My Balsa & Glass Workshop

RC FLYING FIELD 8' FLAT TOP STARTING TABLE CONSTRUCTION

The Triad Aeromodelers R.G. Satow – RC Flying Field has nine of the standard pit area starting tables as shown in the photo below. These are made entirely of 2"x6" pressure treated wood.

But, as you can see at the far end of this table line, they also have six older 8' flat top tables. These are primarily used by the electric plane flyers but can also be used for nitro or gas plane starting with the wing stops at one end of the table. Since these old flat top tables are starting to fall apart, the club decided to get some new tables built. This article covers the build of an 8' flat top table should anyone want to build one for their own home use.

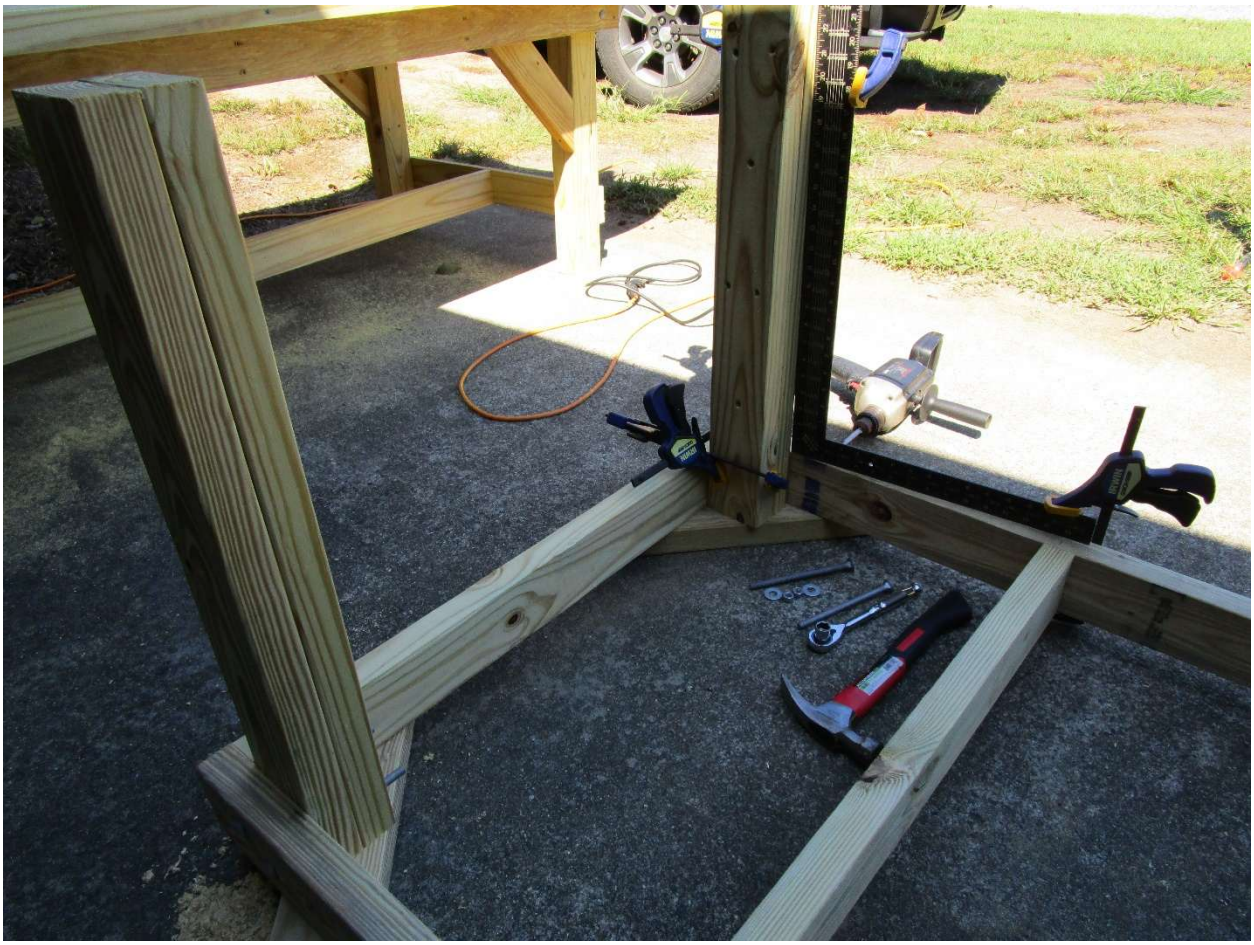
First, let's go over the materials that were used to build a single table. Below is a list of everything needed.

1" x 4" x 8' #2 Prime pressure treated	3.5 each
2" x 4" x 8' #2 Prime pressure treated	2.5 each
2" x 4" x 10' #2 Prime pressure treated	4 each
5/4" x 6" x 8' #2 Premium pressure treated deck board	7 each
1 & 5/8" exterior wood screws - for edge stops	26 each
2.5" exterior wood screws - for top deck boards & under frame	62 each
3" exterior wood screws - for legs and frame	50 each
4" exterior wood screws - for main frame	22 each
3/8" x 5 & 1/2" galvanized carriage bolt	8 each
3/8" galvanized flat washer	8 each
3/8" galvanized nut	8 each
3/4" lath screws – for wing stop bumpers	28 each
27" wide woven rubber backed carpet runner - wing stop bumper	1 foot

I purchased everything from Lowes, but you can also find all this stuff at Home Depot. With the cost of lumber changing daily, your total cost can vary greatly, but you should be able to get all the materials needed for under $200. I'll go over the various tools used as I progress thru the build.

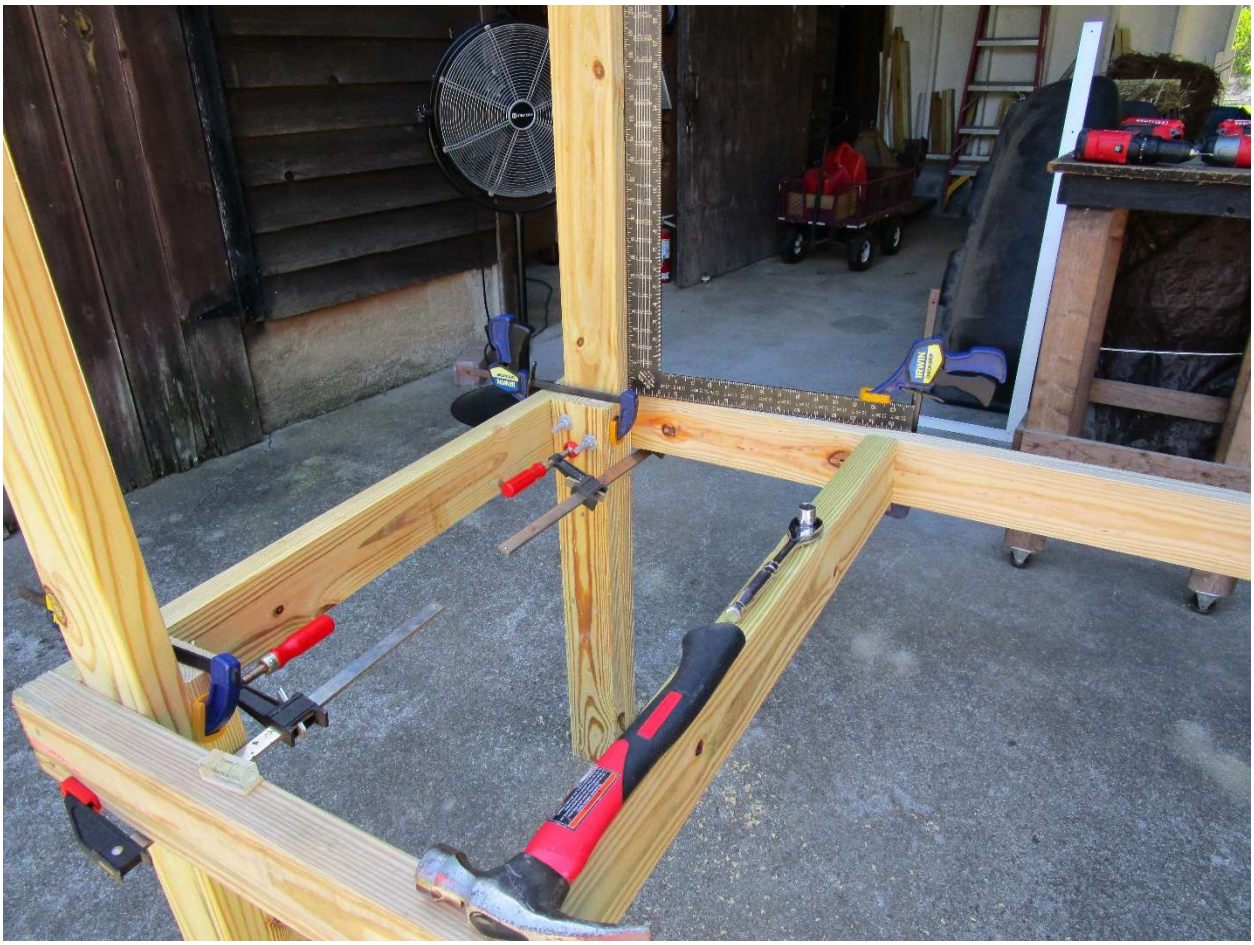
Let's get started. First take two 8' 2x4s, square off one end on each, then cut each of them to a length of 80". These are the sides of the tabletop frame. I cut these using my miter saw, but you can also accomplish using a powered circular saw or even a hand saw if needed. Next, take one of the 10' 2x4s, square off one end, then cut a 27" length piece, a 31.5" length piece, and a 58" length piece from this one board. Repeat the same cuts using a second 10' 2x4. Now take the third 10' 2x4, square off one end, then cut two 27" length pieces, and two 31.5" length pieces from this one board. Take the last 10' 2x4, square off one end, then cut two 27" length pieces, and one 31.5" length piece from this one board. The scrap from this last 2x4 will be used later. Lay out the two 80" sides and five 31.5" cross-frame pieces on a flat surface as shown in the photo below. Cross-frame boards are placed at 20", 40", and 60" from one end. Using a carpenter square and a couple long bar clamps, square up one end then assemble the tabletop frame using 4" exterior wood screws, 2 each at each end of the cross-frame pieces. I pre-drilled holes for screws, then installed them using my battery powered impact driver.

Now for the table legs. Take four of the 27" long 2x4s you cut earlier for the two rear legs. Assemble these two legs using two 2x4s each, joined together with 3" exterior wood screws in a 2-1-2-1 pattern, leaving one end with no screws to allow for drilling the 3/8" bolt holes. Place the leg inside the tabletop frame, clamp in place, and insure it is square to the frame by using a carpenter square as shown in the next photo below. Once the leg is in the proper place, drill a 3/8" hole thru the frame side and the leg 2x4s using a 1/2" power drill with a long 3/8" wood drill bit. I used a small plastic bubble level along the length of the wood bit to help drill the hole straight thru the 2x4s. Now bolt the leg to the frame sideboard using a 3/8" x 5.5" galvanized carriage bolt (inserted from the outside), washer, and nut. Drill the second hole at a 45-degree angle from the first, then install the second 3/8" carriage bolt. Repeat these steps for the other rear leg.



Now for the front leg/wing stop assemblies. Using the two 27" and two 58" 2x4s you cut earlier, assemble a front leg/wing stop assembly using a 27" and 58" 2x4 flush at one end, joined together with 3" exterior wood screws in a 2-1-2-1 pattern, leaving the top end of the 27" piece with no screws to allow for drilling the 3/8" bolt holes. Repeat for the second front leg/wing stop assembly.

Turn over the tabletop frame/rear leg assembly you built, raise the frame front end, place a front leg on the inside of the frame sideboard and clamp in place as shown in the next photo below. **NOTE**- the longer 58" wing stop 2x4 must go against the tabletop frame sideboard. **Also**, the tabletop frame must be clamped so its top is even with the top of the 27" 2x4 on each front leg/wing stop. Again, ensure the wing stop is squared to the tabletop frame using a carpenter square. Once the assembly is in the proper place, drill a 3/8" hole thru the frame side and the assembly 2x4s. Now bolt the leg/wing stop to the frame sideboard using a 3/8" x 5.5" galvanized carriage bolt (inserted from the outside), washer, and nut. Drill the second hole at a 45-degree angle from the first, then install the second 3/8" carriage bolt. Repeat these steps for the other front leg/wing stop assembly.



Next, we need to install some lower frame structure to help keep the tabletop square to the legs. First take one of the 8' 1x4s, square off one end, and cut two 31.5" length pieces. Now take another 8' 1x4, square off one end, and cut a 77" length piece. Clamp one 31.5" long 1x4 piece across the outside of the two rear legs with the top edge of the 1x4 at 8.5" above the ground, and each end flush to the outside edges of the 2x4 legs. This will keep the legs square to the tabletop frame. Pre-drill the screw holes (to keep from splitting the 1x4) and secure the 1x4 to the 2x4 legs using two 2.5" exterior wood screws at each end, 45 degrees to each other. Repeat the same steps for the front legs. Mark the center on these two 1x4 cross members 15.75" from one end. Take the 77" length of 1x4 you cut and clamp it in place against the two cross members at the center marks. Pre-drill the screw holes and join the 1x4s together using two 2.5" exterior wood screws at each end. This will end up with a lower frame structure as seen in the next photo below.

Now for some lower frame 2x4 diagonal braces to stiffen up the entire table frame. Using the half 8' 2x4, or the scrap piece from the last 10' 2x4 cutting, cut two 20" length pieces. Make 45-degree angle cuts at each of a piece, opposite to each other so the resulting piece will fit up into a 90-degree corner. Clamp one diagonal brace against the inside of the tabletop

side such that one 45-degree end of the brace is against the lower back side of the wing stop 2x4, and the other 45-degree end is flush with the top of the frame 2x4 sideboard. Join the diagonal support to the wing stop 2x4 using a single 4" exterior wood screw driven thru the back side of the diagonal into the wing stop 2x4. Join the diagonal support to the inside of the top frame sideboard using two 3" exterior wood screws. Repeat the same steps for the other diagonal support, resulting in a lower frame as seen in the photo below. This completes the table framing.

How about putting a top on this thing. The large flat top is built using seven 8' 5/4"x6" Premium pressure treated deck boards. These things are not cheap but they give the table a nice strong surface that will last longer than plywood and are lighter than the 2x6 top surfaces that were used on our standard starting tables you see in the first photo. So, let's get started by fitting the two outside boards around each wing stop 2x4. Take the first deck board, square off one end, and clamp it to the top framing outside of the wing stop 2x4 with the squared off end sticking out 10" over the outside of the front cross-frame board. Using a small

square, mark the deck board on each side of the wing stop, then take a scrap piece of 2x4, lay it up against the wing stop, and mark along it for the 2x4 depth. Remove the clamps, and using a jig saw cut out the marked area so the deck board will just fit around the wing stop and end up flush with the inside edge of the wing stop. Any adjustments can be made with a course wood rasp. Do this again for the second deck board on the other side of the table. **Reverify the table frame is still squared**, then clamp the notched board in the correct position and parallel with the frame sideboard so the overlap is the same along the entire length of the table. Since these two boards will carry the weight of the complete table when folks are trying to move them around, I used 3" exterior wood screws to attach these two deck boards to the table framing. Pre-drill each of the screw holes to prevent any splitting. One screw at each cross member with another halfway between each cross member in the frame sideboard, and one screw just outside the wing stop 2x4. Do the same for the other side. Your table should now look like the next photo below.

Take each of the remaining five 8' 5/4"x6" deck boards, square off one end, and place them between the wing stops with the squared off end at the front of the table. All five should fit snuggly between the two side deck boards. Carefully align the front edges of these five deck boards so you have a nice straight front edge to the tabletop. Once they are all in place, use a straight edge and mark a line across the five boards at the center of each cross-member. Attach each board to the table framing using two 2.5" exterior wood screws at each cross-member, for a total of 10 screws per deck board. With that done, measure from the front edge back to the rear of the table and mark the top deck boards just short of 96". Use a straight edge to mark along the entire rear edge as a guide to trim the rear of the tabletop. Cut off the excess deck boards using a power circular saw, jig saw, or a hand saw, resulting in a nice straight edge at the rear of the tabletop.

Next are the edge stops. Take two of the 8' 1x4s and rip them in half using a table saw. If you don't have a table saw, you may want to substitute the purchase of two 1x4s with four 1x2s. I would not recommend trying to rip a 1x4 in half with a power circular saw or jig saw. And if you can do it with a hand saw, have at it. Square off the ends of the first two now 1x2s and lay them along the length of the tabletop on each side, mark them to the same length as the deck boards, and cut both to fit. All edge stops are attached to the deck boards using pre-drilled holes and 1 & 5/8" exterior deck screws. A trick I used to help hold the edge stop at one end while attaching the other end is to clamp a piece of scrap wood under the deck board at one end and use this to rest the edge stop on while working at the other end. Also, I would recommend you mark the thickness of the deck board (using scrap deck board) on the edge stop at each place you want to drive a screw to aid in pre-drilling the edge stop at the center of the deck board. Attach the side edge stops with the bottom flush with the bottom of the deck boards. This results in a nice, raised edge to the table to keep things from rolling off when you have your engine running at full throttle. With both sides completed, take another 1x2 and mark it for one end of the tab so it overlaps the ends of the two side edge stops. Attach to the deck boards as you did for the side edge stops and run a screw thru the end edge stop into the side edge stop the corners. Do the same for the other end of the table.

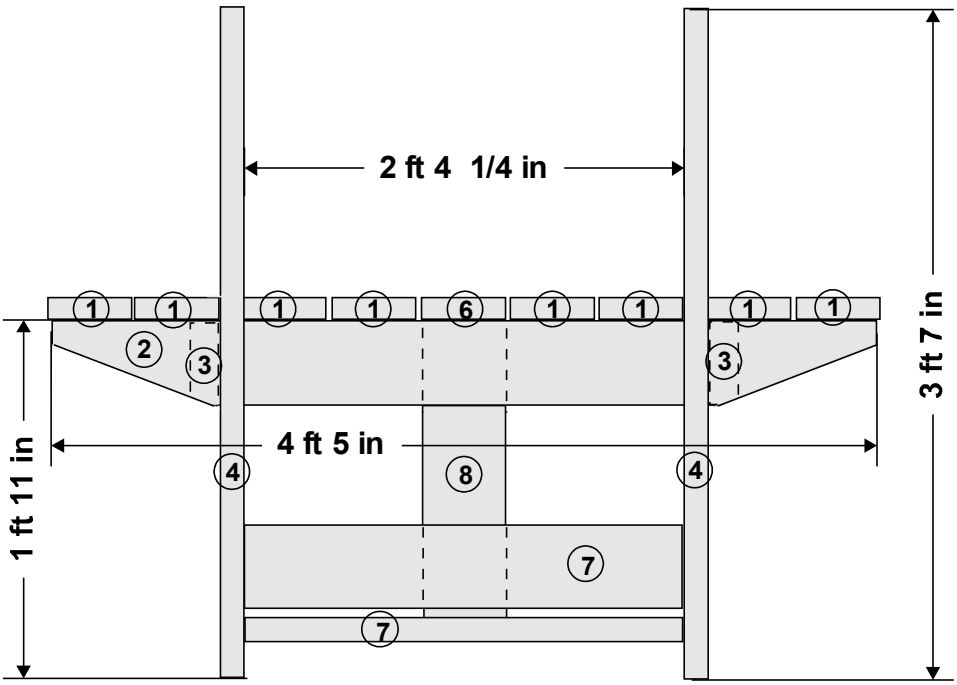
We are almost finished. I used my hand orbital sander with 80 grit paper and rounded all the edges to the edge stops, the four corners, the top edges and the corners down the sides of the wing stops. This ensures the clubs old men don't get wood slivers. Take the 27" wide rubber backed carpet runner and cut two 6" wide strips that will be used as wing stop bumper pads. Using 3/4" lath screws (they have a larger head to help keep from going thru the bumper pads. Fold a 6" wide strip around the back edge of a wing stop and with equal amounts on each side attach the bumper pad to the wing stop 2x4 using seven screws on each side. Do the same for the other wing stop.

OK, now step back and take a well-earned look at your work. Hopefully it looks something like the next photo below. If so, congratulations, you now have your very own starting table.

As pictured at the start of this document, the standard starting tables used at the TAI flying field were also built by me. There are standard size tables, and a couple of 1/4 scale tables. In addition, I built five 8’ picnic tables for use by club members.

While I had not documented my building of those tables, I have added the instructions I used to the end of this document so other clubs can build them if desired. If you have any questions about these builds, please feel free to contact me via email @: niemanl@balsaandglass.com.

MODEL AIRCRAFT STARTING BENCH



FRONT VIEW

PARTS LIST		
2"x6" LUMBER		
PN	CUT LENGTH	QTY
1	2' 8"	8
2	4' 5"	2
3	1' 10-1/2"	2
4	3' 8" (4' start)	2
5	3' 9" (4' start)	2
6	5' 7 3/4"	1
7	2' 4 1/4"	2
8	1' 7 3/4"	1
3/4" SQ 4'	UNCUT RAILS for rear of PN 6	2

BILL OF MATERIALS	
2"x6"x8' Wood	8 ea
3/4" sq x 4' Wood	2 ea
1-1/2" Nails	20 ea
3" Deck Screws	80 ea
1/2"x4"x18" Rubber mat material	2 ea
3/4" Drywall Screws	20 ea
15" Pipe Hangar	2 ea
Spar Urethane	1 qt

Revisions:
1 - Apr 12, 2007
BOM Update
Add info
2 - Dec 31, 2007
Disclaimer
3 - Oct 17, 2010
Add Cutting Detail B
Modified BOM
4 - Moved PN 3
Corrected misc errors
5 - Nov 3, 2010
Added dim's to pg 4
Moved Pn 7 on pg 3
6 - Dec 13, 2010
Added Assembly Inst.
7- Feb 15, 2011
Added Safety Precations
8- Jul 13, 2013
Added 1-3/4" to PN 6

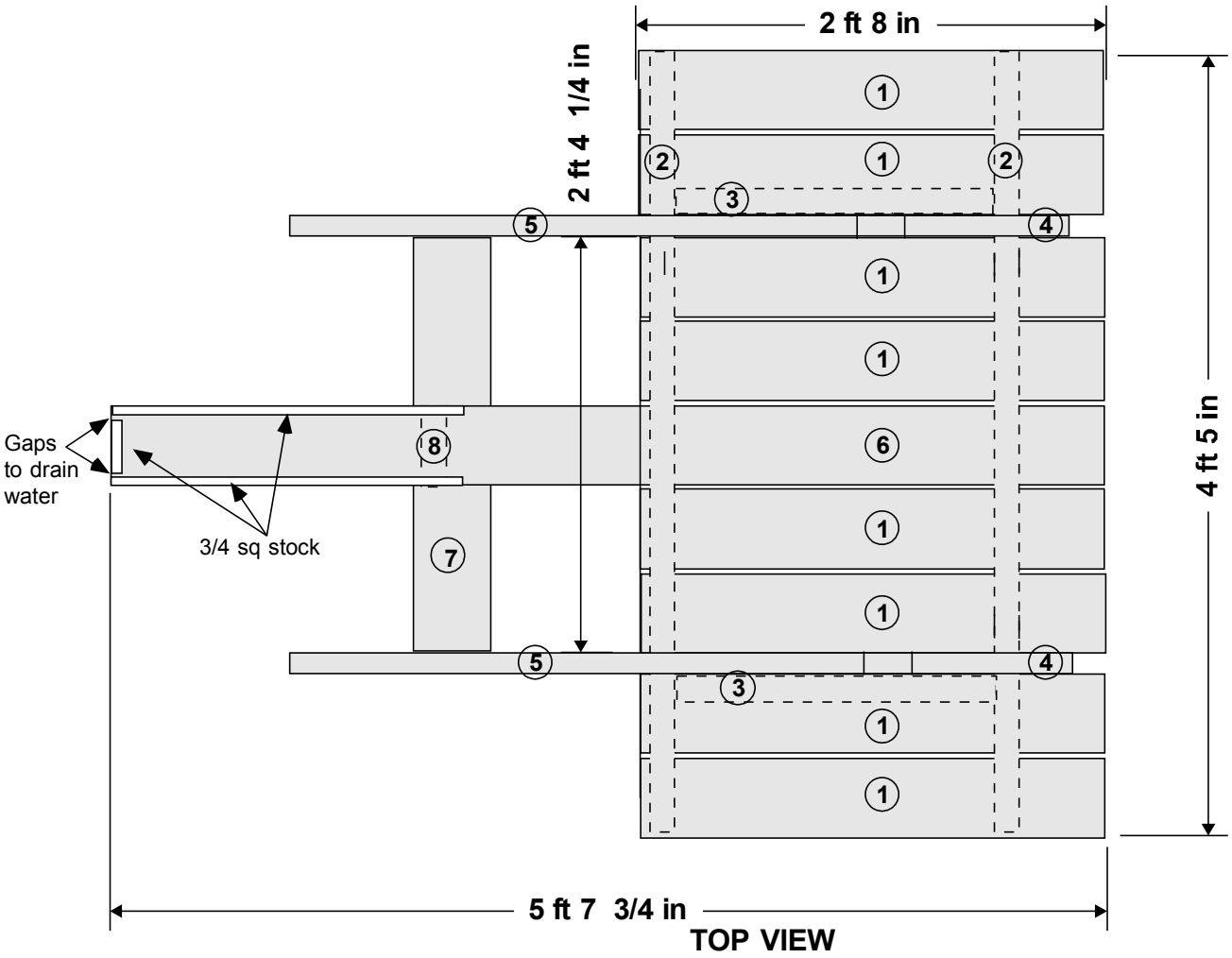
Notes:

1. Put Urethane on top surfaces and bottom of legs.

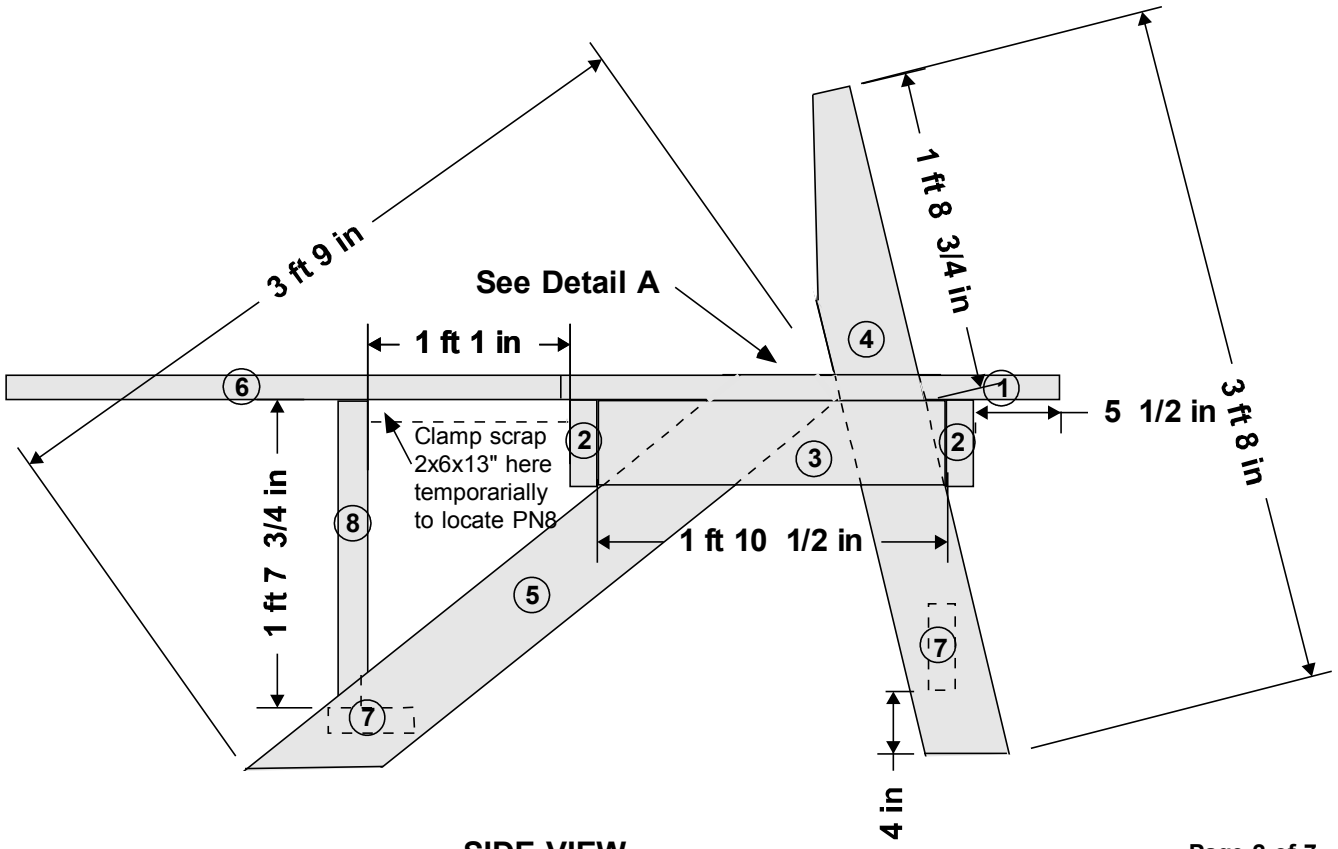
2. Use Pipe hangar and drywall screws to put rubber mat material on top rear of PN 4 to prevent damage to wings.

3. No guarantee of safety is implied, use at your own risk.

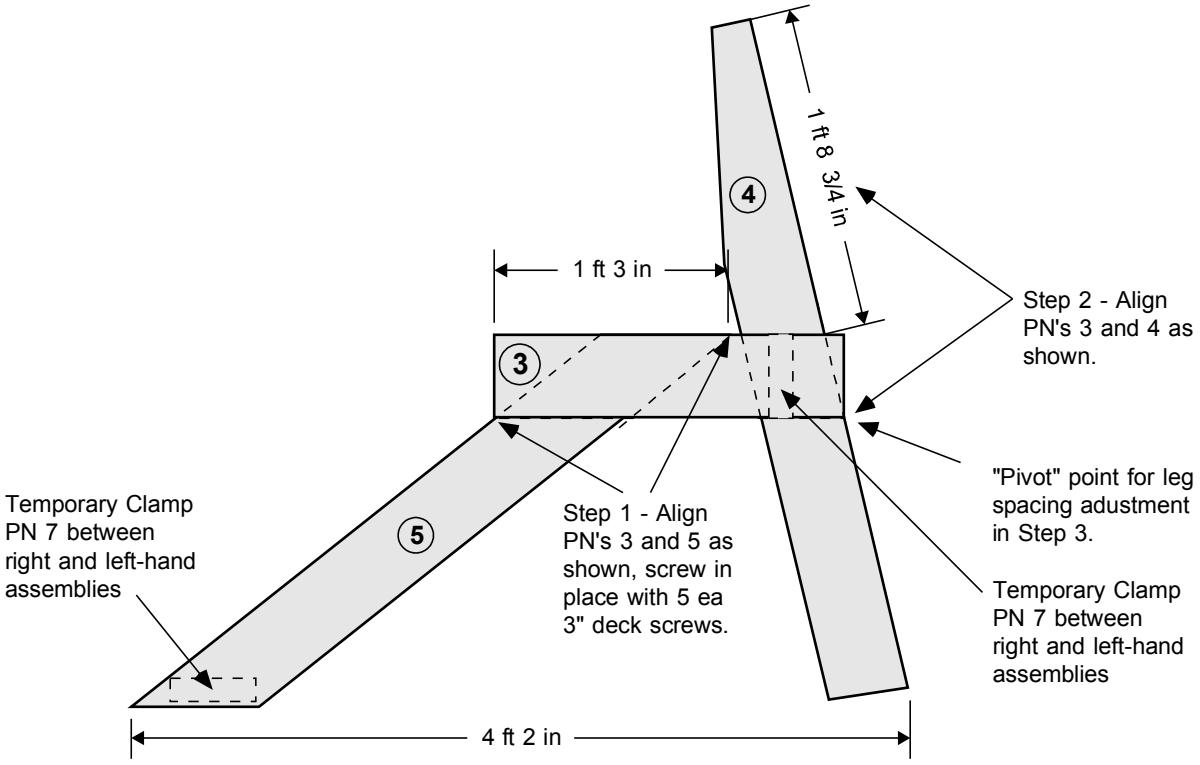
4. Do not use for aircraft with over 20 lbs of thrust.



TOP VIEW



SIDE VIEW



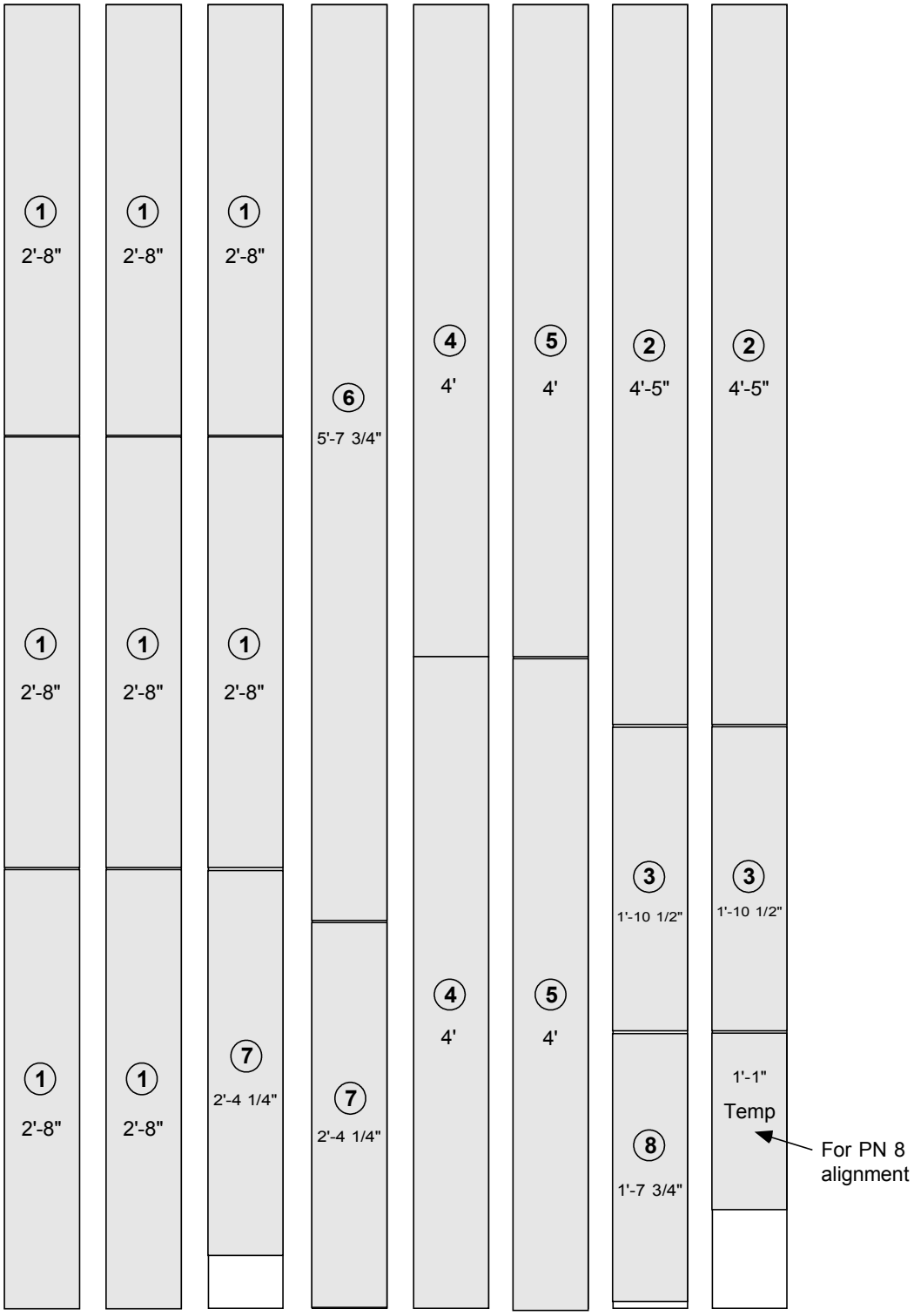
Step 3 - Adjust leg spacing to dimension shown by "pivoting" PN 4, and screw in place with 5 ea 3" deck screws.

Assemble PN's 3, 4, and 5 as shown. This is the right-hand leg assembly. Use this as a pattern to make the left-hand leg assembly.

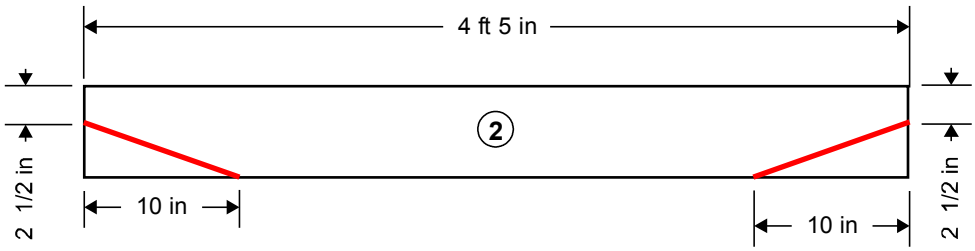
(See Sheet 5 for leg cutting Detail B)

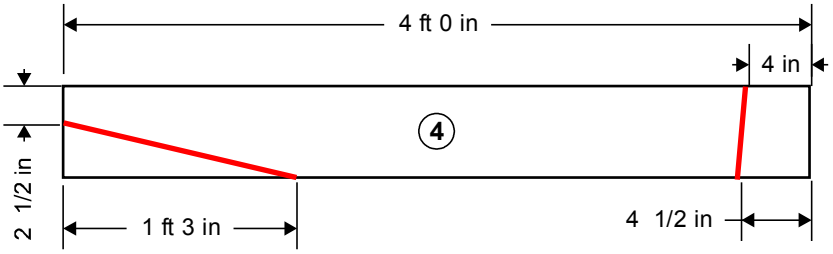
Detail A

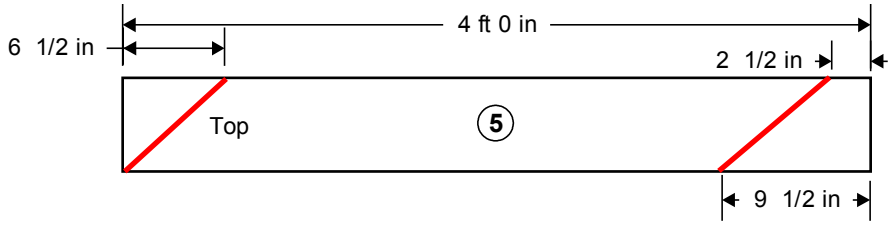
CUTTING DIAGRAM



2"x6"x8'
TREATED LUMBER







Cut = ——

Cutting Detail B

Model Aircraft Starting Bench
Assembly Instructions

1. Assemble PN's 3, 4 and 5 to make a "right-hand" leg assembly. See Detail A for instructions. Note - Right and left-hand orientation on the bench is the same as right and left on an airplane if it were sitting on the bench.

2. Use the "right-hand" leg assembly as a pattern to make a "mirror image" for the "left-hand" leg assembly using PN's 3, 4 and 5.

3. Clamp the "right-hand and left-hand leg assemblies together with 2 PN 7's temporally (do not fasten them) for spacing. Make sure that each PN 3 faces the outside of both leg assemblies. See Detail A for the location of PN 7's.

4. Put one PN 2 on the front of the leg assemblies and fasten to the ends of PN 3.

5. Put one PN 2 on the back of the leg assemblies and fasten to the ends of PN 3.

6. Fasten one PN 7 to the front; do not put the rear PN 7 on at this time.

7. Check to make sure assembly is square.

8. Lay PN 1's and PN 6 loosely on top between the uprights of the leg assemblies.

9. Center PN 6 with 5 ½ "overhang at front and fasten with six 3" deck screws.

10. Space PN 1's evenly, with small gaps between them and PN 6, and fasten them with the same overhang at the front as PN 6.

11. Fasten PN 1's on the right and left side of the uprights of the leg assemblies. Note – make sure to leave a small gap (1/8" to 1/4") between PN 1's. Note - The extreme right and left hand PN 1's will overhang the ends of the PN 2's slightly.

12. Fasten PN 8 to PN 6. Note - Cut a scrap 2x6 to 13" long and temporally clamp it between PN 2 and PN 8 to act as a spacer and help keep PN 8 at a right angle to PN 6 while it is fastened.

13. Fasten PN 7 (2) to the bottom of PN 8 then to each side of PN 5.

14. Add 3/4" square strips to rear of PN 6.

15. Use the pipe hangar and drywall screws to fasten the rubber bumper material to the back of the uprights to prevent the wood from denting the aircraft wings.

Model Aircraft Starting Bench
Safety Precautions

Some safety precautions for the ones who need written instructions:

Standard safety precautions for starting and running your engine should be followed when using this or any other bench.

Make sure your wing is secure on the fuselage.

Hold the airplane when starting the engine (it may run backwards.)

Use two hands when lifting the plane from the bench (it may be oily and slip.)

Make sure you have sure footing and balance when lifting.

Do not try to lift the plane over the uprights – pull it straight back until the prop is clear (you may slip and the prop will be near your neck.)

Hold, tie down, or use up-elevator/trim on the airplane when running the engine at high RPM (prevents the prop from hitting the bench.)

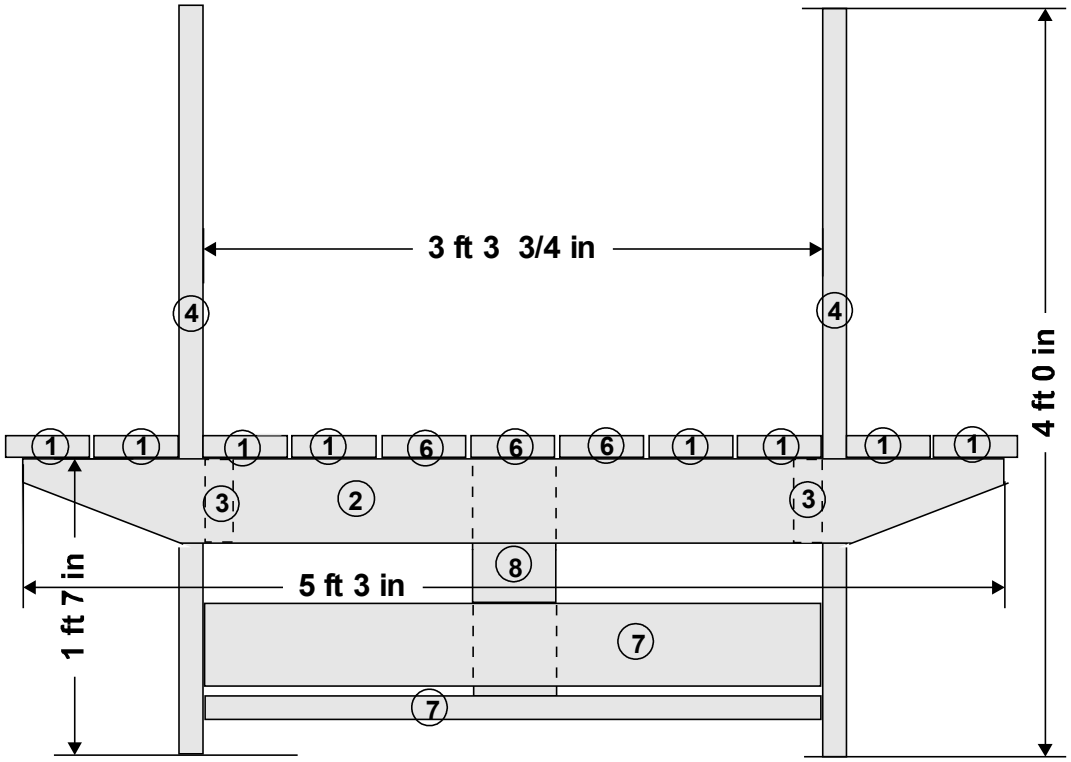
Leave your plane on the ground in high winds (it may blow off the bench.)

Don't drag the bench sideways (it will weaken the structure.)

If the engine has over 30 lbs of thrust put it on the ground (the bench could move forward or tip.)

This design has been tested with engines up to 20 lbs of thrust with no problems noted.

MODEL AIRCRAFT STARTING BENCH
(FOR 1/4 SCALE SIZED PLANES)



FRONT VIEW

BILL OF MATERIALS	
2"x6"x8' Wood	12 ea
1-1/2" Nails	40 ea
3" Deck Screws	140 ea
1/2"x4"x18" Rubber mat material	2 ea
3/4" Drywall Screws	20 ea
15" Pipe Hangar	2 ea
Spar Urethane	2 qt
Thinner	2 qt

Notes:

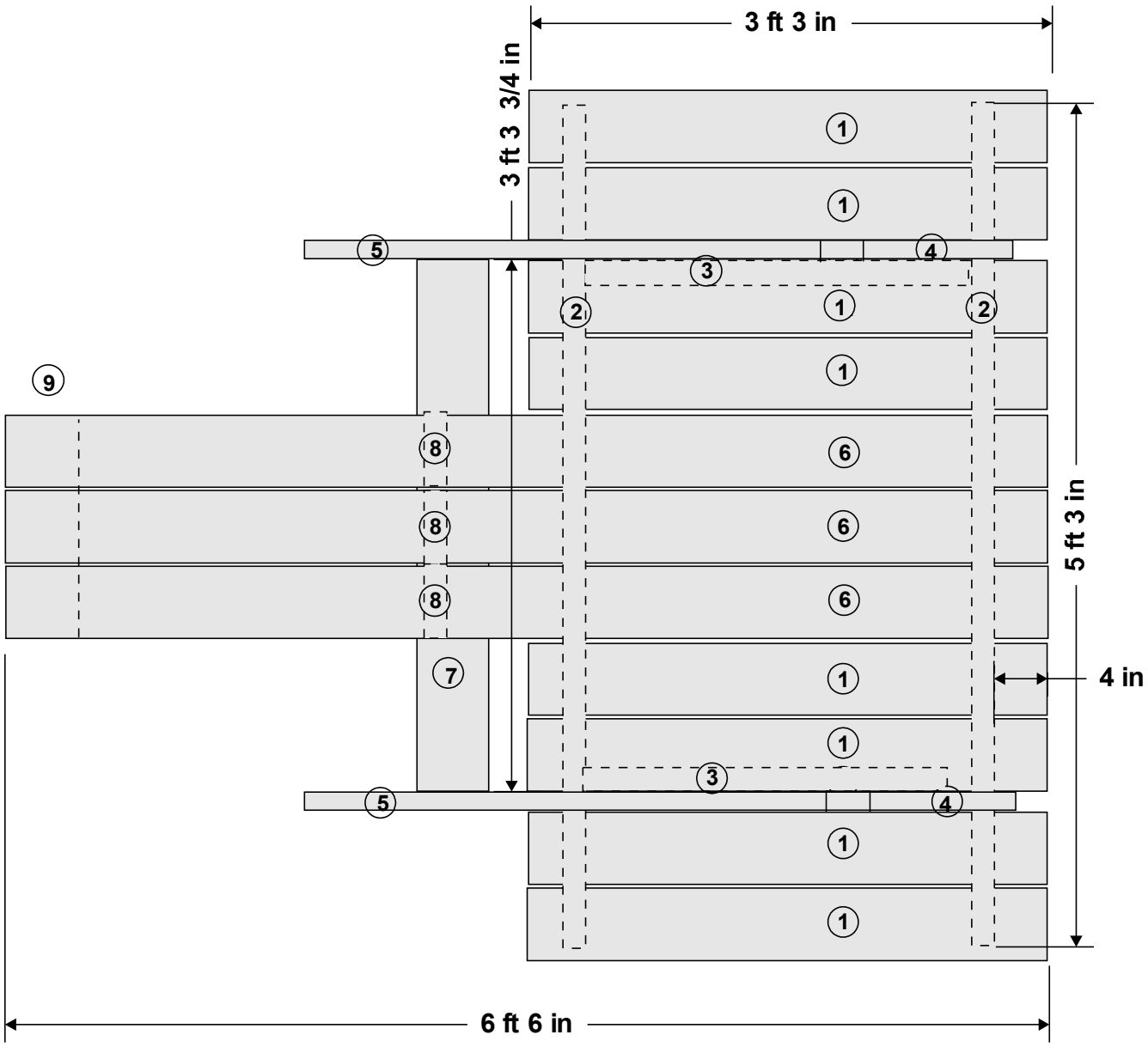
1. Put Urethane and thinner, 50/50 mix, on top surfaces and bottom of legs.

2. Use Pipe hangar and drywall screws to put rubber mat material on top rear of PN 4 to prevent damage to wings.

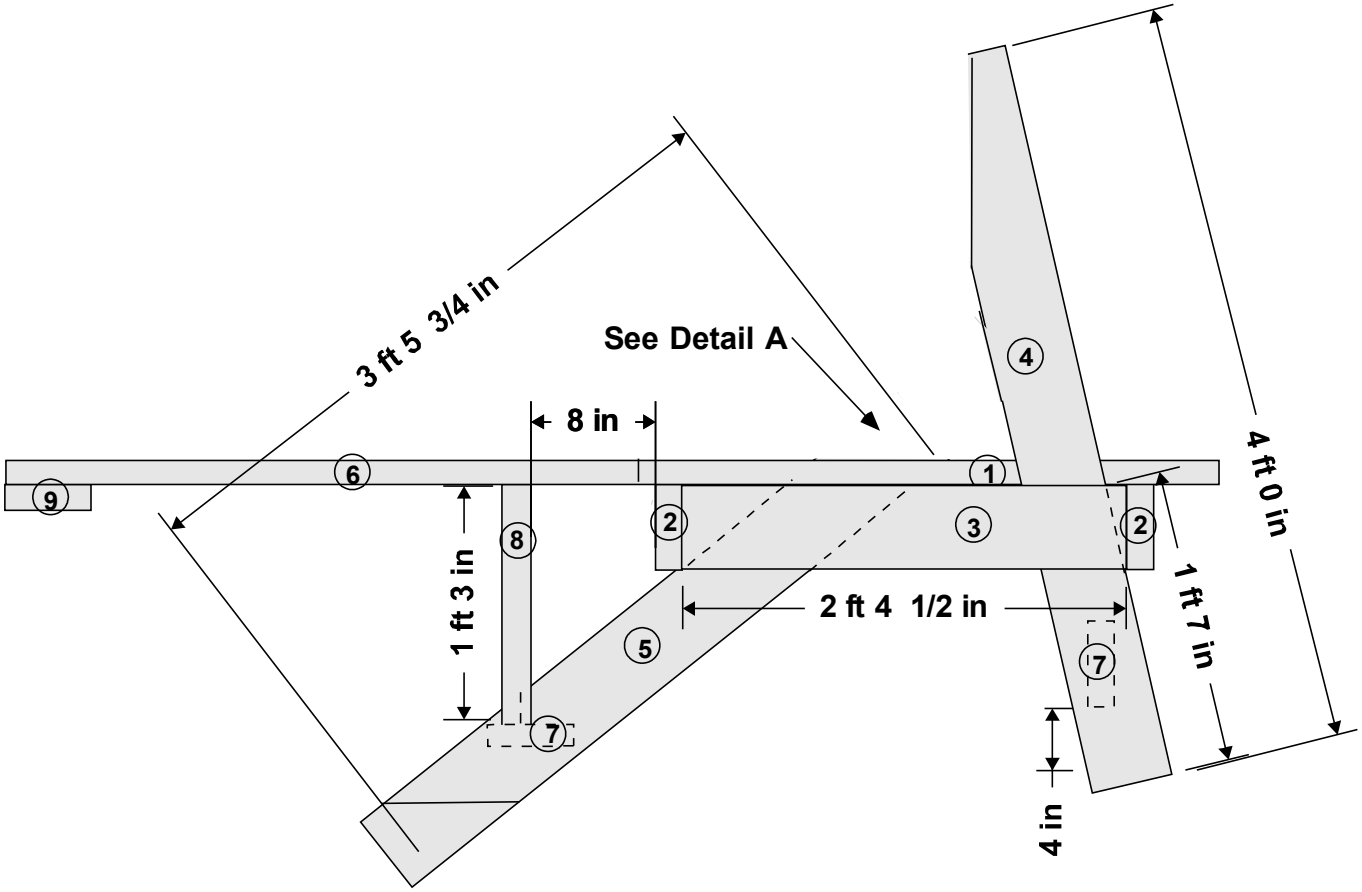
3. No guarantee of safety is implied, use at your own risk.

4. Do not use for aircraft with over 60 lbs of thrust.

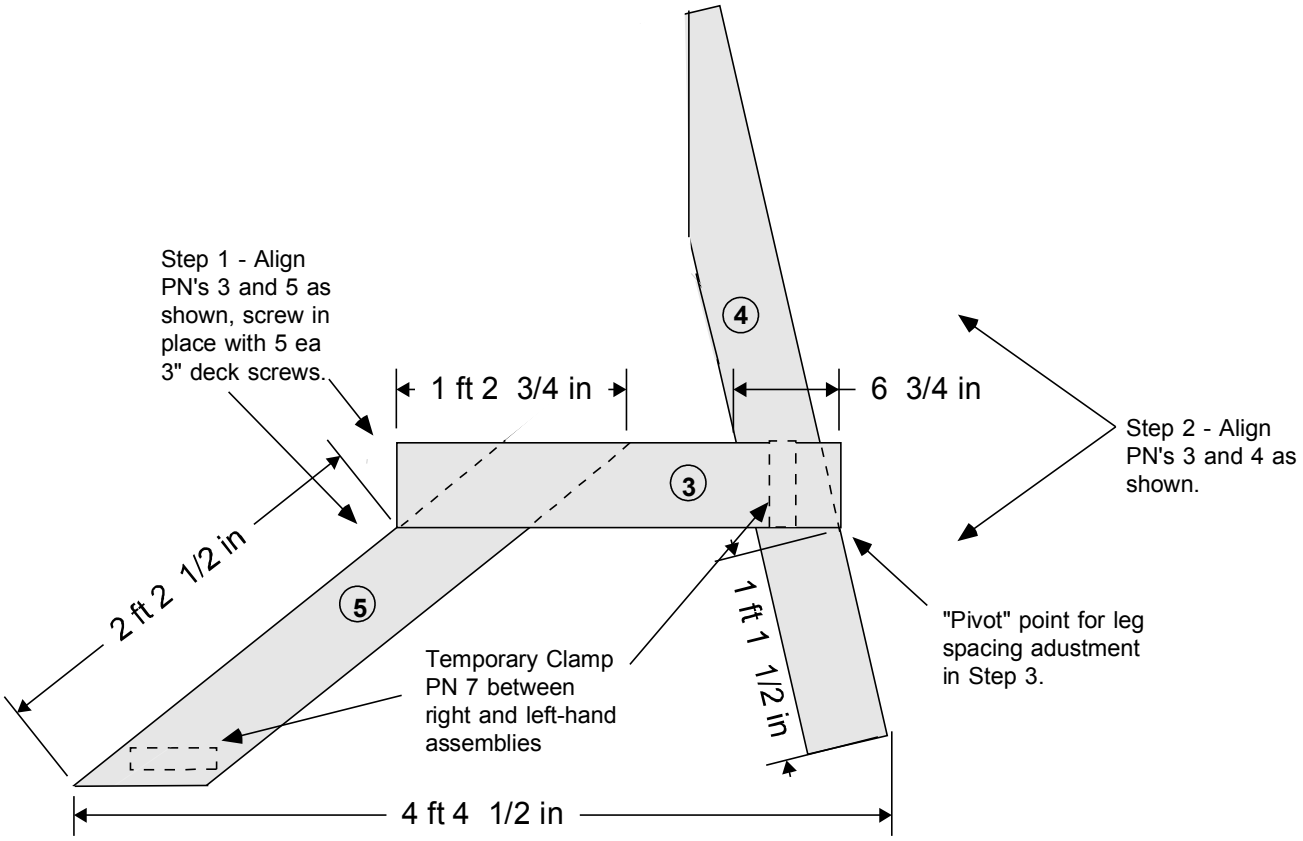
Revisions:
1 - Jul 17, 2013-Scaled up plans of original bench.



TOP VIEW


3 ft 5 3/4 in
See Detail A
8 in
4 ft 0 in
1 ft 3 in
2 ft 4 1/2 in
1 ft 7 in
4 in
1
2
2
3
4
5
6
7
7
8
9

SIDE VIEW



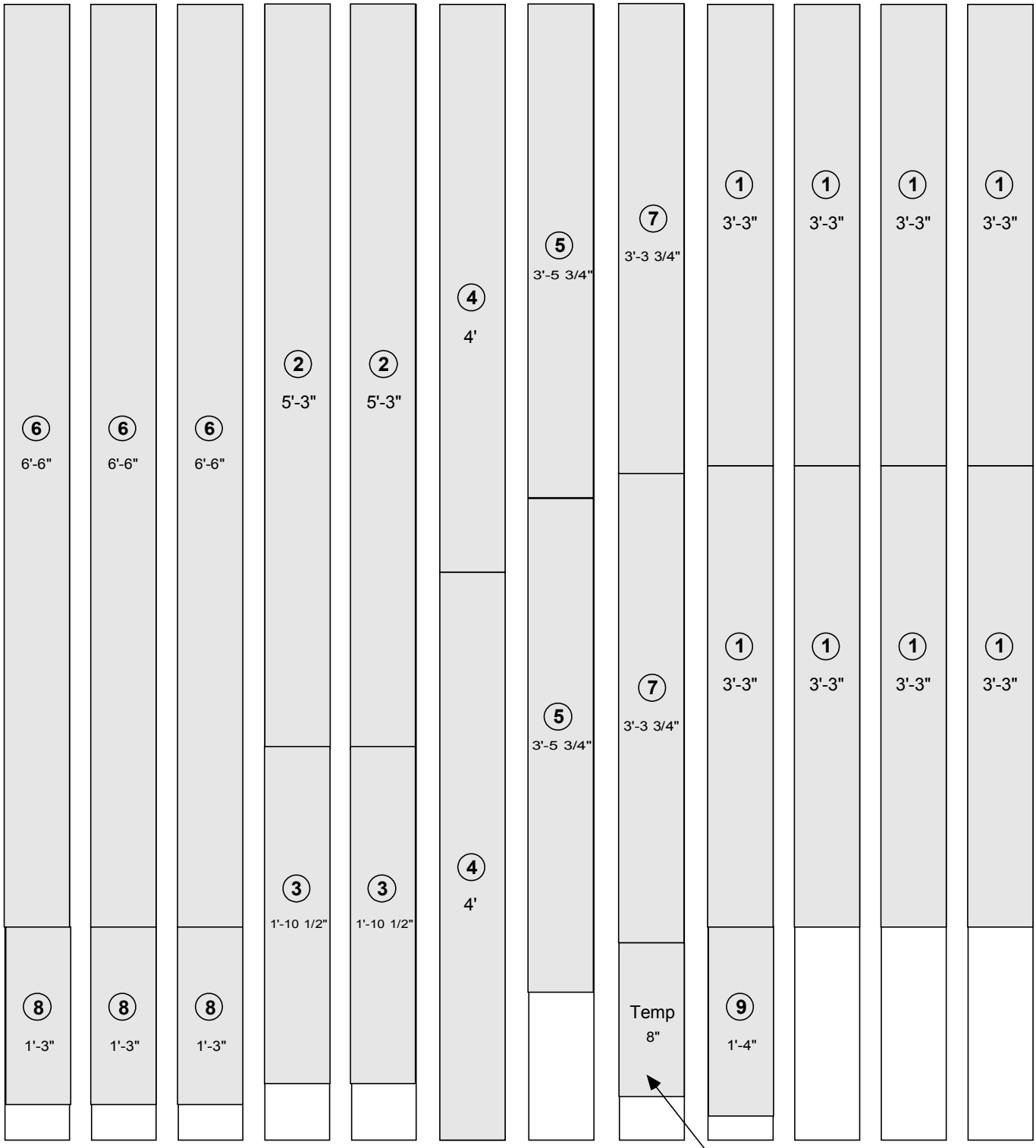
Step 3 - Adjust leg spacing to dimension shown by "pivoting" PN 4, and screw in place with 5 ea 3" deck screws.

Assemble PN's 3, 4, and 5 as shown. This is the right-hand leg assembly. Use this as a pattern to make the left-hand leg assembly.

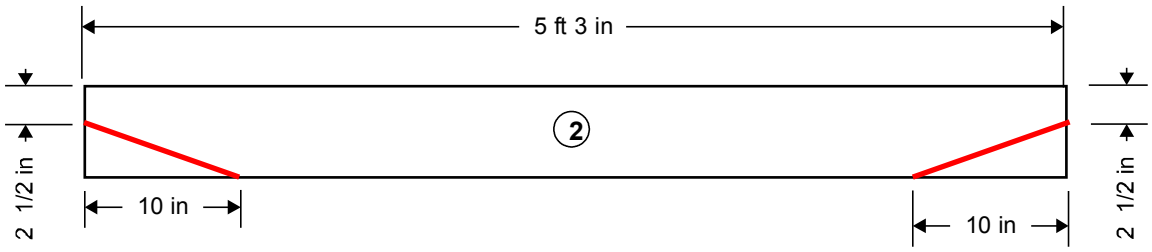
(See Sheet 5 for leg cutting Detail B)

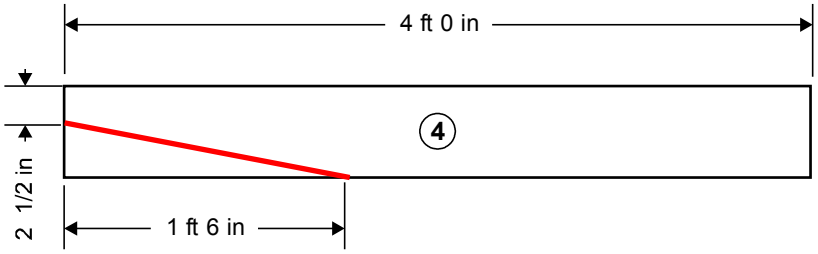
Detail A

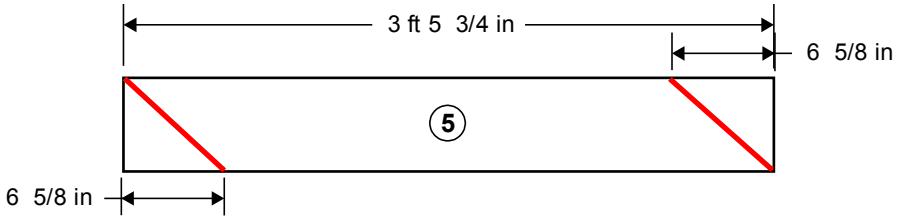
CUTTING DIAGRAM



2"x6"x8'
LUMBER







Cut = ——

Cutting Detail B

Starter Bench
Assembly Instructions

1. Assemble PN's 3, 4 and 5 to make a "right-hand" leg assembly. See Detail A for instructions. Note - Right and left-hand orientation on the bench is the same as right and left on an airplane if it were sitting on the bench.

2. Use the "right-hand" leg assembly as a pattern to make a "mirror image" for the "left-hand" leg assembly using PN's 3, 4 and 5.

3. Clamp the "right-hand and left-hand leg assemblies together with 2 PN 7's temporally (do not fasten them) for spacing. Make sure that each PN 3 faces the outside of both leg assemblies. See Detail A for the location of PN 7's.

4. Put one PN 2 on the front of the leg assemblies and fasten to the ends of PN 3.

5. Put one PN 2 on the back of the leg assemblies and fasten to the ends of PN 3.

6. Fasten one PN 7 to the front; do not put the rear PN 7 on at this time.

7. Check to make sure assembly is square.

8. Lay PN 1's and PN 6's loosely on top between the uprights of the leg assemblies.

9. Center and square the middle PN 6 with 4 "overhang at front and fasten with six 3" deck screws. Repeat with the other two PN 6's.

10. Space PN 1's evenly, with small gaps between them and PN 6, and fasten them with the same overhang at the front as PN 6.

11. Fasten PN 1's on the right and left side of the uprights of the leg assemblies. Note – make sure to leave a small gap (1/8" to 1/4") between PN 1's. Note - The extreme right and left hand PN 1's will overhang the ends of the PN 2's slightly.

12. Fasten PN 8's to PN 6's. Note - Cut a scrap 2x6 to 8" long and temporally clamp it between PN 2 and PN 8 to act as a spacer and help keep PN 8 at a right angle to PN 6 while it is fastened.

13. Fasten PN 7 (2) to the bottom of PN 8 then to each side of PN 5.

14. Fasten PN 9 to rear and bottom of PN 6's.

15. Use the pipe hangar and drywall screws to fasten the rubber bumper material to the back of the uprights to prevent the wood from denting the aircraft wings.

Starter Bench Safety Precautions

Some safety precautions for the ones who need written instructions:
Standard safety precautions for starting and running your engine should be followed when using this or any other bench.
Make sure your wing is secure on the fuselage.

Hold the airplane when starting the engine (it may run backwards.)

Use two hands when lifting the plane from the bench (it may be oily and slip.)

Make sure you have sure footing and balance when lifting.

Do not try to lift the plane over the uprights – pull it straight back until the prop is clear (you may slip and the prop will be near your neck.)

Hold, tie down, or use up-elevator/trim on the airplane when running the engine at high RPM (prevents the prop from hitting the bench.)

Leave your plane on the ground in high winds (it may blow off the bench.)

Don’t drag the bench sideways (it will weaken the structure.)

If the engine has over 60 lbs of thrust put it on the ground (the bench could move forward or tip.)

8 Foot Picnic Table Plans

These 8 foot picnic table plans are ideal for large families or groups. It can seat up to eight people (10, if you count a person sitting at each end).

Completed 8 Foot Picnic Table

Note: Before cutting any wood or building any part of this picnic table, read through to the end of these instructions so that you can verify the materials list.

Also note that these picnic table plans show the table being 7' 10" long (rather than 8 feet). The reason for this is so that you can purchase 8 foot 2x6s (for the top and benches), and have room to cut off damaged or cracked ends (if necessary). If the material you buy doesn't have damaged ends, you can use the whole 8' length. The decision is yours.

Power tools required:

- Circular Saw
- Power Drill

Rough material list:

Material	Qty	Usage
2" x 6" @ 12'	1	Legs (4)
2" x 6" @ 10'	1	Two Horizontal Bench Supports
2" x 6" @ 10'	2	One Bench (two 8-Foot Planks), Both Vertical Ctr. Bench Supports
2" x 6" @ 8'	7	One Bench (two 8-Foot Planks), Table Top (five 8-Foot Planks)
2" x 4" @ 12'	1	Table Top Braces (3), Table Top Supports (2)
2" x 4" @ 8'	1	Diagonal Braces (2), Center Bench Braces (4)
3/8" x 3.5" Galvanized Carriage Bolts	16	Bench Supports, Legs, and Diagonal Braces
2.5" Galvanized Deck Screws	46	Table Top, Bench Seat, Misc. usage
3" Galvanized Deck Screws	48	Table Top, Bench Seat, Misc. usage

The material list for the 8 foot picnic table becomes:

Material	Qty
2" x 6" @ 12'	1
2" x 6" @ 10'	3
2" x 6" @ 8'	7
2" x 4" @ 12'	1
2" x 4" @ 8'	1
3/8" x 3.5" Galvanized Carriage Bolts, Washers and Nuts	16
2.5" Galvanized Deck Screws	70+/-
3" Galvanized Deck Screws	50+/-

Note: You can use any species of lumber that you want to build this picnic table. I use **Western Red Cedar**.

Assembling the 8 Foot Picnic Table

Cut and Assemble the Table Top

1. Cut five 2x6s 7'10" long from five of the 8 foot 2x6s.
2. Cut three 2x4s 28" long out of the 12' 2x4. Cut a bevel on each end of the three 2x4s (as shown in the drawings).

3. On a flat surface, lay out the five 2x6s side by side, with the best side facing down. Add about an 1/8" spacing between each 2x6.
4. Position two pre-beveled 2x4s on each end of the table top (as shown in the diagram) 9" from each end, and the third one in the center.
5. Attach the three 2x4s to the table top boards using two 2.5" galvanized deck screws per plank. *Note: The 2x4 braces do not have to be flush with the edges of the table, as shown in the diagrams. Center them so that the 2x6 planks will hang over the 2x4s equally on both sides.* Ensure that all of the 2x6s line up and are squared at the ends before putting in all of the screws. See diagrams below.

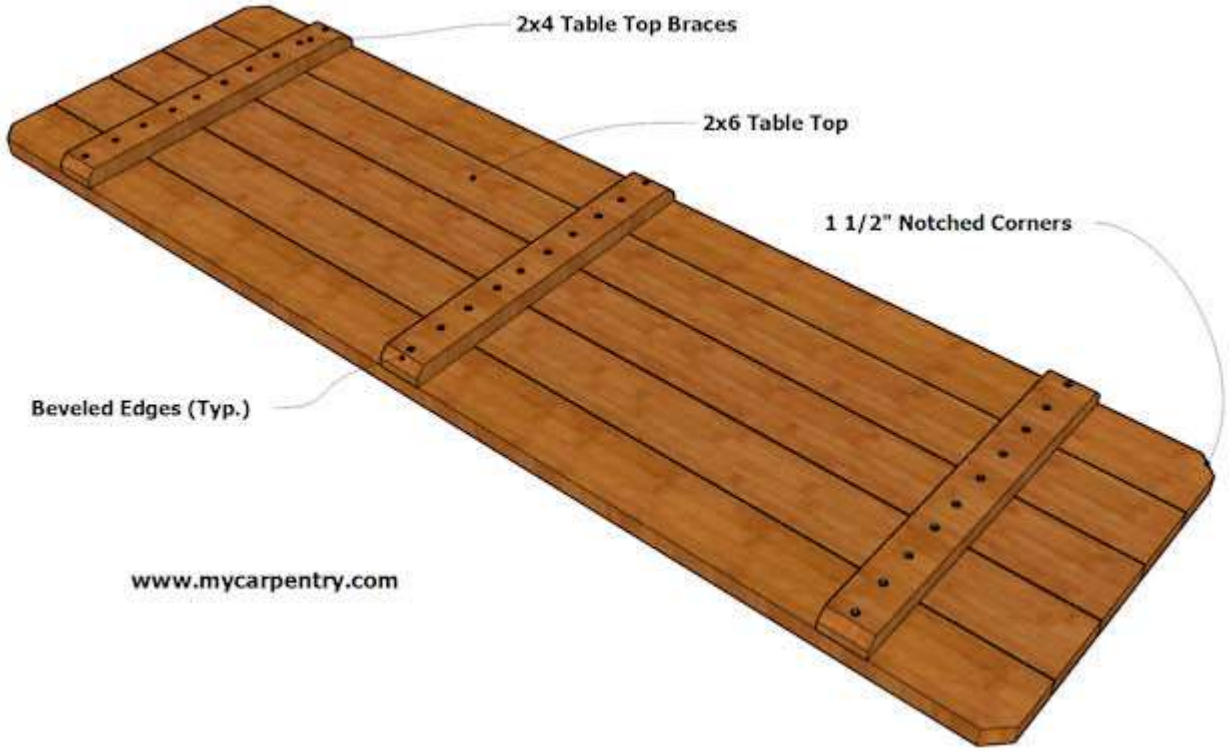


Diagram A - Table Top (bottom side)

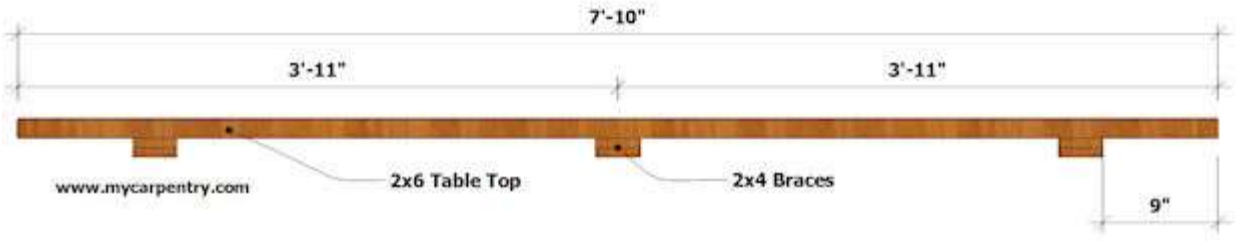


Diagram B - 8 Foot Picnic Table - Table Top (side view)

Cut and Assemble the Legs and Bench Supports

1. Mark an angle (with a *speed square*) 23 degrees on one end of the 12' 2x6 and cut it (this will leave a 67 degree angle on the leg).
2. Measure 31" from the long point of the previous angle cut and mark another 23 degree angle (parallel to the first angle) and cut it. (see diagram below) Using the first leg as a template, mark and cut the remaining three legs from the same 12' 2x6.
3. From what is left from the 12' 2x4, cut two pieces 28" (2'-4") long (these are the table top supports). Notch the ends as shown in the drawings.
4. On the top edge of one of the 2x4s, make a mark 4" from each end. This will be the position of the top of the legs. (see diagram)
5. Place the legs on the 2x4 (as shown in the diagram) and secure them on the edges with two 2.5" galvanized deck screws.

   Note: Once assembled, all of the parts of the leg assembly will be permanently fastened together with carriage bolts. Make note of where the carriage bolts are to be placed so that your deck screws won't be in the way.

6. From the 10' 2x6, cut two pieces 60" (5'-0") long. These will be used for the bench supports.
7. Measure up 16" (1'-4") from the bottom end of each leg and make a mark. This will be the height of the bench support.
8. Line up the top of the 60" bench support with the marks made from the previous step.
9. Center it between the legs so that an equal amount of 2x6 is extending past each leg. (see the diagram below).
10. Temporarily secure the bench support to the legs with two 2.5" galvanized deck screws.

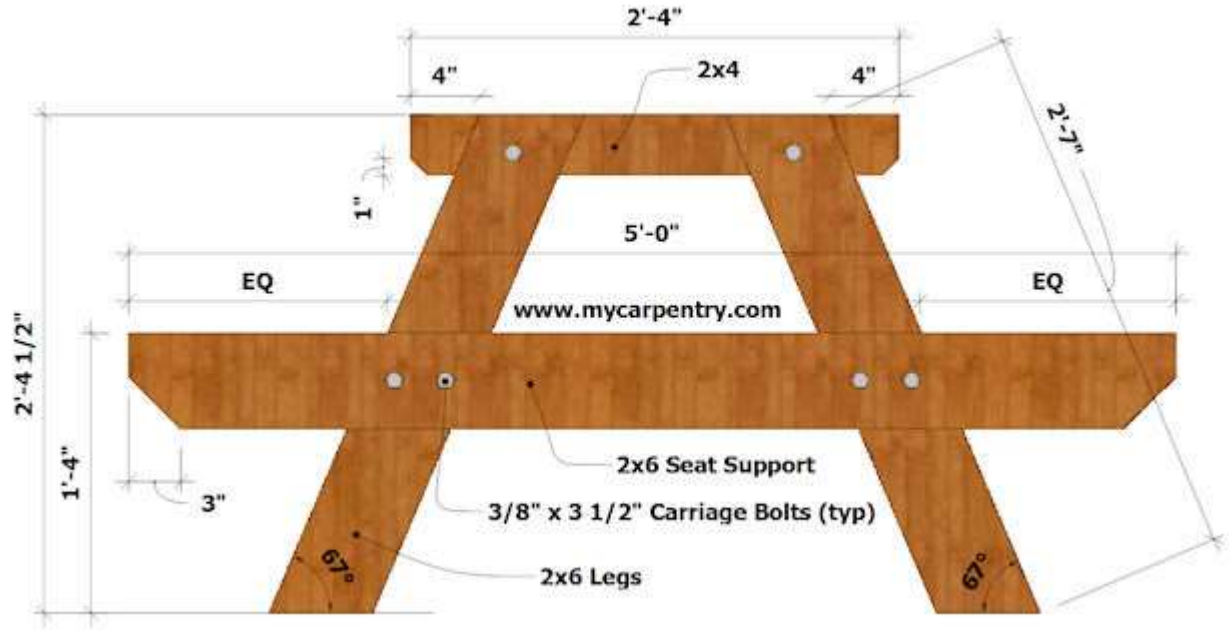


Diagram C - 8 Foot Picnic Table - Leg Assembly

11. Drill 3/8" holes through both boards where each piece connects (as shown in the drawings), and secure the pieces together with four 3/8" x 3.5" galvanized carriage bolts, washers, and nuts. Note that the holes that secure the legs to the upper support should be drilled 2 1/4" from the top of the upper support (see Diagram F). This is so that when you attach the leg assembly to the table top braces, the carriage bolts won't be in the way.
12. Repeat the steps above to assemble the remaining leg assembly.

Attach the Leg Sections to the Table Top

13. Flip the table top upside down and attach the legs to each side of the table top braces using four 3" galvanized deck screws on each end. (see Diagram D)

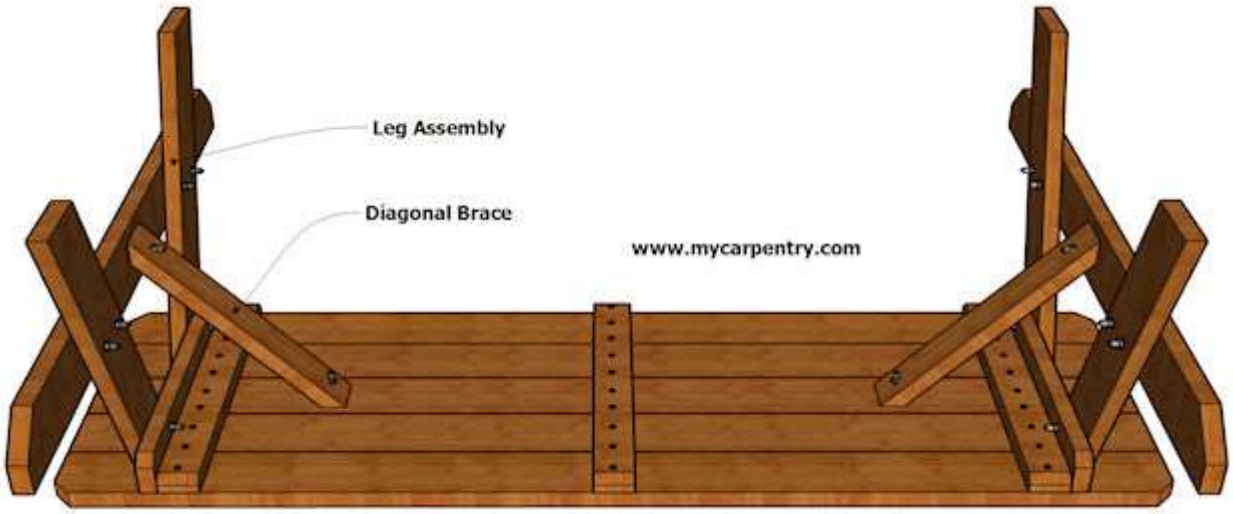


Diagram D - 8 Foot Picnic Table - Upside-Down View

Attach the Diagonal Supports to the 8 Foot Picnic Table

14. From the remaining 8' 2x4, cut two 24" pieces with a 45 degree bevel on each end. These are the diagonal braces. (shown above)
15. From the bottom of the table top (point B) to the inside-middle of the bench support, make a mark at 17" (point C). (see Diagram F)
16. Make another 17" mark on the underside of the table from the inside plane of the bench support (point B) to the center board on the underside of the table (point A). The long points of the 24" brace, when attached, should line up with these two marks. If they don't, tilt the leg assembly until the marks line up. This is required so that the legs and table top will be a perfect 90 degrees.
17. Temporarily secure the braces with 2.5" galvanized deck screws and finally, with carriage bolts.

Adding the Bench Seats to the 8 Foot Picnic Table

18. With the diagonal braces in place and secured, flip the table upright. Cut four 7'-10" bench seat boards from the two 10' 2x6s and the two 8' 2x6s.
19. On each side of the table, center two of the bench seat boards between the two 2x6 bench supports.
20. The bench seat boards should overhang the same amount on each end and on both sides of the picnic table, and spaced approximately 1/8" apart.

21. Once you are satisfied with the placement of the 2x6 bench seat boards, secure them to the bench supports using two 3" deck screws on each end.
22. From the two remaining pieces of 2x6, cut two pieces 16" (1'-4") long. These will be used for the center bench supports.
23. Locate the center of the bench seat and place one of the 16" bench supports upright under the bench. Attach the bench seat support to the bench seat boards using two 3" deck screws (one per bench seat board - see diagrams).
24. From the remaining 2x4 material, cut four seat braces about an inch less than the width of the double 2x6 bench seat (roughly 10").
25. Sandwich the 2x6 center bench supports with these 10" seat braces (as shown in the drawings) and secure them to the bench seat from the bottom with four 2.5" deck screws per brace.
26. Add the remaining carriage bolts and missing deck screws.

Complete!

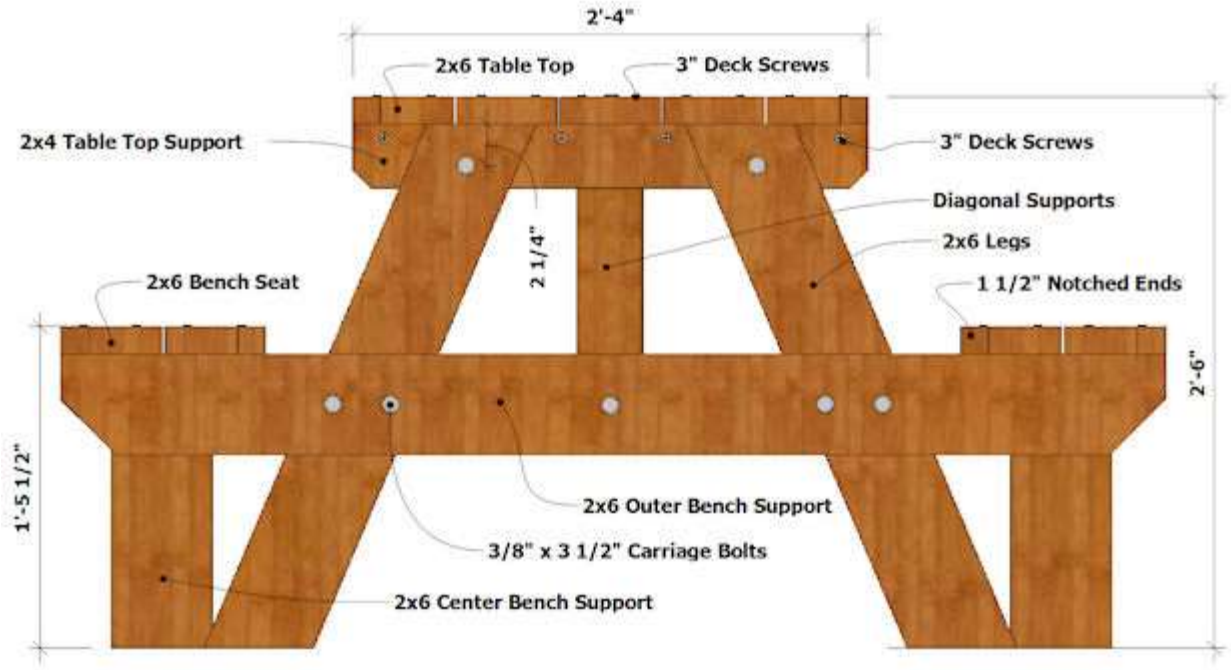


Diagram E - 8 Foot Picnic Table Plans - End View

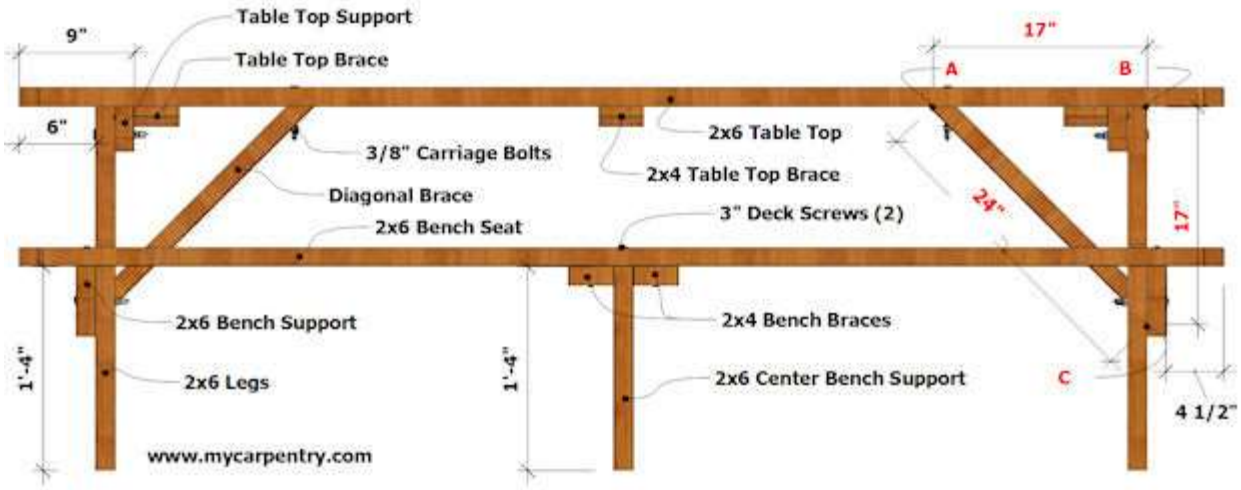


Diagram F - 8 Foot Picnic Table Plans - Side View

I hope you find these 8 foot picnic table plans helpful when you decide to build a picnic table. Check out the other picnic table designs on our free picnic table plans page.

If you are wondering what species of wood to use for your picnic table, this link will take you to a site that shares some good information.