



**Next Meeting: Thursday, June 19, 2008  
7:30 PM at the EAA 113 Aviation Center**

**EAA Chapter 113**  
Mark Freeland  
42636 Faulkner Drive  
Novi, MI 48377

# ***EAGLE'S PROPWASH***

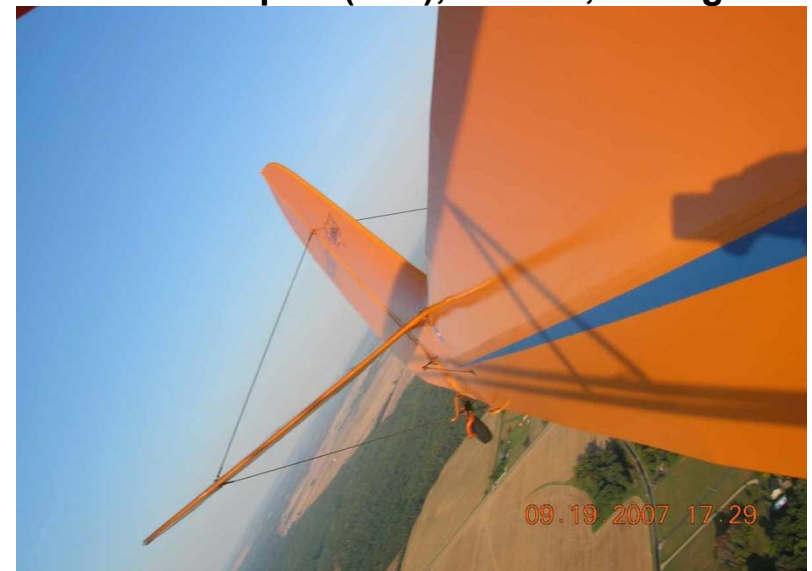
June 2008 Issue



**CHAPTER 113**

***"The Backyard Eagles"***

.....  
Mettetal Airport (1D2), Canton, Michigan



Dog Days of summer!!!

Our Web Site: [www.eaa113.org](http://www.eaa113.org)

**Meetings: 7:30 p.m. the 3<sup>rd</sup> Thursday of each month at the**

***EAA113 AVIATION EDUCATION CENTER!***

[EAA113@yahoogroups.com](mailto:EAA113@yahoogroups.com)

## Member Services

**President:** Dave Buck (734) -4535375  
**Vice President:** Jim Trick (248) 766-2092  
**Secretary:** Bob Wagner (313) 274-8292  
**Treasurer:** Grant Cook (734) 223-2688

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### Aviation Center Management Committee:

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Dave Buck (734) 453-5375  
Bill Brown (734) 420-2733  
Bob Skingley (734) 522-1456

## Mission Statements Chapter

*"EAA Chapter 113's major focus is on the relationships with people who have diverse aviation interests, centered around their love of flight, fellowship, learning and fun. Chapter members have a passion for flying and are willing to share it with others. Chapter 113 provides the opportunity for exchange of information as well as the interaction that leads to friendships that last a lifetime."*

## Board

*"The Board of Directors are to provide both advice and assistance to the chapter officers on an ongoing basis."*

## President's Podium



**Dave Buck (734) 453-5375**  
[dbuck19208@aol.com](mailto:dbuck19208@aol.com)

June 08 Newsletter

Congratulations to David Brent on being selected as the recipient of the 2008 Aviation Studies Scholarship awarded by Chapter 113. David is a junior at Eastern Michigan and the son of chapter member Paul Brent. The scholarship will be awarded at the Fathers Day Pancake Breakfast. Congratulations David! Thanks also to the scholarship chairman, Howard Rundell for another great job in screening candidates.

Congratulations are also in order to Mark McGowan. Mark finished the restoration of his Mooney MK20 last year. Sean Crooks did the first flight after restoration. We presented Mark with an award at the May meeting, after your president forgot to do it at the banquet. (Sounds to me like grounds for impeachment.)

We are going to have a BBQ before the June meeting. It will start at 6:30 pm and the club will provide hot dogs, hamburgers, and soft drinks. Bring a dish to pass if you can. The meeting will start at 7:30.

Make note that there will be no board meeting in July.

Keep looking around. There's always something you've missed.

Dave

## Calendar of Events

### Father's Day Pancake Breakfast

EAA 113 Pancake Breakfast June 15<sup>th</sup>.

### Saturday Morning Breakfast

Every Saturday 8:30am at the Coney Island on Lilley Rd. across the street from Mettetal airport.

**EAA 113 – YAHOO!** To access our YAHOO Group Site, go to <http://groups.yahoo.com/group/EAA113/> New users click "SIGN UP." Already a member of a YAHOO Group? Click "JOIN THIS GROUP" You'll have to sign in every time to access all the features. Contact Donna Monson for further information.

## *PAULSON LIBRARY*

**Barb Cook (734)277-3469**  
barb@armipay.com

June 2008

We are happy to count that we now have 1400 cataloged items in our library. That is 450 more than when I started cataloging in September 2007. We have several empty shelves for more items, and to spread out the contents with meaningful spacing between sections.

We hope to have the library open to guests during the Pancake Breakfast on Father's Day. Anyone who could be available to babysit the library that morning would be greatly appreciated. We would provide you with information, some FAQs, and some good answers!

If you'd like to help out here, give Dave Buck or myself a call. There are still several shelves of un-cataloged materials. These should keep us busy for the next year, while we are making ourselves known to both the aviation and general community.

Our newest area is: AIRCRAFT MAINTENANCE. We have 3 shelves of these items, and one of EAA publications alone.

Happy Reading,  
Barb Cook

FAMOUS PEOPLE with  
PILOT CERTIFICATES \*

Prince Andrew	Mario Andretti	James Arness
Richard Bach	F. Lee Bailey	Howard Baker
Dirk Benedict	Chris Boniol	Jimmy Buffet
Levar Burton	George Bush	Johnny Carson
Prince Charles	Roy Clark	Stephen Coonts
Dave Coulier	Tom Cruise	Hon. Duke Cunningham
Robert Cummings	Dan Dierdorf	Tom Daschle
John Denver	Michael Dorn	Hugh Downs
Clint Eastwood	Dwight Eisenhower	Bill Elliot
Hal Fishman	Michael J. Fox	Sarah (Fergie) Ferguson
Mickey Gilley	Bill Glass	John Glenn
Barry Goldwater	David Hartman	Paul Harvey
Chad Hennings	King Hussein	Howard Hughes
Barron Hilton	Alan Jackson	Bruce Jenner
Joe Juneau	George Kennedy	Tom Landry
Bill Lear	Ann Lindberg	George McGovern
Harriet Nelson	Paul Newman	Leonard Nimoy
Joe Montana	Susan Oliver	Arnold Palmer
Dennis Quaid	Cliff Robertson	Anthony Robbins
Johnny Rutherford	Kurt Russell	William Shatner
Marty Schottenheimer	Jimmy Stewart	Lowell Thomas Jr.
John Travolta	Bobby Unser	Hon. Barbara Vucanovich
Rusty Wallace	Sam Wyche	YOU!!!!

\*compiled by Rod Machado in his "Private Pilot Handbook"

## Oil Filter Cutting Tool

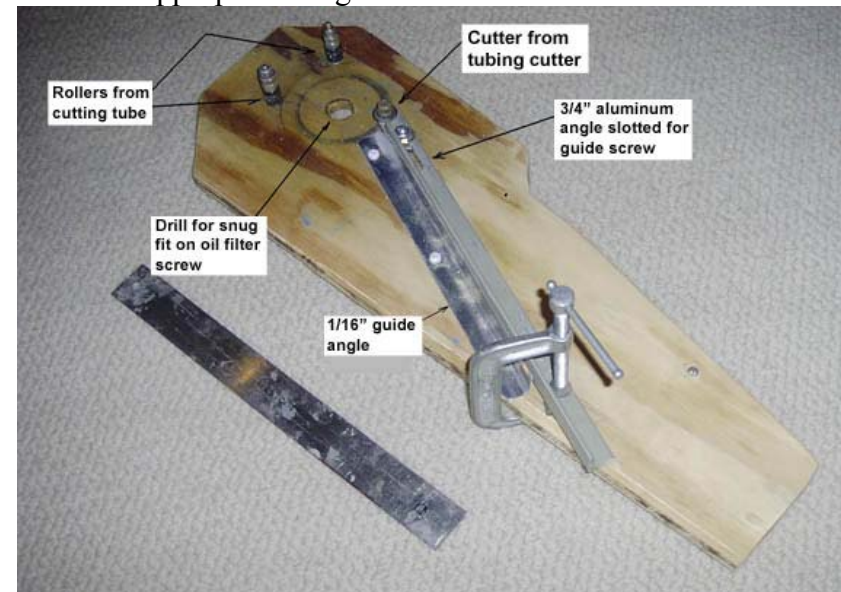
By George Killishek

It's a good idea to cut open the used oil filter every time we change oil to inspect for metal particles. Once an engine starts to make metal, it's a fairly short while before big problems are likely to occur in the most inconvenient circumstances.

Aircraft Spruce sells tools for cutting open the filter canister starting at about \$50 and going up well into the three-digit range. The Pilot Shop at Addison Airport sells a good tool for about \$120.

I built a workable tool in about two hours for a total cost of \$0.00. The two pictures below show it: very ugly but serviceable.

Materials include a piece of scrap 3/4" plywood, a length of 3/4" aluminum angle, a 2 1/2" "C" clamp, assorted nuts, bolts, washers and screws and the cutting blade and guide rollers from an old tubing cutter. All were found lying derelict in my garage. The pictures are self-explanatory, except to note that the aluminum angle supporting the cutting tool is supported off the surface of the plywood to make the cut at the appropriate height on the filter canister.



## EAA Chapter 1000 Standardized Work Tables

Bob Waldmiller

(Originally published June 1992)

Revised/updated by Russ Erb

Several articles have been written in a number of publications on the subject of setting up a workshop in which to assemble your homebuilt project. Most of these focus on how much space you'll need in your hangar, garage, basement, den, or living room (pick one). Likewise, there is always some discussion on the kind of tools you'll need to build your metal, wood, composite, or tube and rag aircraft. The design of your aircraft will pretty much dictate what kind of hand and power tools you'll need but there is always one common tool that can be used in any workshop—a decent work bench or work table.

A good looking airplane starts with decent tooling and although you can make cheap expendable tooling for one-time applications such as jigs and fixtures, you'll no doubt agree that a sturdy work table is an absolute must. I've seen tables made from a sheet of plywood or particle board over a couple of saw-horses and the mere flimsiness of the work surface quickly leads to severe onsets of the love-hate relationship with the airplane—most of it spent in the hate mode—and it's tough to do quality workmanship when you're that frustrated.

Remember, a good looking airplane starts with decent tooling. On one of my previous projects I used work tables built out of light weight angle iron with holes in it all bolted together. We used a 5/8ths inch particle board top covered with Formica for the work surface and gave it adjustable legs for leveling. A neat idea and the tables sure looked nice but they were a little too wide (36") and a little too high (36"). One problem we had was the work surface was a bit too flimsy so we put stiffeners under it—but even then we didn't want to climb on the tables or put any heavy loads on it.

When we Bondo'ed the Defiant canard jigs to the table, we found that the table itself contributed to our difficulties in getting everything lined up. Our solution was to adopt some basic etiquette, like keeping our

elbows and feet off the table. Not a very practical solution was it? Let's face it, sturdy worktables are a must for any project and a good-looking airplane starts with decent tooling.

When Norm Howell and I discussed the subject of building work benches for the infamous "Hangar 308," we somehow managed to engage our minds simultaneously and from the synergy of both our brain cells crashing together, we hit upon the idea of standardized general-purpose work tables. "Standardized" such that all our worktables are built to the same general dimensions—especially the 33-3/4 inch table height and "general-purpose" such that our tables are not aircraft specific. By that I mean that our tables are not 10- or 15-foot long but rather a relatively short 5 feet in length. It is a lot easier to bolt our tables together than to disassemble a larger one. Besides, what do you do with a 15-foot long bench after you've built that canard or fuselage? Long tables don't fit well in small workshops and they're tough to give away. In contrast, our 2'-by-5' work tables can be put just about anywhere and used for almost anything. They are also sturdy enough to climb on without fear of disturbing jig or fixture alignments.

### *Addendum by Russ Erb*

I'd like to submit for your consideration the EAA Chapter 1000 standardized work table. These tables take a totally different approach than the one shown in the Bearhawk newsletter. The crux of the idea is that instead of using one large table, use several standardized smaller tables that can be clamped or bolted together and individually leveled.

I'm building in a one car garage that measures 20'6" x 13'10", of which I lost 2 feet of width to the requisite shelves. Like Sean, an 18' x 4' table would take a huge chunk out of that, especially at the ends. Additionally, I am not part gorilla, and thus have a hard time reaching across a 4' table (comfortably reaching the middle isn't easy either). However, reaching across a 2' table is no sweat.

The Chapter 1000 standard work table is 2' x 5' in dimensions, and 33-3/4" high. I can use them separately to build small parts, such as the wing ribs. For the wing spars, which are just under 14' long, I will clamp 3 tables together for a 2' x 15' table. When it is time to assemble the wings, I will move the tables out of the way and set up

the wing jigs (yes, plural—I plan to do both wings simultaneously—I figure I’ll have a better chance of making them identical that way.) For the fuselage, I’ll clamp the three tables (maybe four) together and attach a flat board across the tables for the required width. My initial thought is to use one or two thicknesses of 7/16” chipboard (or OSB). While it doesn’t look pretty, it doesn’t seem to warp like plywood. This has the additional benefit that I won’t care if it gets burn spots while tack welding the fuselage.

After tack welding, remove the boards, which will leave most of the welds exposed for completing. (Actually, I’m thinking of putting the fuselage on a rotating spit to make the welding easier.) My main point is that several small standard tables are more manageable and useful than one big one.

Something else that we do with our tables is to cover the tables with butcher paper held down around the edges with masking tape. That way, the paper gets messed up, but the table is unharmed. When the paper is really messed up, just replace it. It has the added benefit that you can scribble notes on it, such as measurements. I can never seem to remember them for any length of time any other way.

Now that I’ve convinced you that you can’t live without a couple of these first-class work tables, refer to the following detail drawing and I’ll tell you how you can build ‘em: \

Step 1: Buy the materials as listed on the drawing. Don’t skimp and get cheap wood as the better quality lumber is well worth the investment. Powerdrive screws work real well for fastening the plywood to the two-by-fours but use flat head Phillips wood screws for fastening the two-by-fours together. You might want to buy a #10 countersink bit for your drill too. In 1992 dollars all this works out to approximately \$47 per table. (*About \$60 per table in 1997*)

Step 2: Cut the plywood to size. You’ll probably want to cut across the 4’ dimension first, leaving a 3’ x 4’ piece. Be careful on the next cut as the saw kerf will use up an eighth of an inch or more so the 24” dimension of both the top plywood and the shelf plywood will be a little undersize. Build the upper frame first and cover it on one side

with the 3/4” plywood. You literally build this table from the top down and it needs to be flat and square. Use 3” long #10 wood screws and glue to fasten the two-by-fours together and use 1-1/2” long #8 construction screws along with the glue to fasten the plywood top in place.

Step 3: Turn the top frame over and fasten the four legs in place with 3” long wood screws and glue. Make sure everything is as square as possible then fasten the 17-1/2” long leg doublers on the outside of each leg with glue and 2” long wood screws.

Step 4: With the table still upside-down, build the lower shelf frame in place on the table legs. Again glue and screw everything in place with the 3” long #10 wood screws. Then add the remaining 8.5” long leg doubler to the table legs. Since the lumber dimensions vary, it is best to mark the 8.5” long doublers in place before cutting them to length. That way you’ll get a good custom fit on the doublers.

Step 5: Turn the table upright and fasten the lower shelf plywood in place with the 1-1/2” long construction screws. Finally, glue and nail the edge molding in place with 3d finishing nails. This gives the table a nice finished appearance and will keep those nasty wood slivers out of your hands.

And that’s all there is to it! If you take your time and do a good job these tables will last forever—which is exactly the kind of work table that you want. Norm and I have built five tables just like the one described above and have been very happy with them. Our airplanes even look a bit better sitting on them! Like I’ve been saying all along, a good-looking airplane starts with decent tooling!

EAA Chapter 1000 Standardized Work Table Plans

Bob Waldmiller

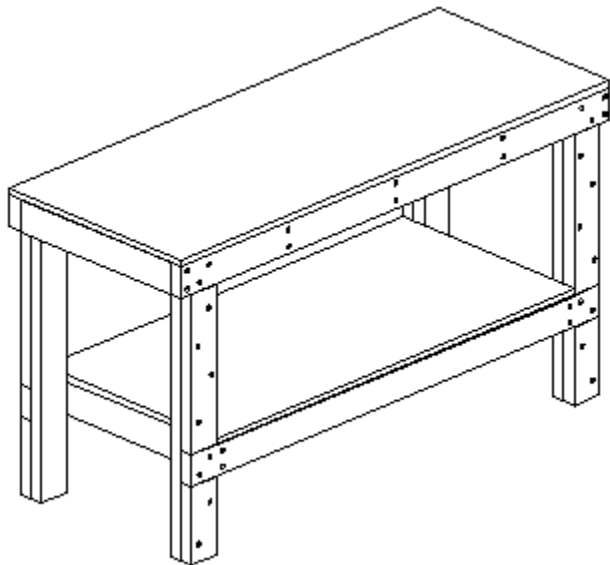
Originally published June 1992

[Building Instructions](#) -

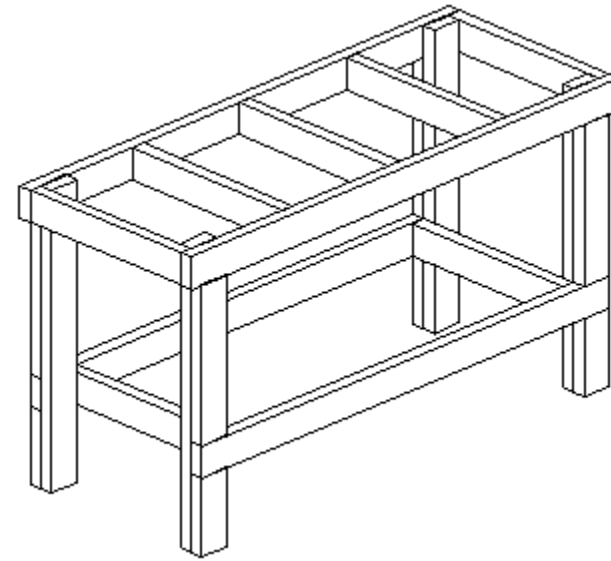
<http://www.eaa1000.av.org/technicl/worktabl/worktabl.htm>

BILL OF MATERIALS (to build 2 tables)

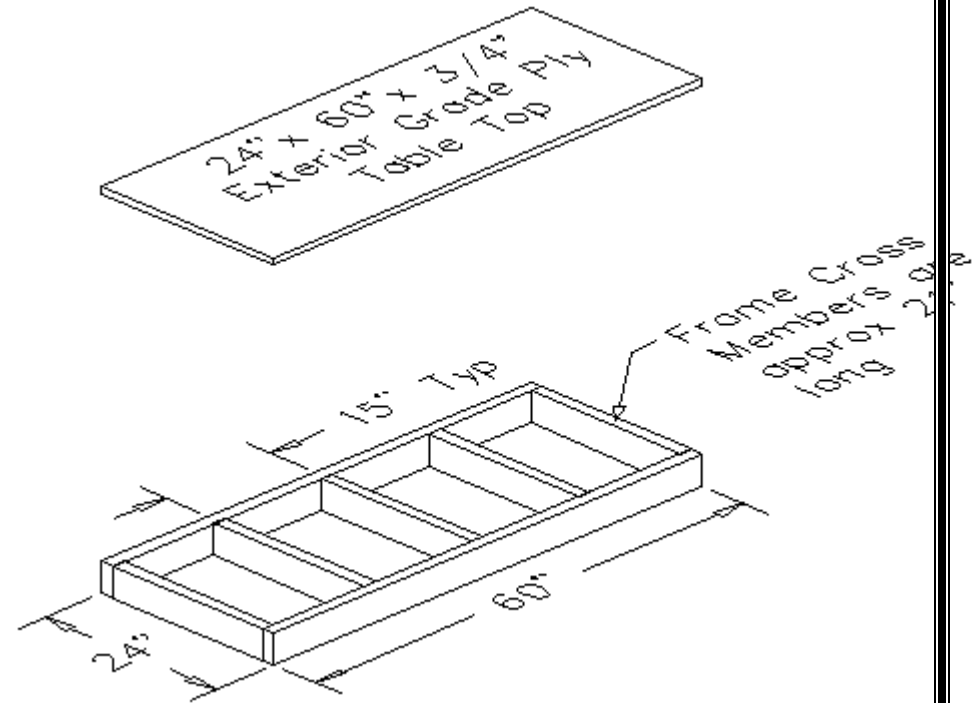
- (1) 3/4" x 4' x 8' Sanded Exterior Plywood
  - (1) 1/2" x 4' x 8' Plywood
  - (14) 2" x 4" x 8' Premium Studs
  - (4) 1/4" x 3/4" x 8' Pine Flat Screen Moulding
  - (80) #10 x 3" Wood Screws
  - (50) #10 x 2-1/2" Wood Screws
  - (50) #8 x 1-1/2" Construction Screws
  - (1) Box of 3d Finishing Nails
  - (1) 16 oz Elmer's Carpenter's Wood Glue
- (See cutting schedule below)



Fully assembled work table



Assembled work table shown with the plywood removed for clarity



Exploded table top

2x4 Cutting Schedule  
 \*Cut to match lower legs

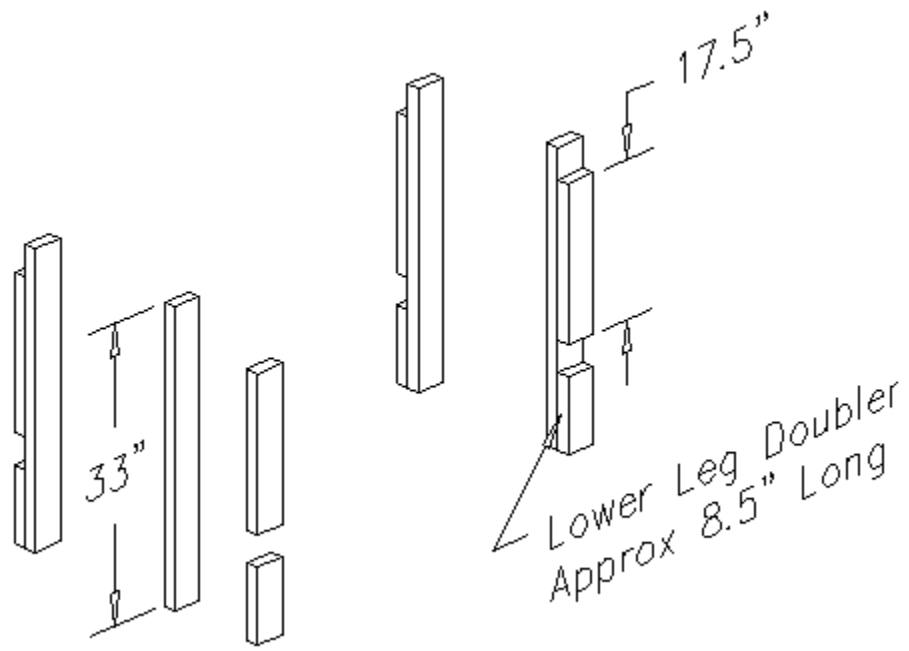
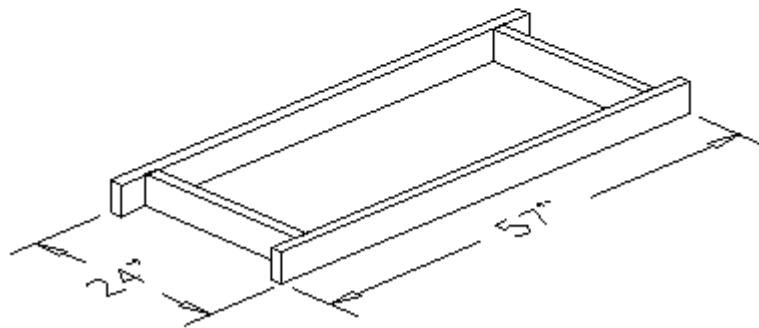
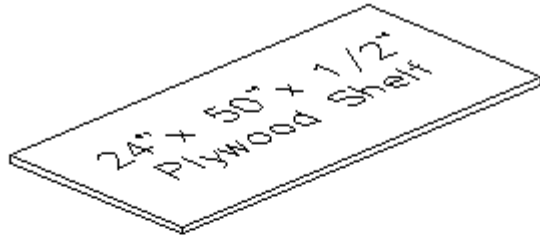


Table legs



Exploded lower shelf

2x4 #	Cut to lengths				
1	60"	33"			
2	60"	33"			
3	60"	33"			
4	60"	33"			
5	57"	33"			
6	57"	33"			
7	57"	33"			
8	57"	33"			
9	17.5"	17.5"	17.5"	17.5"	17.5"
10	17.5"	17.5"	17.5"	21"	21"
11	21"	21"	21"	21"	8.5"*
12	21"	21"	21"	21"	8.5"*
13	21"	21"	21"	21"	8.5"*
14	8.5"*	8.5"*	8.5"*	8.5"*	8.5"*