

the builders challenge

# SEASON 8 BUILD



## Mid-Century Modern Bar Cart

**START**

Go build (or go home).

By downloading this tutorial you the builder agree not to re-publish this tutorial or resell these plans in their original form. These plans are to be used as a guide for your build, but we encourage you to put your own stamp and personality on your own version.

Woodworking tools can be dangerous and we strongly advise you read all instruction prior to using any tools and use all required safety equipment.

Happy Building!

## **CUT LIST**

Legs - (4) 1x6 (0.75"x 5.50") x 40"

Arms - (2) 1x6 (0.75"x 5.50) x 18"

Box Sides - (4) 1x4 (0.75" x 3.50") x 32"

Box Ends - (4) 1x4 (0.75" x 3.50") x 19"

Box Bottom - (2) 17.50"x 30.50"

\*You can use 3/4" or a glue up of 3/4" boards

Quarter Sheet (2'x4') of 3/4" MDF

## **TOOLS USED**

Circular Saw

Jig Saw

Router (optional)

Miter Saw (optional)

Table Saw (optional)

Hand saw (flush cut saw)

Sander

Drill or Drill Press

## **SUPPLIES USED**

1" Wooden Dowel

0.50" Wooden Dowel

1" & 0.50" Spade Bit Or Forstner Bit

## **OPTIONAL**

Katz Moses Dovetail Jig

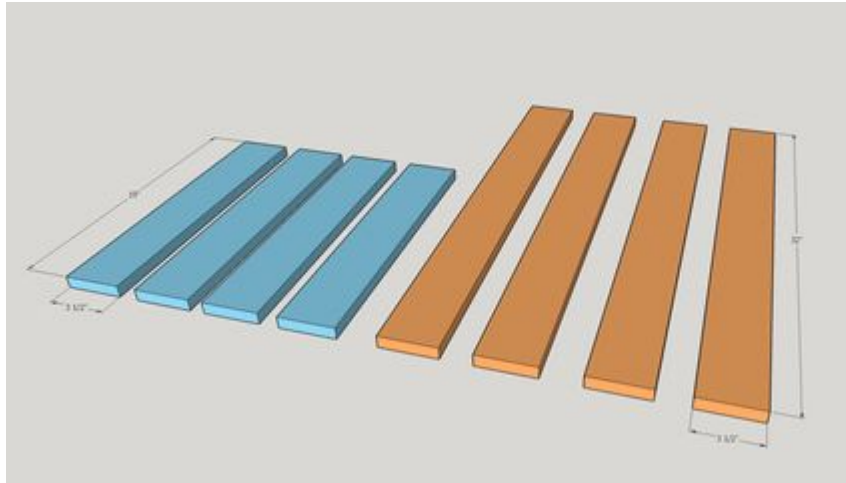
1" Flush Trim Bit w/ Top Bearing

Round Over Router Bit

# 01

## Cut Box Frames

Cut (4) four 1x4's (0.75"x 3.50") to 19" for the ends and (4) four 1x4's to 32" for the sides of both boxes.



You'll need to decide what sort of joints your box frames will be using before you cut.

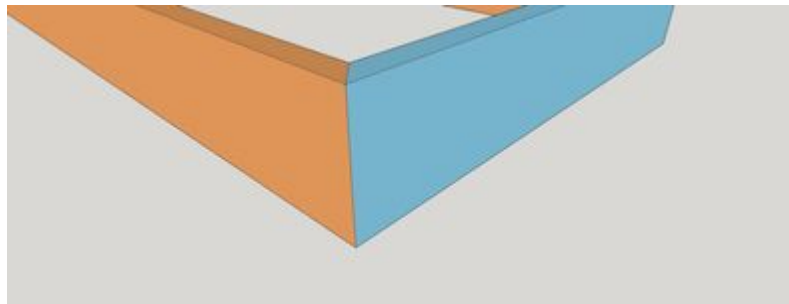
If using a miter joint or a miter joint with splines cut to the recommended lengths but with a 45 degree miter on a miter saw.

If using a dovetail or finger joint, add an extra 0.50" to each measurement.

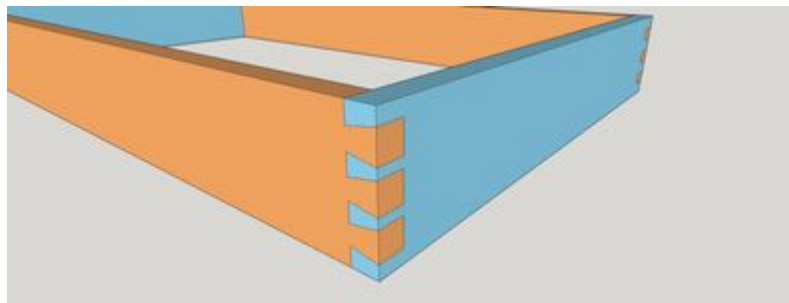
# 015

## Box Joints

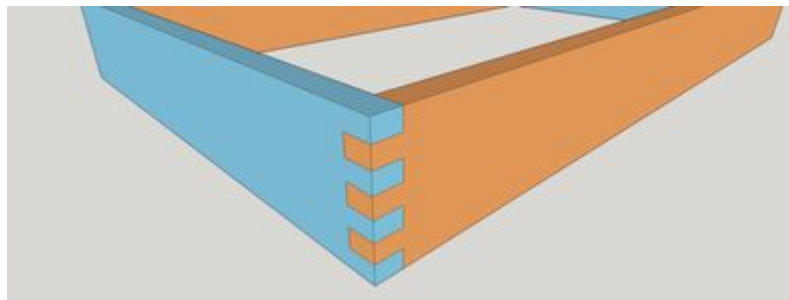
The basic miter joint will be the easier joinery as long as your angles are cut exactly at 45 degrees



If you want an easy way to cut Dovetails check out Tamar's video using the Katz Moses Dovetail Jig.



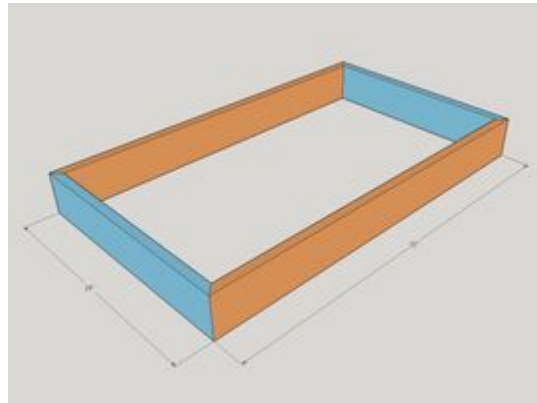
If you want to cut Finger Joints check out Tamar's other video using a table saw jig.



# 02

## Box Frame

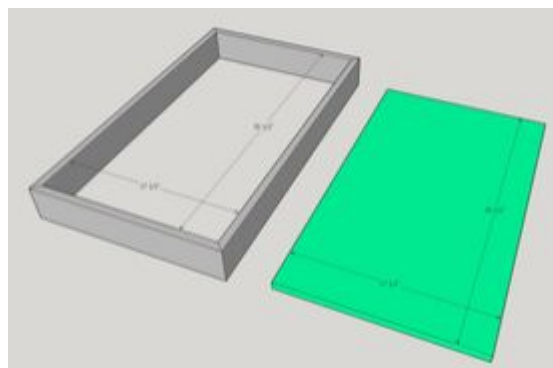
With your joints cut, your dry fitted box should measure 19" x 32". Don't forget you're making a set of two boxes of the same size.



# 03

## Box Bottom

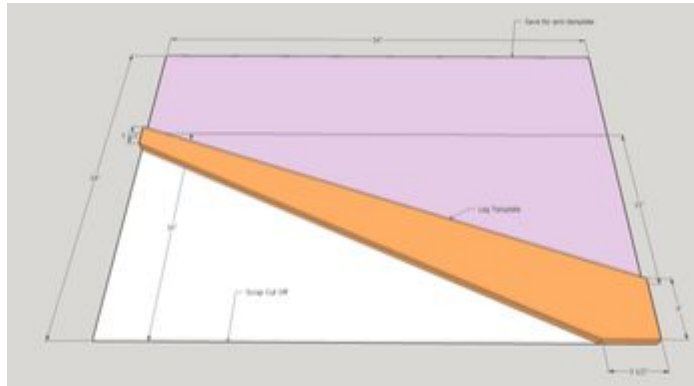
Whether you're using a premium sheet of plywood or joining boards together to make the box bottoms, the inner dimensions of the box are 17.50" x 30.50". If possible, assemble the box frame around the bottom and glue up all at once. You can also drop the bottom in the frame and attach with pocket holes from underneath.



# 04

## Leg Template

Cut a quarter sheet of 3/4" MDF down to 24"x 34". You can use a circular saw with a guide or a table saw for this cut.



Trace out the leg template using the measurements based off the 16"x34" section. Don't chase the angles.

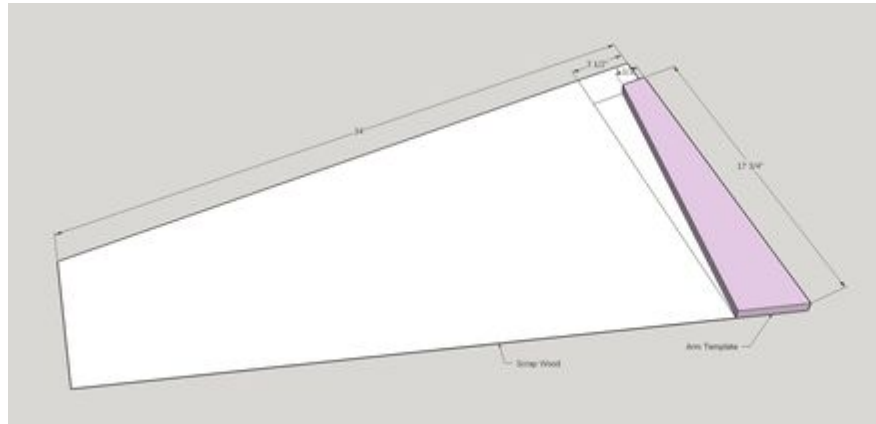
They'll drive you crazy. Using a circular saw and a guide edge make both cuts and save the top purple section for the arm template.

\*The template will be used with a router and jig saw in order to make repeatable pieces. You can also skip the template steps and move to step 09 and cut out the legs individually.

# 05

## Arm Template

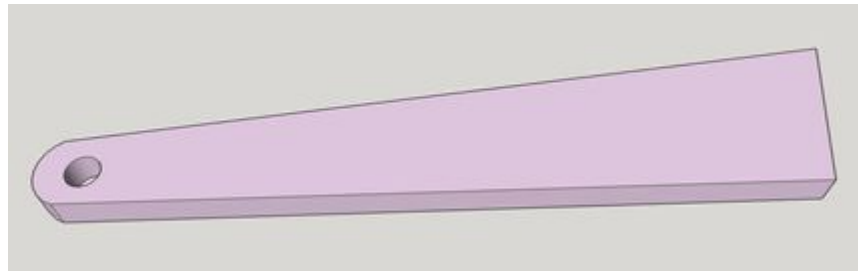
Using the MDF cut off and inside angle from the leg template, use the same method with a guide edge and circular saw to cut out the arm template.



# 06

## Arm Template Part 2

Using a compass or round object, trace and cut a rounded end onto the template using a jigsaw.

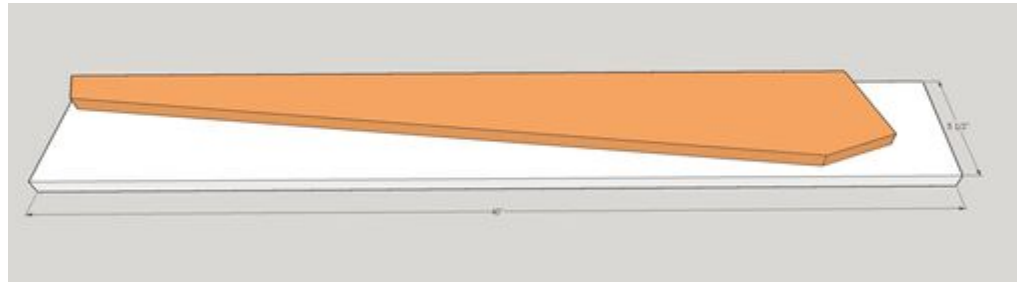


Use a drill or drill press and a 1" spade bit or forstner bit and cut a hole for the dowel handle.

# 07

## Cut Out Legs

Place the leg template on a 40" 1x6 (0.75" x 6") board and trace the template design onto the board.



Remove the template and cut out the leg with a jig saw as close as possible to the traced line without cutting into the leg area.

Attach the template to the leg cut out using clamps or double sided tape.

Use a router and a 1" flush trim bit with top bearing to remove the remaining material left from the jig saw to match the leg template.

Repeat this process for four legs.

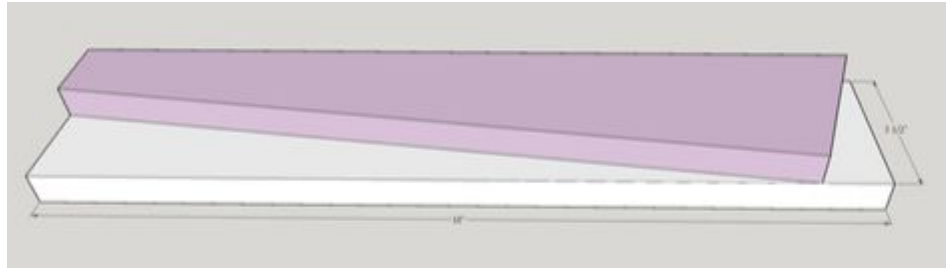
Sound difficult? Watch Adam's video showing how to use a router and template guide.



# 08

## Cut Out Arms

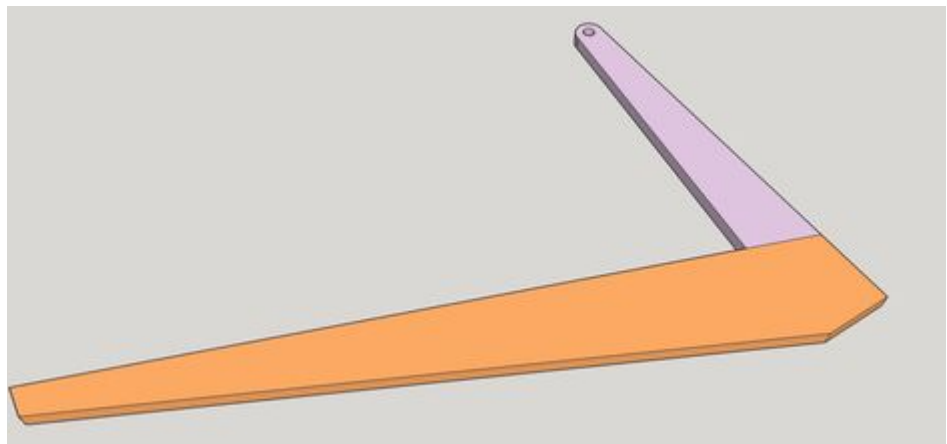
Using the same method as the legs, cut out a pair of arms using a router and 1" flush trim bit with top bearing.



# 09

## Join Arms & Legs

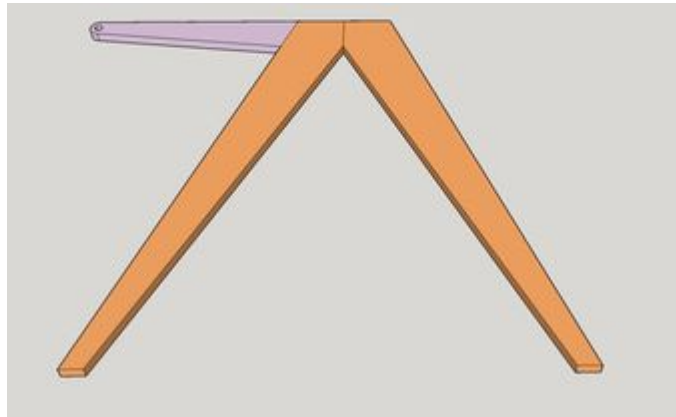
On a flat surface, join a pair of arms and legs. You can use only wood glue, add splines at the angles, a dowel jig or pocket holes hidden on the back side.



# 10

## Add Back Legs

Using the same method as attaching the arms, join the back leg to the arm and leg combo while on a flat surface.

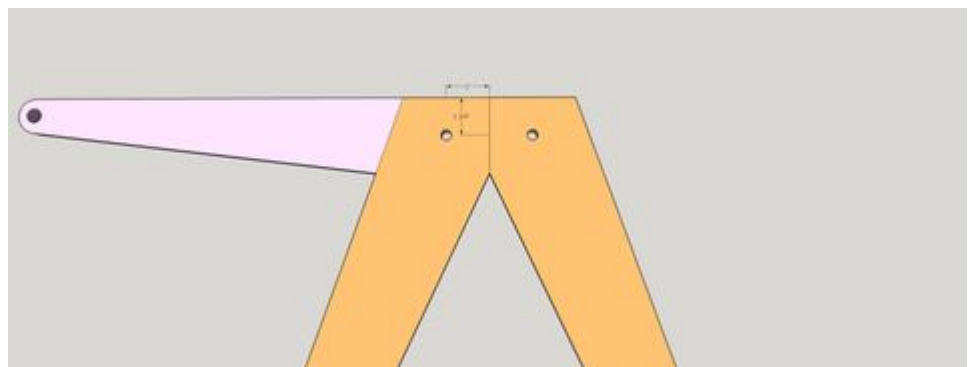


\*Optional update - use a router and round over bit on all edges to give a true Mid-Century Modern look.

# 11

## Pre-Cut Dowel Holes

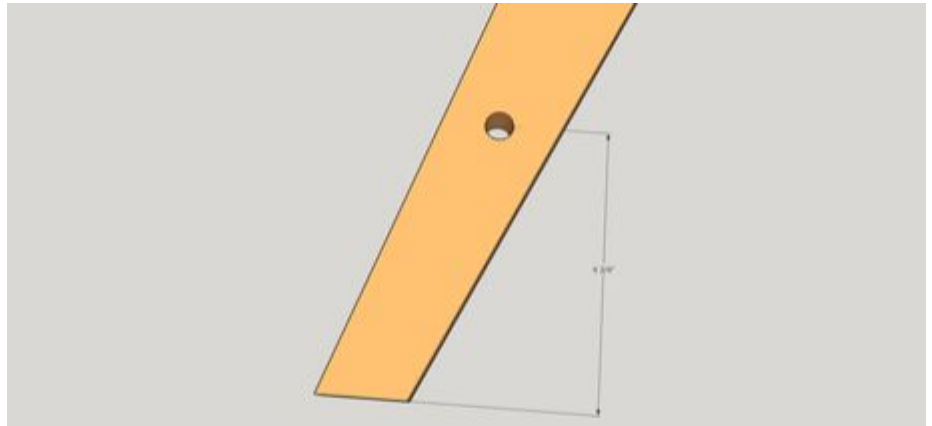
Centered on each leg (2" off center and 1.75" from top) pre-drill a 0.50" hole using a spade bit or forstner bit.



# 12

## Pre-Cut Dowel Holes Part 2

Pre-drill 0.50" dowel holes on the bottom of the legs centered 4.75" from the bottom.



# 13

## Attach Boxes

Glue and clamp the boxes using 24" clamps between the legs.

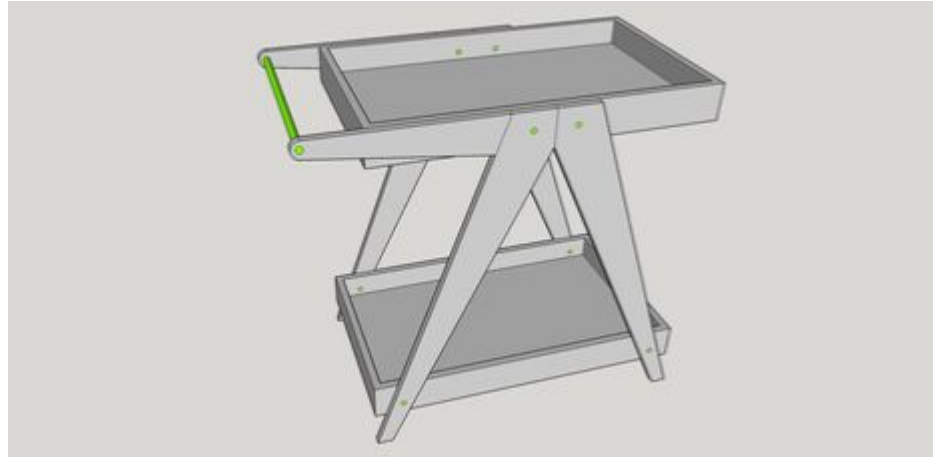


The top box should be flush with the top of the legs. The bottom box will be 3" off the ground.

# 14

## Add Dowels

With the clamps still in place, add 1" dowel for the handle and 0.50" dowels (with glue) to secure the boxes to the leg frame.



Either cut to size and drive in with a mallet or use a flush cut hand saw to remove the excess dowel ends. Once glue is dry, sand until flush.

# 15

## Finish & Enjoy

Sand any rough edges and then apply desired finish. Once dry, add your favorite adult beverages (or coffee) and enjoy!