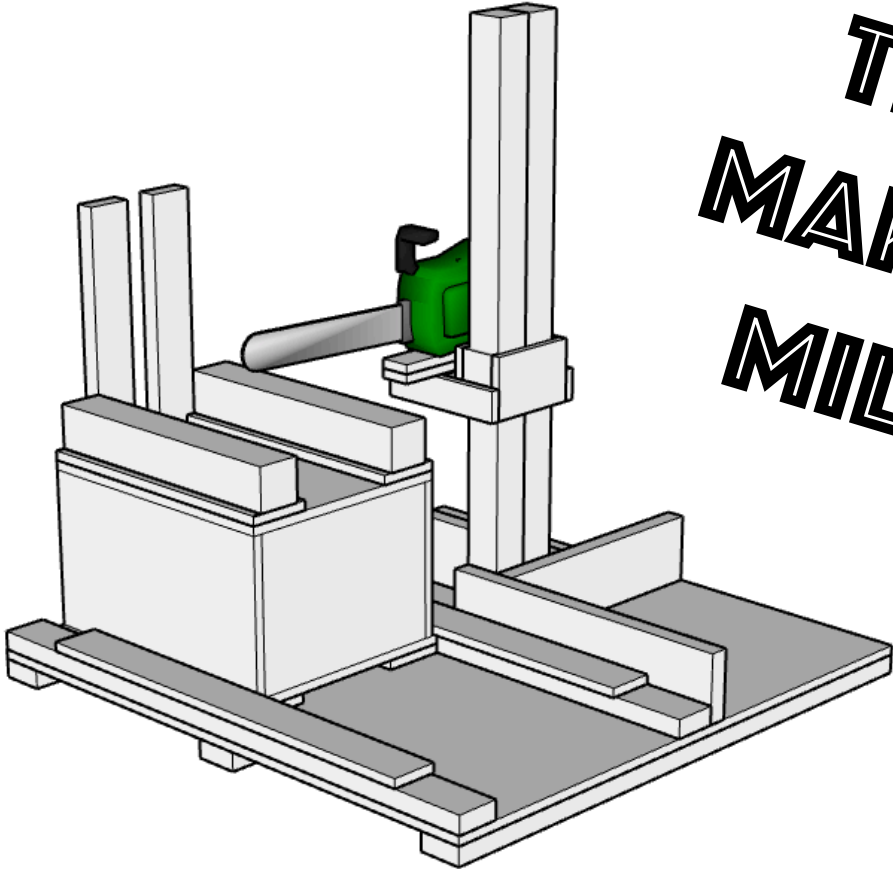


**MAKING  
MAKERS**



**THE  
MAKER  
MILL**

# **DIY VERTICAL CHAINSAW MILL**

**MAKER PLAN**

VERSION 2.0 - UPDATED NOV 2020

USE AT YOUR OWN RISK DISCLOSURE: THESE PLANS REPRESENT MY IDEAS AND EXPERIENCES ONLY. I AM NOT A PROFESSIONAL AND THE INFORMATION IN THESE PLANS SHOULD NOT BE CONSIDERED ADVISE. NONE OF THE AUTHORS, OR ANYONE ELSE CONNECTED WITH MAKING MAKERS AND THESE PLANS IN ANY WAY WHATSOEVER, CAN BE RESPONSIBLE FOR YOUR USE OF THE INFORMATION CONTAINED IN OR LINKED FROM THESE PLANS.

## MATERIALS LIST

1 4'X8' 3/4" SANDED PLYWOOD  
1 2'X4' 3/4" <SAME>  
3 2"X4"X8'  
3 4"X4"X8' (KILN DRIED PREFERRED)  
WOOD GLUE  
SCREWS 1 3/4" & 2 1/2")  
TIMBERLOK/LAG) SCREWS - 6" (NEED 4)  
CHEAP YARD STICK

## CUTLIST

### SANDED PLYWOOD      2x4x8

1 @ 4'x4'	5 @ 4' (approximate OK))
2 @ 36" x 3 3/4"	2 @ 32"
4 @ 22" x 5"	
1 @ 22" x 19"	<u>2x6x8</u>
1 @ 22" x 18"	
2 @ 22" x 12 1/2"	2 @ 25 1/2"
2 @ 16 1/2" x 12 1/2"	1 @ 20 7/16"
2 @ 15" x 2 1/2"	
2 @ 10 3/4" x 2 1/2"	
1 @ 7 1/2" x 2 1/2"	
1 @ 7 1/2" x 5 1/2"	
2 @ 7 1/2" x 5"	
2 @ 5" x 3 1/16"	

## TOOLS USED

MITRE SAW  
TABLE SAW  
DRILL

(OPTIONAL)  
JIG SAW TO AID IN BREAKING DOWN  
PLYWOOD  
SQUARE  
LEVEL  
CLAMPS

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## Cutlist — 2x4x8

### Notes

#### Generating the following components:

- [1] → 47.875" (x5)
- [2] → 32" (x2)

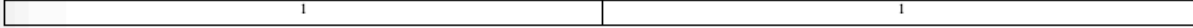
Disregard 47.875", that was just for the graphic, just cut your first 3 2x4's in half

#### The following stock board lengths are available:

96"

#### Results:

96" board = [1] 47.875" + [1] 47.875" + 0.125" cut losses + 0" excess



96" board = [1] 47.875" + [1] 47.875" + 0.125" cut losses + 0" excess



96" board = [2] 32" + [1] 47.875" + 0.25" cut losses + 15.875" excess



96" board = [2] 32" + 0.125" cut losses + 63.875" excess



#### Board Count:

4x 96" (8')

Generated at <http://jonathan.overholt.org/projects/cutlist>

## Cutlist — 4x4x8

### Notes

#### Generating the following components:

- [1] → 47.875" (x2)
- [2] → 22" (x2)

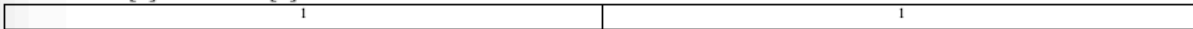
Disregard 47.875", that was just for the graphic, just cut your first 4x4 in half

#### The following stock board lengths are available:

96"

#### Results:

96" board = [1] 47.875" + [1] 47.875" + 0.125" cut losses + 0" excess



96" board = [2] 22" + [2] 22" + 0.25" cut losses + 51.75" excess



#### Board Count:

2x 96" (8')

## Cutlist — 2x6x8

#### Generating the following components:

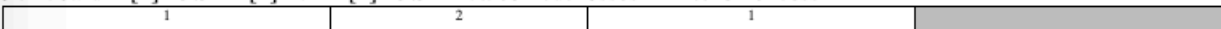
- [1] → 25.5" (x2)
- [2] → 20" (x1)

#### The following stock board lengths are available:

96"

#### Results:

96" board = [1] 25.5" + [2] 20" + [1] 25.5" + 0.375" cut losses + 24.625" excess



#### Board Count:

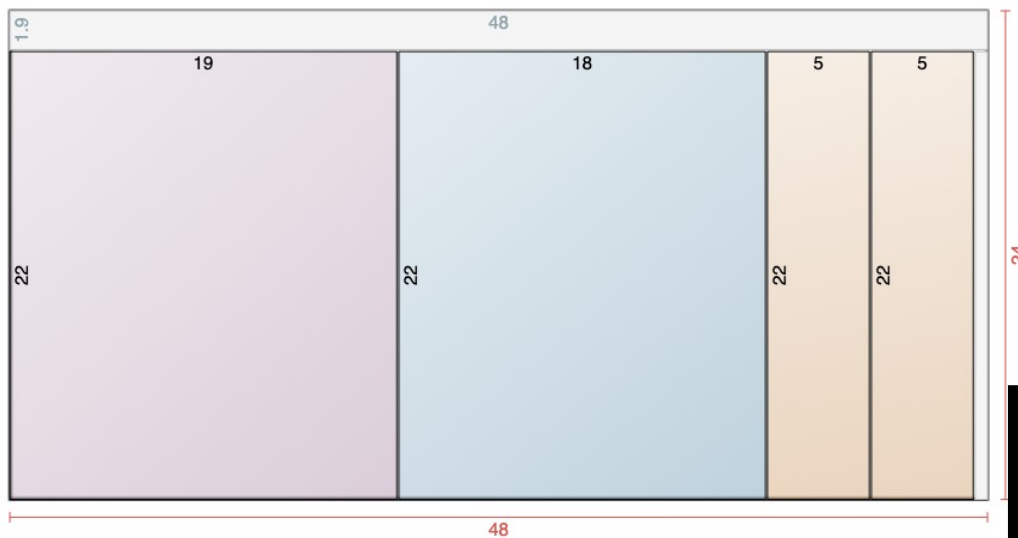
1x 96" (8')

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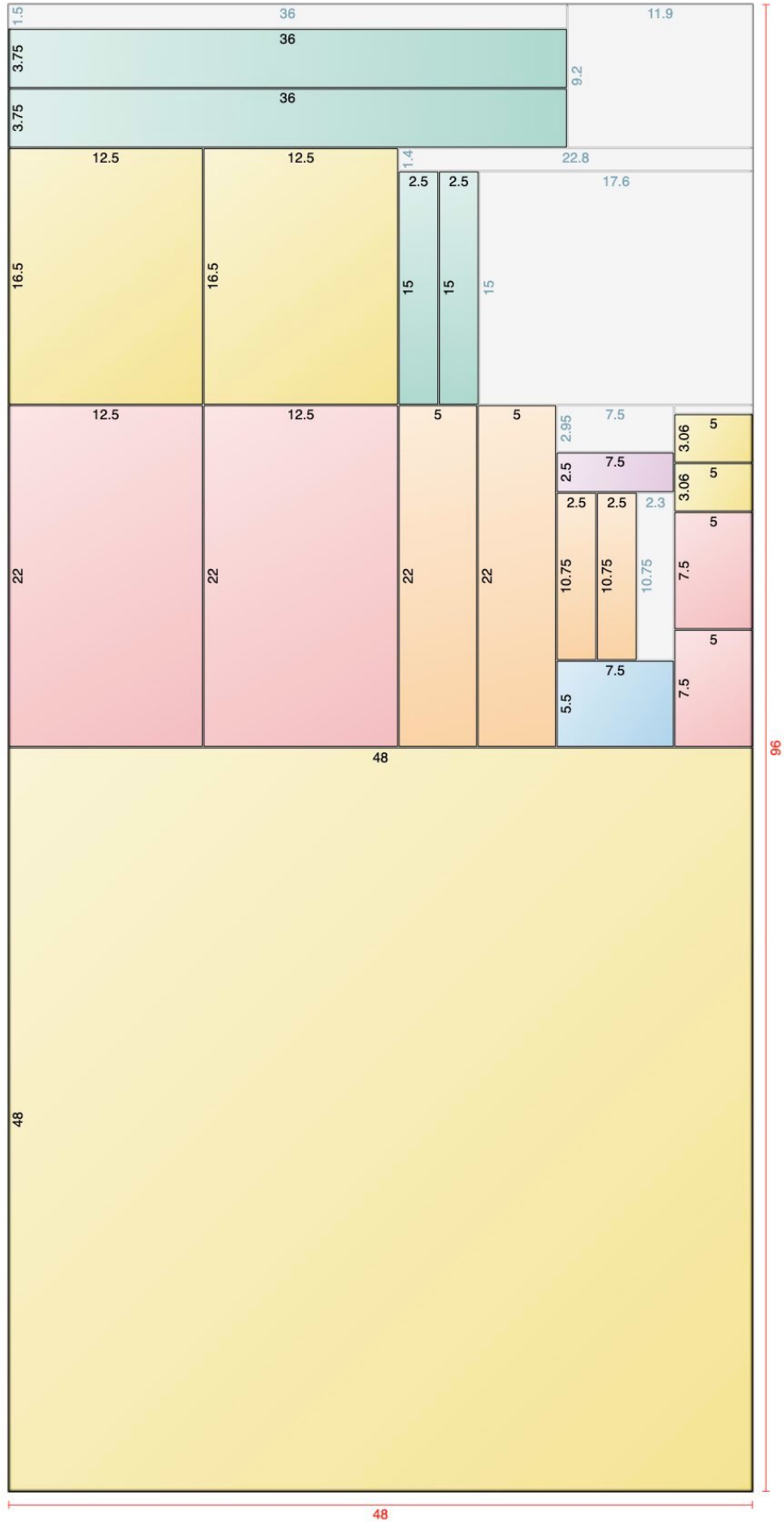
# PLYWOOD CUTLIST

SEE DIAGRAMS ON THE NEXT TWO PAGES

<span style="font-size: 1.2em;">■</span> CutList Optimizer		Vertical Chainsaw Mill Project
<span style="font-size: 1.2em;">■</span> Panels		
Length	Width	Qty
48	48	1
36	3.75	2
22	5	4
22	19	1
22	18	1
22	12.5	2
16.5	12.5	2
15	2.5	2
10.75	2.5	2
7.5	2.5	1
7.5	5.5	1
7.5	5	2
5	3.06	2
<span style="font-size: 1.2em;">◆</span> Stock sheets		
Length	Width	Qty
96	48	1
24	48	1



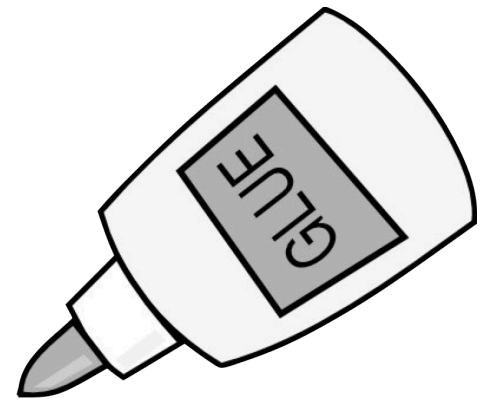
# PLYWOOD CUTLIST CONTINUED...



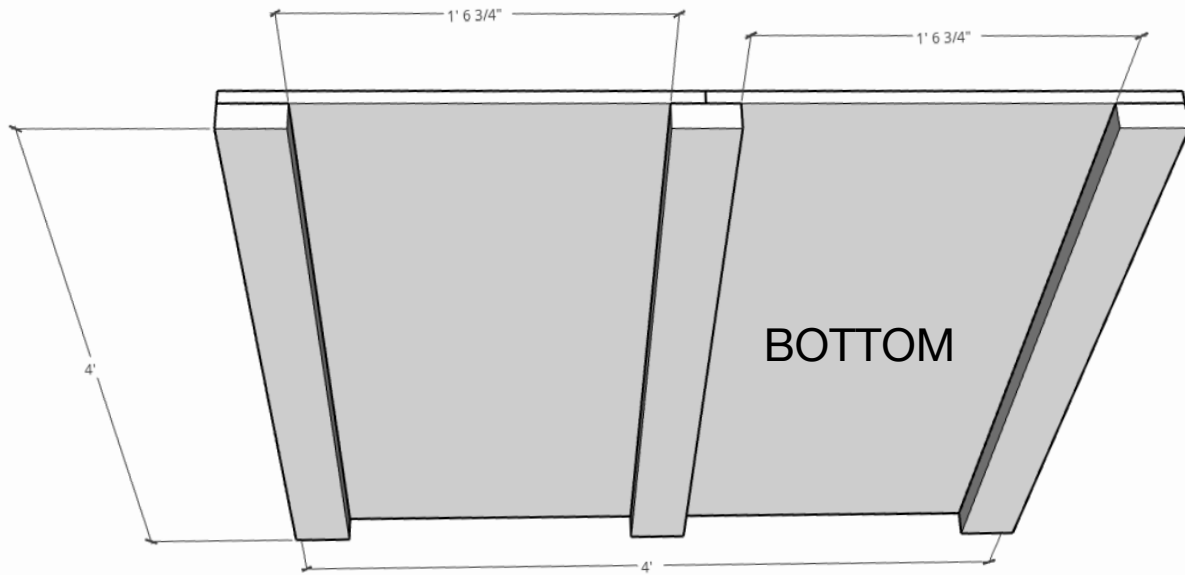
# PART 1

## CONSTRUCT THE BASE

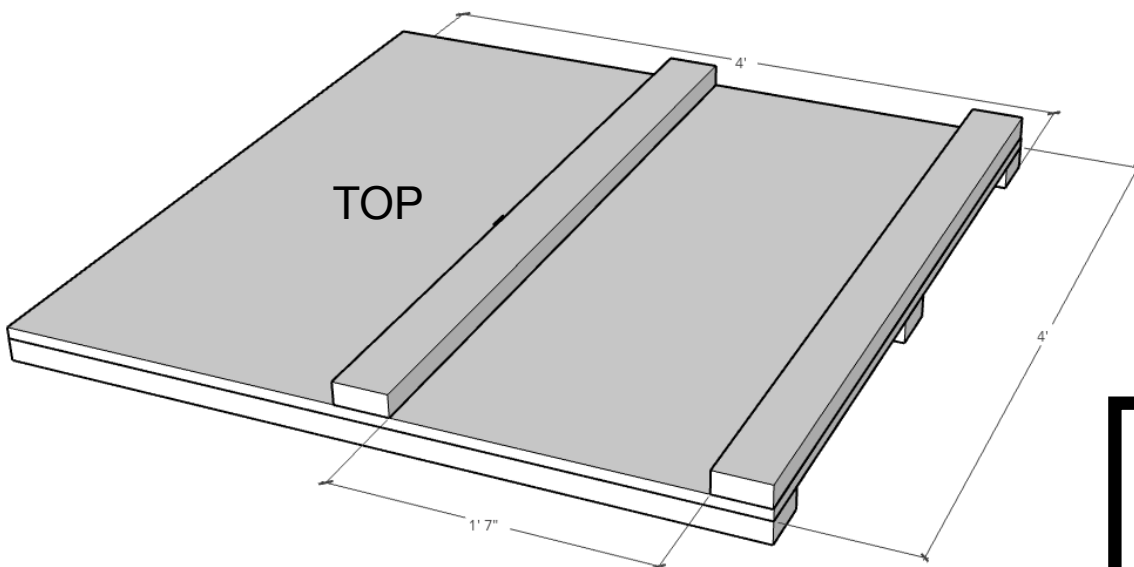
STEP 1) ATTACH 3 48" 2X4'S TO THE BOTTOM OF THE 4'X4' PLYWOOD BOARD. TARGET LEFT, CENTER, AND RIGHT AS SHOWN



GLUE EVERYTHING IN THIS PROJECT UNLESS NOTED

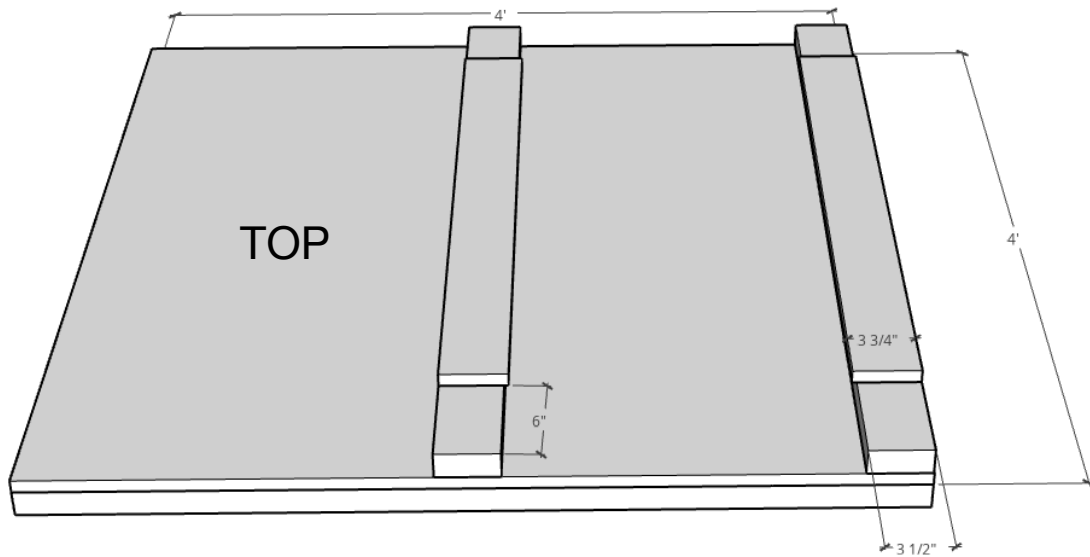


STEP 2) FLIP PROJECT OVER AND ROTATE 90 DEGREES. NOW ATTACH 2 48" 2X4'S IN PARALLEL AS SHOWN 19" APART



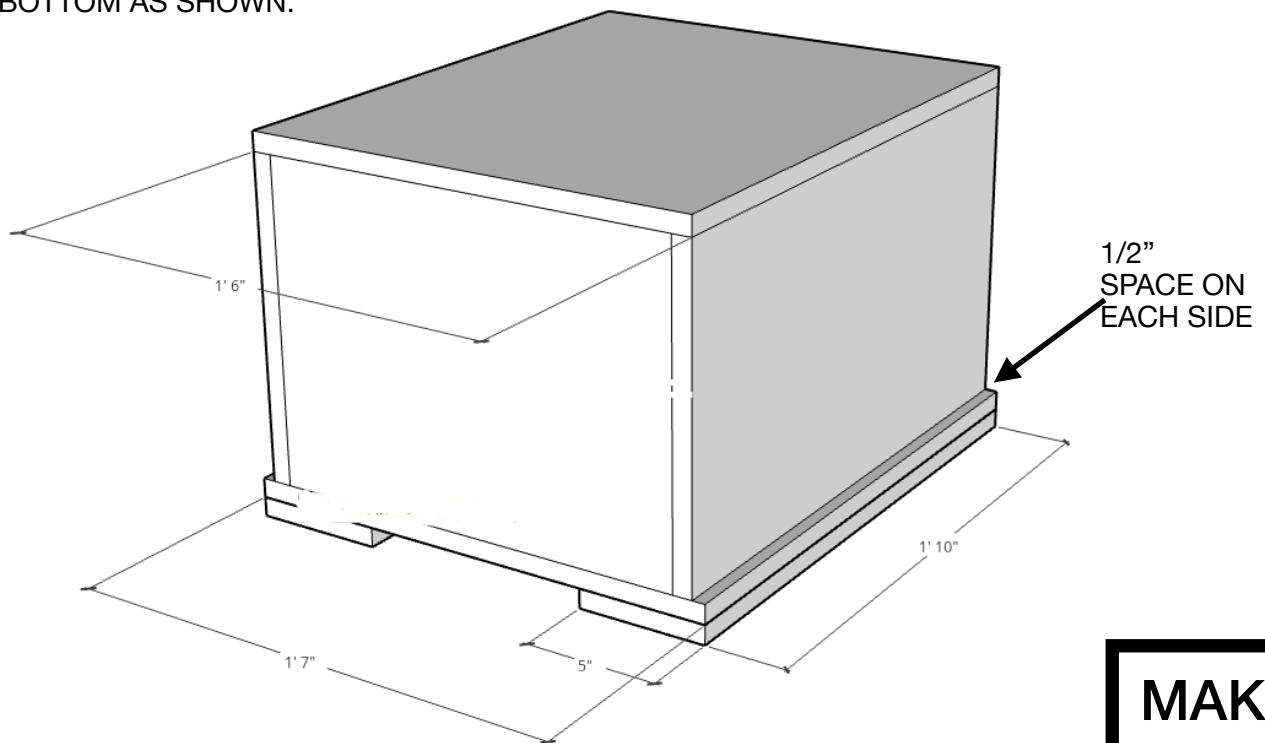
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STEP 3) NOW ATTACH 2 36" X 3 3/4" (ACTUAL) BOARDS TO THE 2X4'S YOU JUST INSTALLED. TARGET 6" FROM THE ENDS WITH THE 1/4" OVERHANGS TOWARDS EACH-OTHER AS SHOWN.



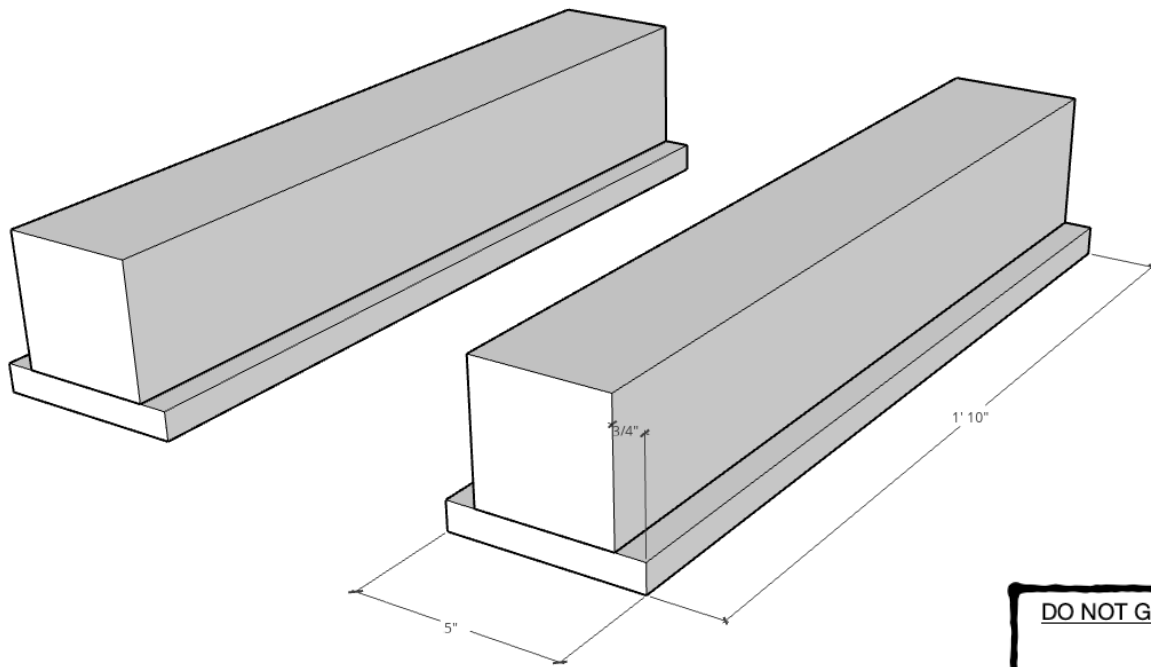
## PART 2 MAKE THE BOX SLED

STEP 1) I TRUST IF YOU ARE MAKING A MILL THEN YOU KNOW HOW TO MAKE A SIMPLE BOX. ASSEMBLE THE FOLLOWING. BE SURE TO LEAVE 1/2" ON EACH SIDE OF THE BOTTOM AS SHOWN.

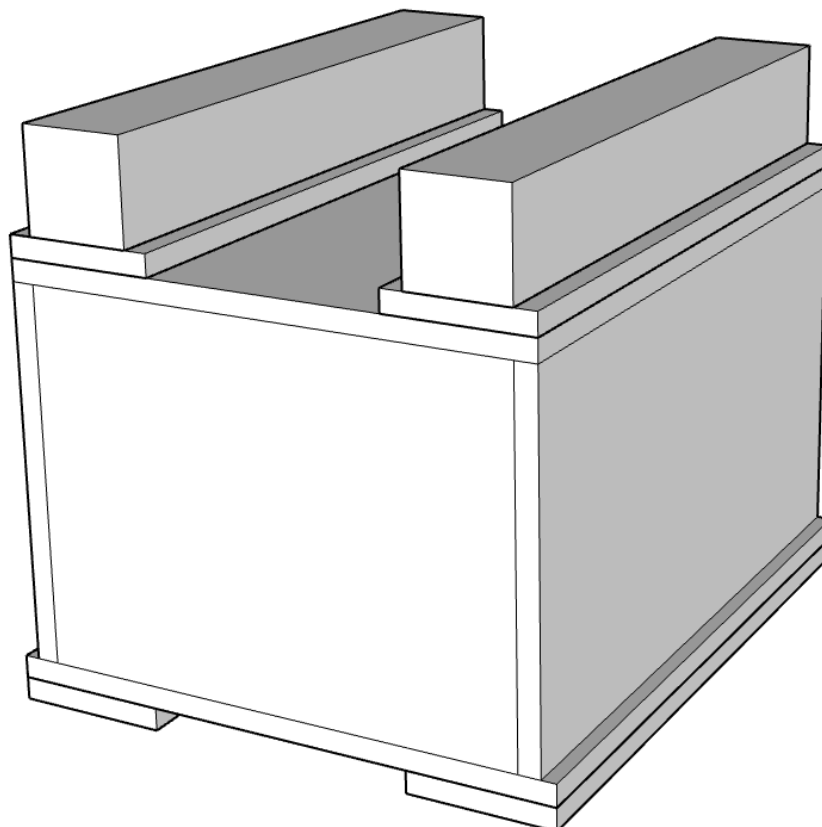


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STEP 2) NOW CREATE YOUR ADJUSTABLE AND SACRIFICIAL BOARDS BY ATTACHING THE 22" 4X4'S TO THE 22" 1X5'S FROM THE BOTTOM. LEAVE 3/4" ON EACH SIDE.

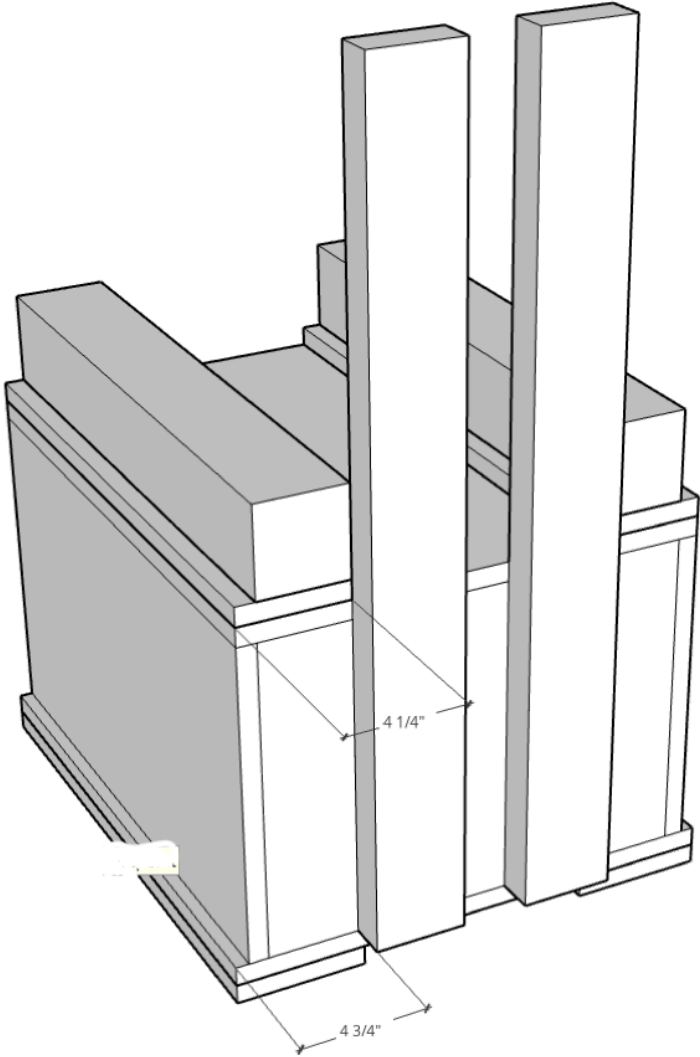
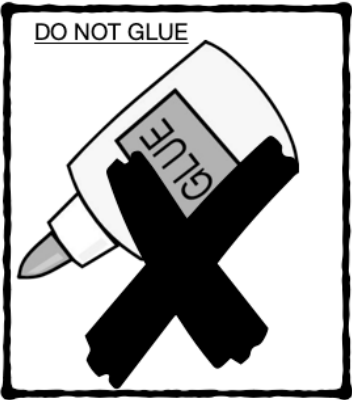


STEP 3) SIMPLY ATTACH THESE TO THE TOP OF THE BOX SLED. THESE ARE MEANT TO BE ADJUSTABLE AND THE 4X4 PART

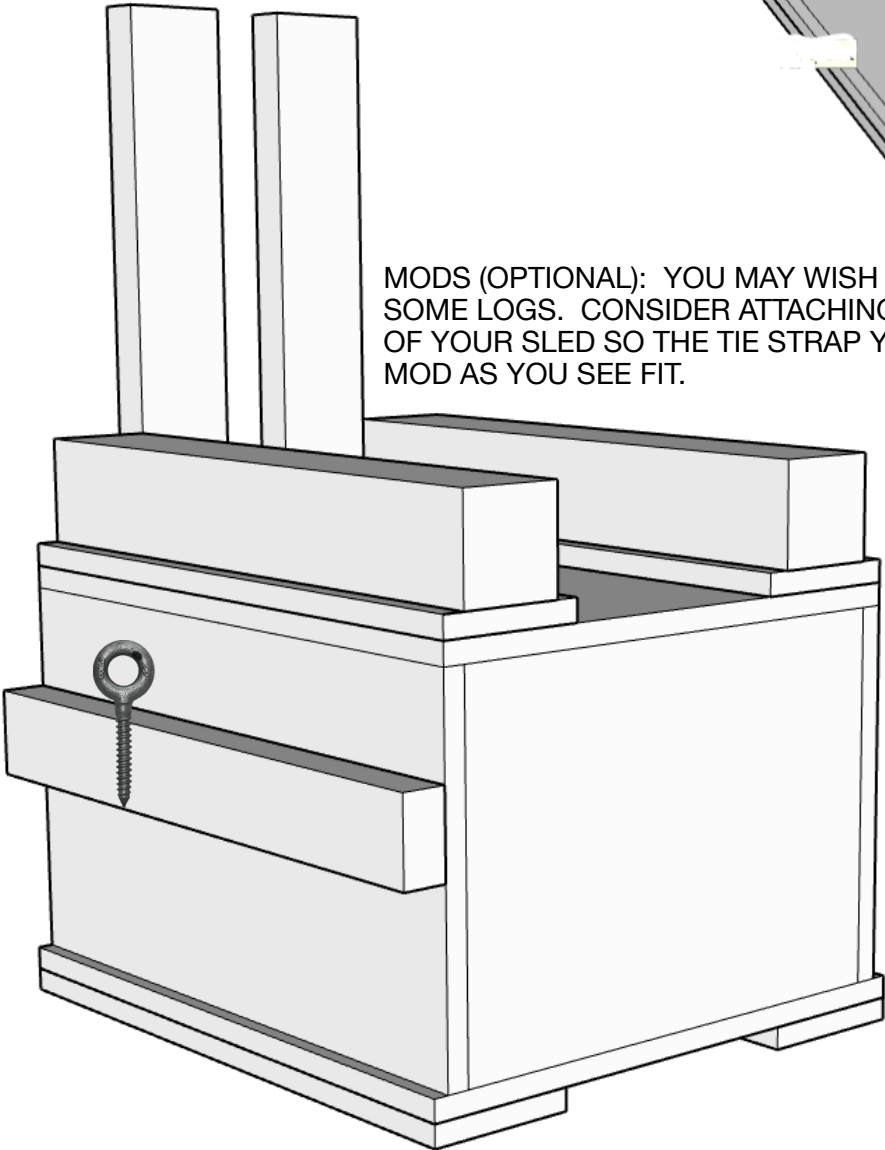




STEP 4) FINALLY, ATTACH 2 32" 2X4'S TO THE BACK OF THE SLED AS SHOW. THESE ARE ALSO MEANT TO BE REMOVABLE AND ADJUSTED AS NEEDED.



MODS (OPTIONAL): YOU MAY WISH TO USE TIE DOWNS OR BUNGY'S TO SECURE SOME LOGS. CONSIDER ATTACHING AN 2x4 and EYE BOLT SCREW TO THE SIDES OF YOUR SLED SO THE TIE STRAP YOU USE HAS SOMETHING TO HOLD ONTO. MOD AS YOU SEE FIT.

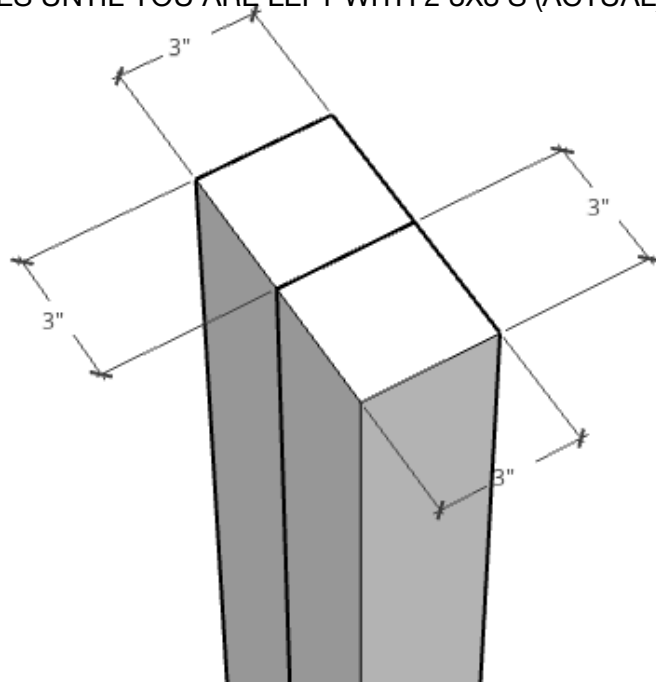


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# PART 3

## CONSTRUCT THE GLIDER

STEP 1) FIRST, TAKE YOUR 4' LONG 4X4'S AND GO TO THE TABLE SAW. SAW OFF THE CURVED SIDES UNTIL YOU ARE LEFT WITH 2 3X3'S (ACTUAL)

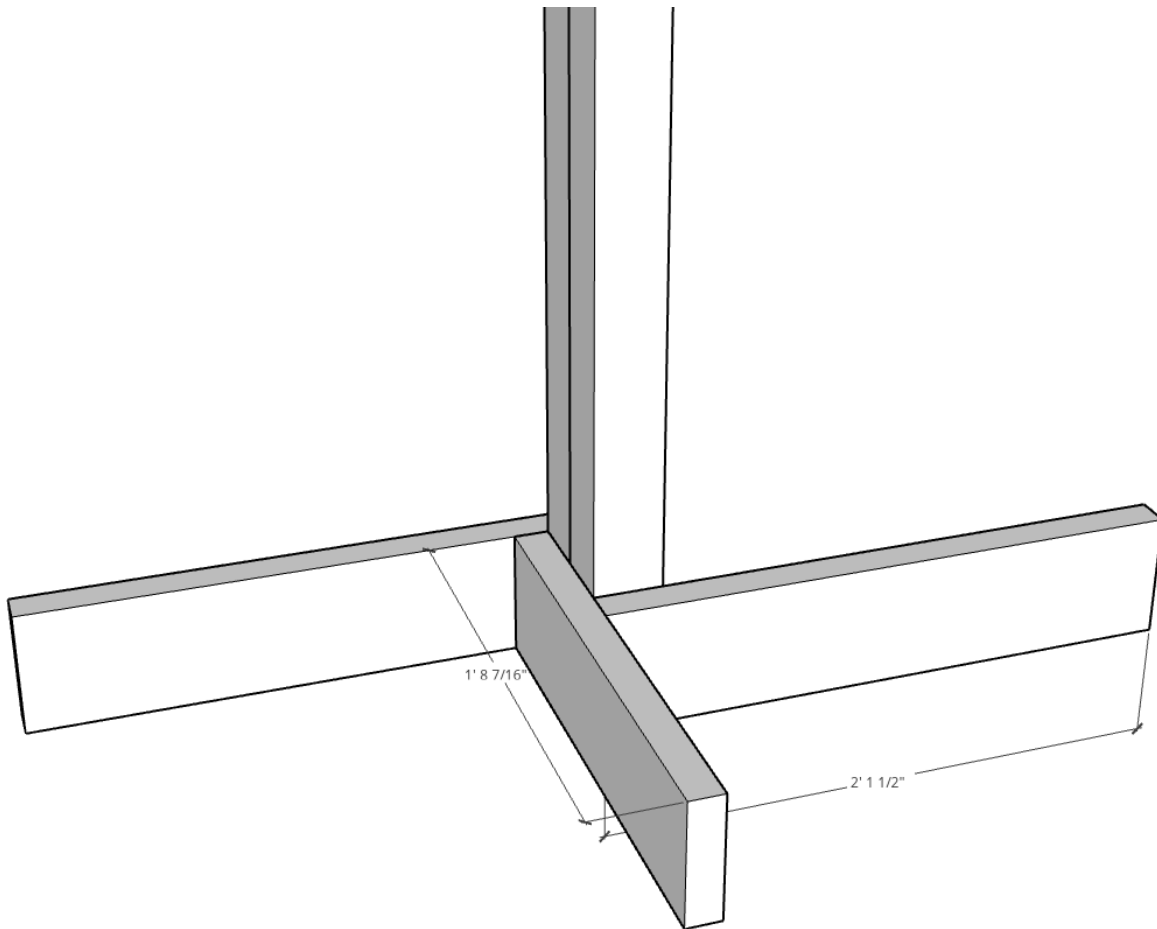


STEP 2) NEXT, USE A 1" WOOD BORING BIT TO NOTCH OUT A 2 1" DEEP HOLE (WHERE THE HEAD OF THE TIMBERLOK/LOG SCREWS CAN BE BURIED) ABOUT 4" FROM EACH END, AND ANOTHER 2 EVENLY SPACED IN BETWEEN THEM (TOTALING 4). THEN SISTER THE NEWLY CREATED 3X3'S TOGETHER, APPLY A LIBERAL AMOUNT OF WOOD GLUE AND SCREW. OPTIONAL, AFTER THIS STEP YOU COULD GLUE A 1" DOWEL INTO THE HOLES. WHEN DRIED, YOU CAN CUT IF WITH A FLUSH CUT SAW OR DREMEL.

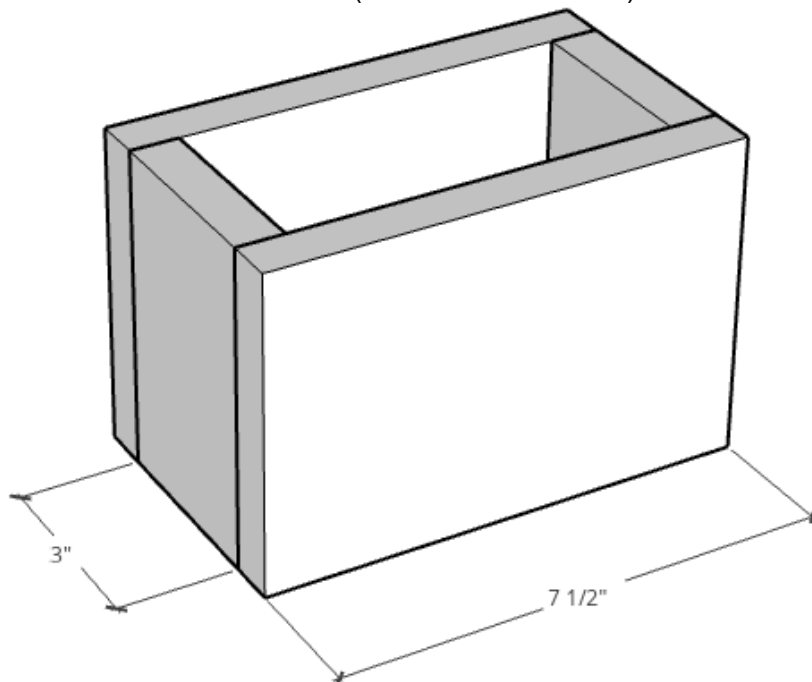


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STEP 3) NOW FIND A FLAT SURFACE AND GRAB YOUR SQUARE, IT IS IMPORTANT YOUR POST IS PERPENDICULAR TO THE GROUND. GLUE AND ATTACH YOUR 3 2X6'S TO THE POST AS SHOWN. THE 2 LONGER PIECES WILL BE OPPOSITE EACH OTHER.

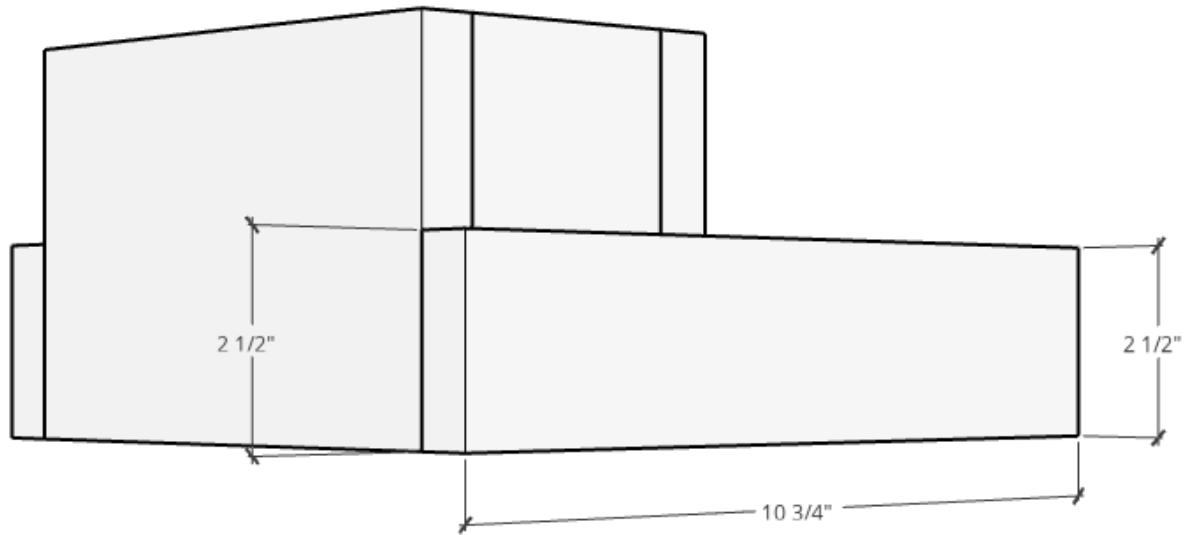


STEP 4) NEXT, MAKE THE COLLAR. DOUBLE CHECK YOUR POST DIMENSIONS FIRST, AND CONSIDER ADDING 1/16TH OF SPACE TO MAKE SURE IT SLIDES WELL. THE POST AND INSIDE COLLAR SHOULD BE WAXED (PASTE WAX IS FINE) BEFORE MILL USE.

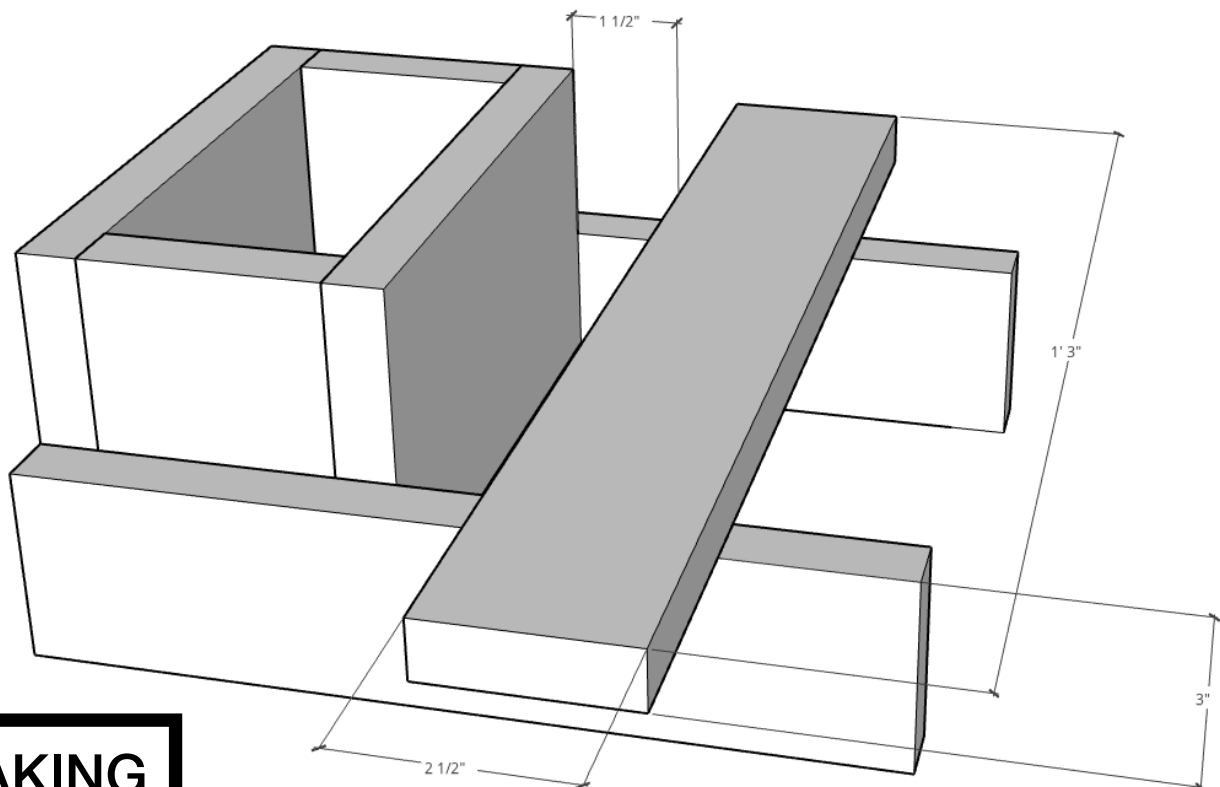


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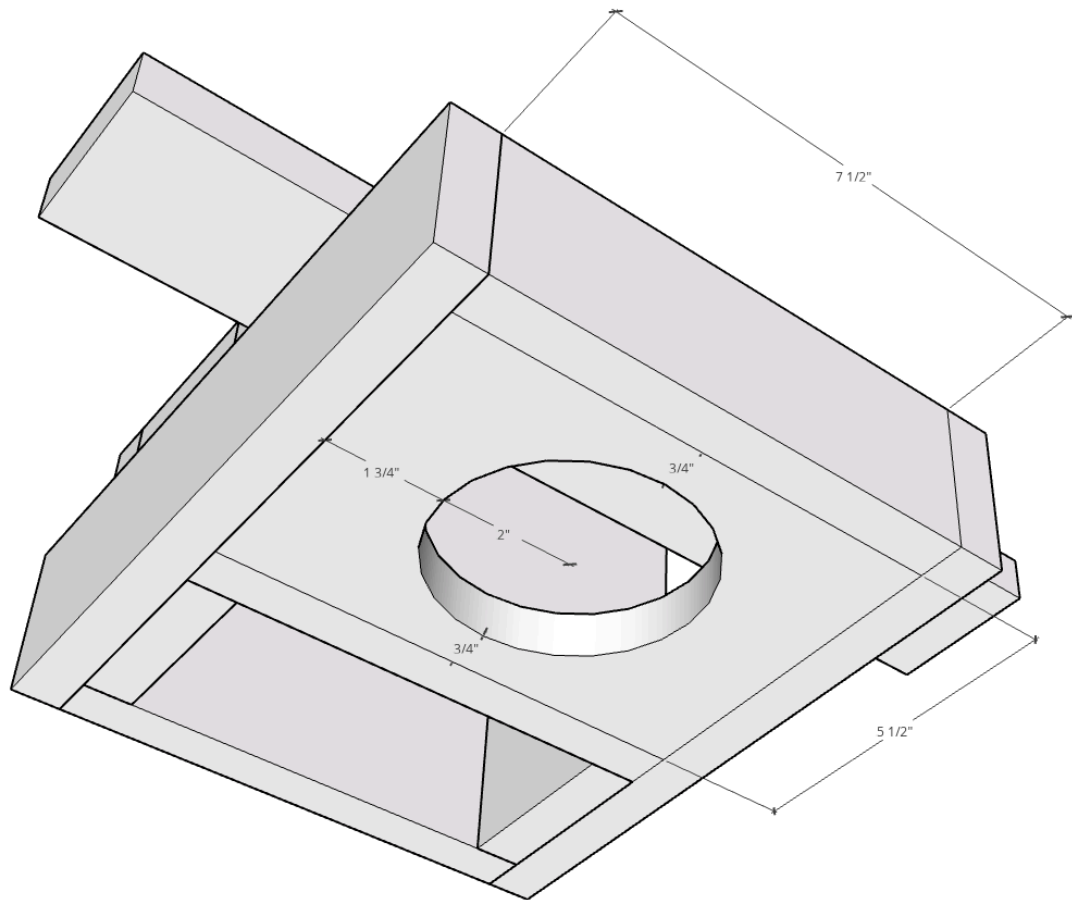
STEP 5) NOW GLUE AND SCREW YOUR 2 1/2"X10 3/4" (2) PIECES TO THE OUTSIDE OF THE COLLAR AS SHOWN.



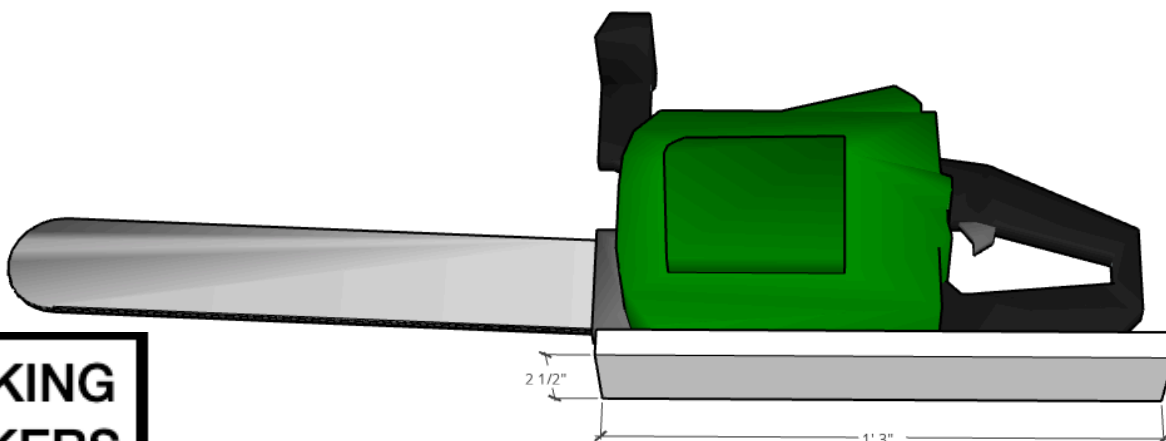
STEP 6) NEXT, GLUE AND SCREW YOUR 15"X2 1/2" PIECE 1 1/2" FROM THE COLLAR AS SHOWN. OVERHANG SHOULD BE 3"



STEP 7) OPTIONAL: IF CONNECTING TO YOUR DUST COLLECTIONS SYSTEM LIKE I DID, CUT A HOLE (DOES NOT HAVE TO BE PERFECT) IN YOUR 5 1/2"X7 1/2" PIECE TO FIT YOUR HOSE COUPLING (NOT SHOWN). GLUE AND SCREW THAT PIECE, ALONG WITH THE 2 1/2"X7 1/2" AS SHOWN. IN MY EXAMPLE, I USED 4" BUT USE WHAT IS RIGHT FOR YOUR SYSTEM. TIP, USE HAND SAW AND CUT OFF TOP (ABOVE BOARD) PORTION OF COUPLING AFTER THE LIP...THIS WILL LET MORE DUST INTO THE HOSE.

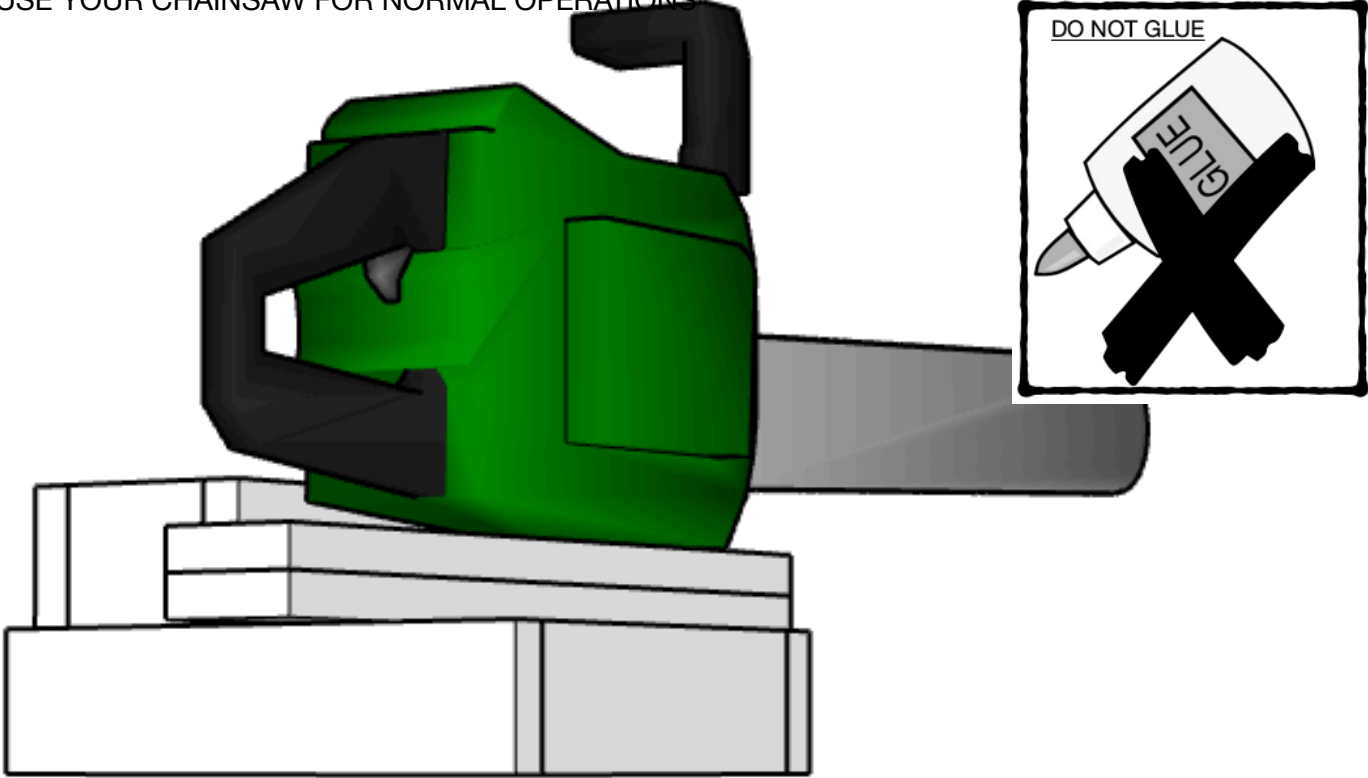


STEP 8) THIS IS HOW I SECURED THE SAW TO A BASE AND IT WORKED FINE BUT ALMOST CERTAINLY VOIDED MY WARRANTY. IF YOU ARE OK WITH THAT, THEN ATTACH THE CHAINSAW TO A 2 1/2"X15" PIECE USING OVERNIGHT EPOXY AND SMALL SCREWS. BE SURE THE SAW BLADE IS STRAIGHT UP AND DOWN, AS THE SAW BOTTOM MAY NOT BE SQUARE. USE SPACERS AS NEEDED TO CORRECT ANY IMBALANCE. I USED ABOUT 8 1" SCREWS WHICH MEANT THAT A 1/4" DRILLED INTO THE CHAINSAW. LET EPOXY DRY OVERNIGHT. EVERY SAW IS DIFFERENT, SO CHOOSE LOCATIONS THAT WON'T DAMAGE SAW FUNCTION. IF YOU ARE NOT COMFORTABLE WITH THIS, FEEL FREE TO COME UP WITH YOUR OWN WAY TO ATTACH THE SAW. PERHAPS SOMETHING SIMILAR TO THE ALASKAN SAWMILL CONSTRAINTS.

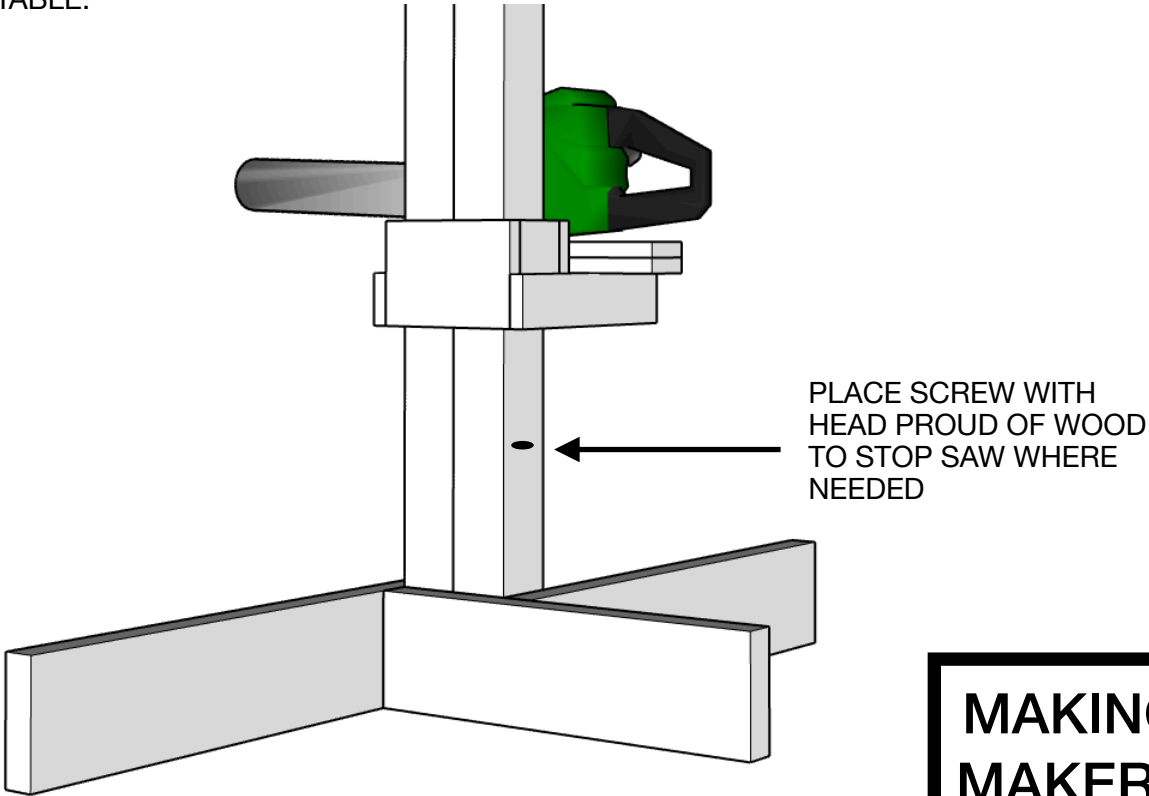


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STEP 9) NOW ATTACH YOUR SAW AND BASE AS SHOWN USING 1 1/4" SCREWS BUT NOT GLUE SINCE THIS IS MEANT TO BE REMOVABLE WHEN YOU WANT TO USE YOUR CHAINSAW FOR NORMAL OPERATIONS

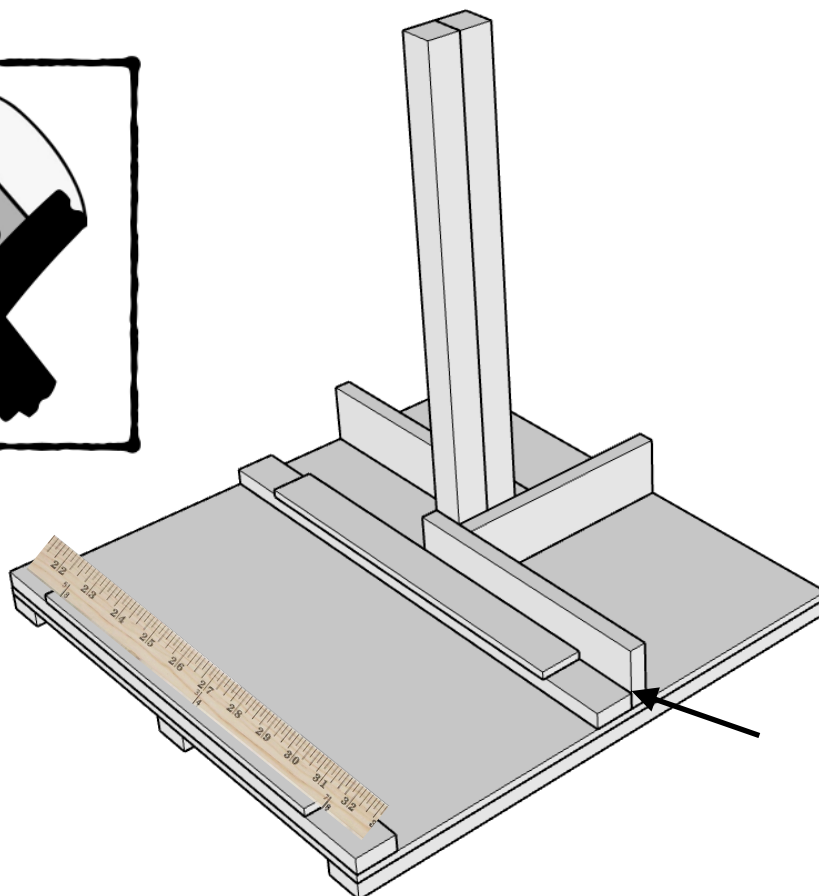


STEP 10) CREATE A STOP-BLOCK (OF SORTS) TO KEEP THE SAW FROM CUTTING INTO THE BOX YOU JUST MADE. REMEMBER IT IS SUPPOSED TO CUT INTO THE 4X4'S YOU PUT ON TOP, THOSE ARE SACRIFICIAL AND REPLACEABLE. FOR MY 'STOP BLOCK' I USED A COUPLE OF SCREWS WITH THE HEADS STICKING OUT ABOUT A 1/2". THIS TOO, SHOULD BE ADJUSTABLE.



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STEP 11) SET ASIDE YOUR NEWLY CREATED SAW GLIDER AND CARRY THE COMPLETED GLIDER POST (W/ FEET) OVER TO YOUR BASE AND ATTACH AS SHOWN. SCREW FROM UNDERNEATH, WHICH CAN BE SIMPLY DONE BY TURNING THE PROJECT ON ITS SIDE. DO NOT GLUE, THIS POST IS MEANT TO BE REMOVABLE FOR EASY STORAGE



STEP 12) OPTIONAL: SCREW A CHEAP YARD STICK TO THE TOP OF ONE OF THE GUIDES, THIS WILL HELP YOU OBTAIN THE DESIRED THICKNESS OF YOUR CUT AS YOU MOVE THE SLED

#### QUICK TIPS:

- STAY ON TOP OF BAR CHAIN OIL LEVELS AND KEEP THE TANK FAIRLY FULL SO YOU DON'T RUN OUT IN THE MIDDLE OF A CUT. I PUT MY OIL IN A SQUIRT BOTTLE FOR FAST FILLING BUT DO WHAT YOU LIKE.

- KEEP IT SIMPLE, SWITCH OUT MATERIALS AS NEEDED, THIS DOES NOT HAVE TO LOOK PRETTY...JUST SAFE AND FUNCTIONABLE.

**CONGRATULATIONS MAKER, YOU HAVE MADE YOUR VERY OWN VERTICAL SAWMILL!!!**

NOW EASILY TURN EVERYDAY LOGS INTO USABLE WOODWORKING MATERIAL. I PERSONALLY HAVE USED THIS MILL TO HELP CREATE LIVE EDGE END TABLES, CHARCUTERIE BOARDS, CUTTING BOARDS, KNIFE BLOCKS. SOON I HOPE TO MAKE CLOCKS, CHESS BOARDS, AND EVEN HATCHET THROWING TARGETS. I CANT WAIT TO SEE WHAT YOU CREATE MAKERS!!!

REMEMBER TO WATCH MY CHAINSAW SERIES ON YOUTUBE FOR "IN USE" EXAMPLES WHICH MAY CLARIFY THESE INSTRUCTIONS. MOD THESE AS YOU WANT TO, AND PLEASE SEND ME PICS OF YOUR COMPLETED PROJECTS. I CAN'T WAIT TO SEE WHAT YOU MAKERS COME UP WITH!!! EMAIL ME WITH PICS OR QUESTIONS ABOUT THE BUILD  
[MAKINGMAKERSDIY@GMAIL.COM](mailto:MAKINGMAKERSDIY@GMAIL.COM)

~ MIKE FROM MAKING MAKERS