame using 0.5 mm diameter rod.
- 2) Obtain a tow bar ring, either from your spares box or by making one. My tow bar ring was taken from a trailer in the Hasegawa US Weapons Loading Set. You can make one by cutting out a 3 mm diameter piece of 1 mm thick sheet styrene or cutting off a slice of round stock about 3 mm in diameter and then drilling out the center, then shaping and sanding the ring.
- 3) Glue the tow bar ring to the top of the tow bar.
- 4) Paint the tow bar assembly to match the stand.
- 5) Paint the tow bar ring insignia redred.
- 6) Set the tow bar aside. You will install it during final assembly.

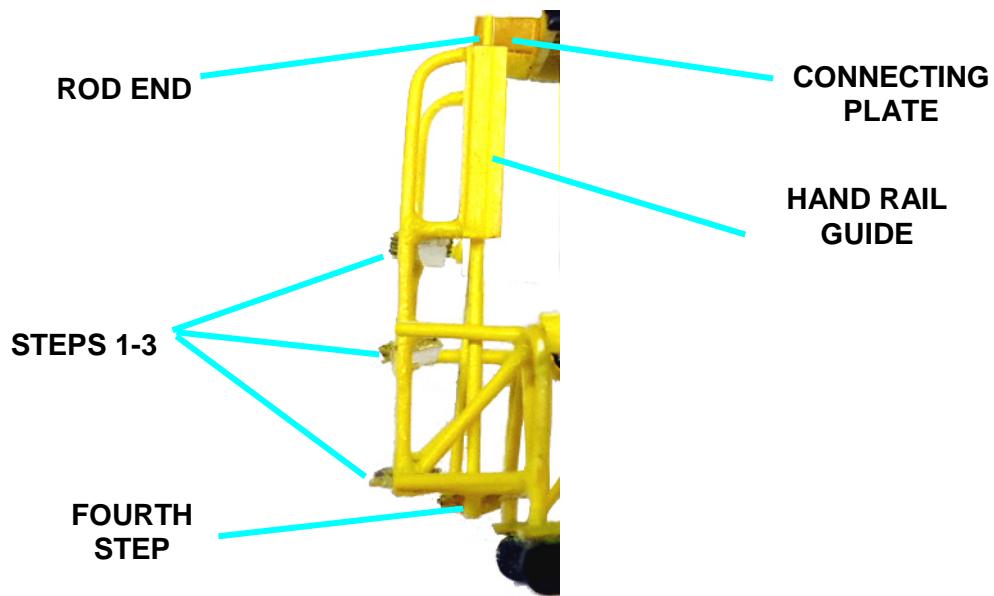
## Assembling the B-4 Stand

You should have the following parts and assemblies completed before you begin the final assembly:

- Platform Assembly
- Scissors Mechanism
- Base Assembly
- Fourth Step Assembly
- Ladder Steps 1-3
- Tow Bar Assembly

- 1) Line up the upper ends of the scissors mechanism with the bottom of the platform assembly. The lift bars on the scissors mechanism should be toward the open end of the platform.
- 2) Thread the hydraulic line through the scissors mechanism (location is not critical) and insert the end into the hole drilled in the hydraulic actuator body, then glue in place.
- 3) Glue the scissors mechanism inside the platform frame, ensuring the sides of the scissors mechanism are perpendicular to the bottom of the platform.
- 4) Insert the scissors mechanism into the base frame and align the upper assemblies so they are level with the base.

- 5) Glue the bottom of the scissors mechanism to the base frame.
- 6) Insert the fourth step assembly from the bottom of the model until the rods rest in the grooves of the hand rail guides.



- 7) Slide the rods up until they are even with the top of the connecting plates attached to the platform. **NOTE:** The final position of the fourth step will depend on how high the platform is extended.
- 8) Glue the rod ends to the outside of the connecting plates as shown above.
- 9) Glue the three ladder steps to the hand rail assemblies as shown above.
- 10) On the opposite end of the stand, glue the bottom ends of the tow bar to the wheel plates and the top end to the leg rail.

**Congratulations! You just completed a very difficult build!**  
**I hope you enjoy your model!**



If you haven't had enough pain yet, you might want to tackle my B-5 stand ☺. Contact me at [striker8241@yahoo.com](mailto:striker8241@yahoo.com) and I'll send you the instructions.

