

Building Instructions

Construction of the Safety Bench

3 pages total

Materials for each bench: Standard or 1/4 Scale.

All lumber was CCA Pressure treated for durability .We purchased it in 8' lengths for handling convenience but if you wish to minimize waste buy the longest lengths possible.

Quantity in 8 foot lengths Size

3 pieces	2X6
2 1/2 pieces	2X4
2 1/4 pieces	1X4
1/2 piece	1X6

Hardware:

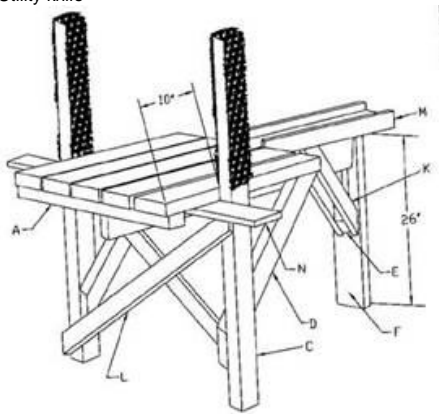
- 1/2 lb. #8 all weather deck screws 3" long
- 1/8 lb. #8 all weather deck screws 2" long
- T-50 staples

Other

Scrap carpet to act as a cushion on the wing restraints.

Tools needed:

- Tape Measure
- Hammer
- Wood Chisel
- Carpenters Framing square
- Pencils
- 7 "Circular saw
- 10" Power miter saw
- Electric drill
- 7/64 drill bit
- Electric screw driver
- Extension cords
- T-50 Staple gun
- Utility knife



Assembly: for the "Standard Safety Bench "

We built five benches at a time and made templates of all the pieces to be used for building more benches in the future. The wood for all five benches was precut.

Pre-drill all screw holes with a 7/64 drill to prevent the wood from splitting.

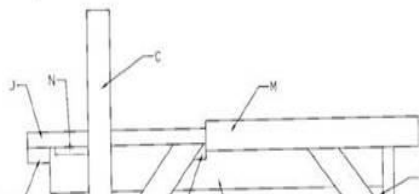
Start by laying 2 pieces of part **J** down. Lay down part **G** next to it. Lay down 2 more pieces of part **J** next to the part **G**. Make all pieces flush on one end and space each seam between the 5 boards with the thickness of the body of a deck screw. This will allow for swelling of the wood .On the flush end lay down flush on the front and flush on the ends the 2x4 part **A** . Use the big framing square and

square everything up particularly on the front .Put in 2 screws on each top board .Next put down part **B** on the opposite end away from part **A**, note that the part **B** is shorter and should be the width of a 2x4 short on each side .again put 2 screws in each board.

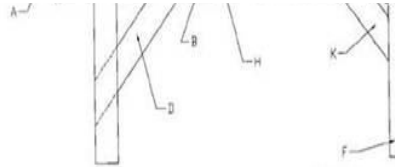
After the top is constructed lift it up and turn it over, slip under the Spine which is part **H** .The horizontal spine must be centered under the middle of the long 2X6 top piece part **G**. The spine must be notched where it meets the rear cross brace part **B**. This notch does not have to be very precise. It can be cut with a circular saw and then knocked out with a hammer. Make several cuts before knocking it out. You can use a chisel if you prefer. Screw the spine to the Part **G** with about 8 screws.

The 2X4 front legs part **C** can be added now. Use two screws on each. Draw guide lines across both legs at 26" & 27 1/2". The legs are attached 10" back from the front of the top and with the top centered between the guidelines on the legs. Make sure the 26" length is toward the bottom. Turn the table upside down and add the field box supports part **N** on each underside .These should be butted against the spine and back against the leg. Use at least 7 screws on each support. The 2X4 angled side braces part **D** is added next with two screws on each end. Make sure to square the legs using the big framing square before screwing in the braces. The front 1X4-angled braces part **L** is now added. Screw in the bottom of the front one first then square the other leg left to right before screwing in the top screws. Repeat with the other brace. It is important to square everything before screwing in the bracing.

The rear leg part **F** is attached by butting it against the spine end. Use two screws into the spine. Add the short 2X4 angled brace part **E** in the same manner. Attach the 1X4 small-angled braces part **K** on each side.



Turn the table right side up. Add three more screws through the middle top piece part **G** into the rear leg and two screws on each rear corner of the top into the 2X4 angled brace part **D** that was previously installed. Attach the 1X4 topside rails part **M** on both sides. Use a piece of scrap 1X4 as a height guide to make the topside rail approximately 1 inch higher than the part **G**. To prevent abrasion between the 2X4 wing restraints and the airplane wings we used surplus or used carpet to act as a cushion. Add scrap carpet to the airplane wing restraints using 1/2", T-50 staples or 3/4" roofing nails.

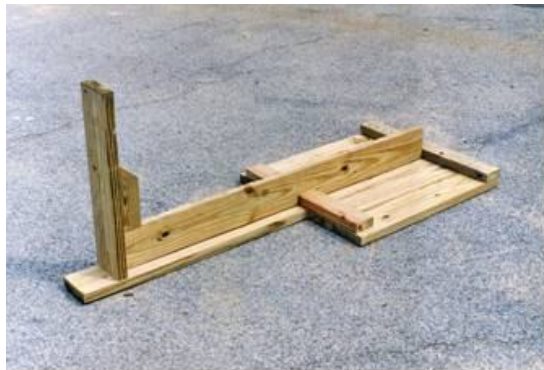


Assembly for the "1/4 Scale Safety Bench"

The assembly of the 1/4 Scale Safety Bench is essentially the same except the table height is lowered by 7 inches. The rear leg will be 7 inches shorter and the length of the main top piece will therefore be 7 inches longer. Notice there are 2 cross braces part A and no part B. The longer part A's are used in both positions for the Part A and Part B on isometric drawings as well as the side and top view drawings.

Variations:

- The center board piece "G" can be extended out in front to accommodate the front wheel on tricycle landing gear for planes with swept back wings such as Fan Jets.
- For the 1/4 Scale Safety Bench, if a wider top is needed to accommodate wider landing gear, additional top pieces Part **J** can be added, they do not have to be full width 6 inches wide but rather can be 2 or 4 inches wide on either side. Naturally if this is done the top cross braces and the leg braces will have to be adjusted accordingly.
- Wheels can be added to the front legs so that one person can move the table more easily. If wheels are added, the rear leg will have to be extended to make up the difference of the wheel height.
- Brackets can be added to the front of the wing restraints to hold the transmitters.
- Hooks can be added to the front edge of the bench or the box supports to hang a transmitter.
- Holes can be drilled in the bench top to have a definite place to put the neck of the glow starter in each time you are finished with it. A place for everything makes it safer.

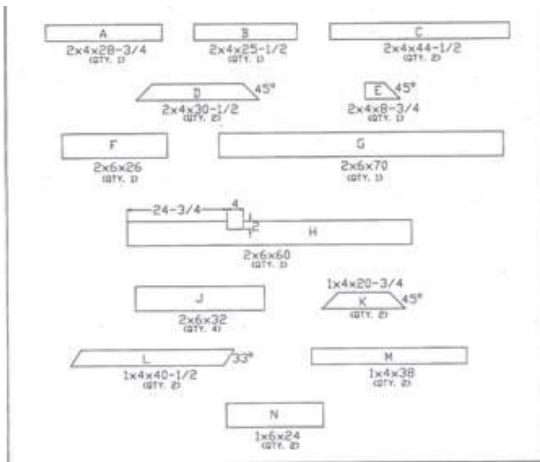


Material cut list



You will recognize this as a "KIT"





1/4 SCALE SAFETY BENCH
DIMENSIONS IN INCHES

