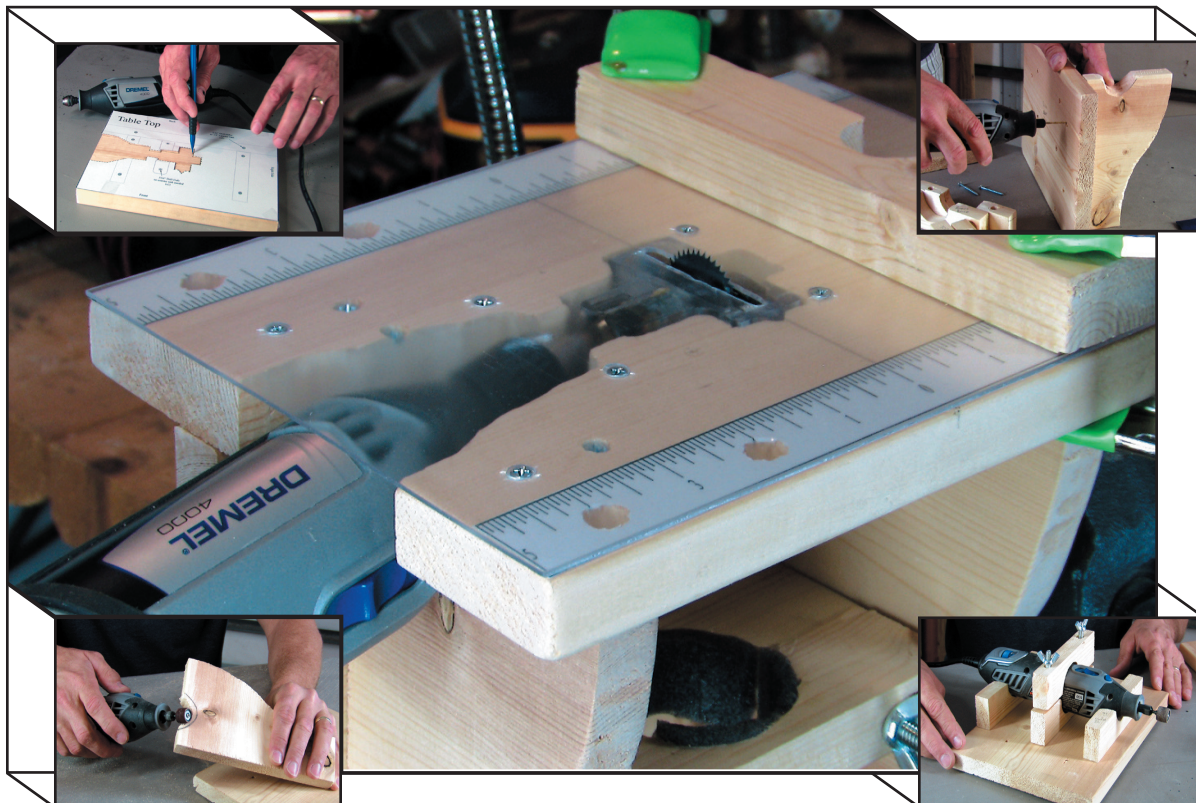


# Mini - Table Saw / Router / Shaper PLANS

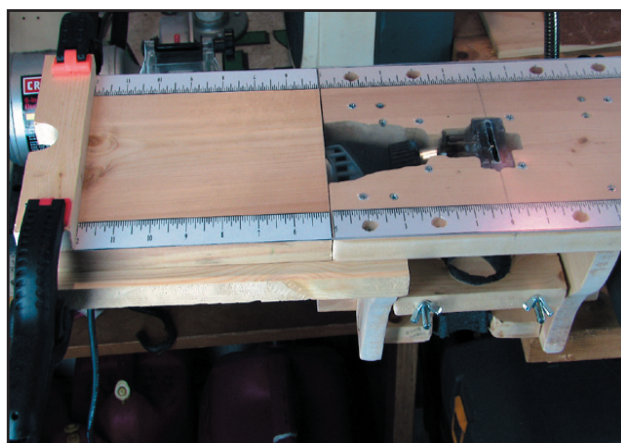


## for Dremel Rotary Tool

Complete set of easy to use templates with detailed instructions.  
Includes material supply and price list.



*Table Top Extension plans -  
Allows table saw to extend up  
to 12" on either side!*



# Material Supply / Price List

Description	Qty	*Price	Total
1x8x4 top choice whitewood board	1	\$4.28	\$4.28
1x2x4 top choice whitewood board	1	\$1.22	\$1.22
Optix 8x10 acrylic sheet (.080" thick)	2	\$1.98	\$3.96
3/4" two hole pipe strap - (bag of 4)	1	\$0.85	\$0.85
1/4"x 4-1/2" bolts	2	\$0.34	\$0.68
1/4" wing nuts - (bag of 4)	1	\$0.98	\$0.98
3/4" foam pipe insulation (sold in 6ft sections)	1	\$0.97	\$0.97
Wood screw - #6 x 1-1/2" - (bag of 10)	2	\$0.98	\$1.96
Wood screw - #4 x 5/8" - (bag of 12)	1	\$0.98	\$0.98
2" Spring Clamp	2	\$0.99	\$1.98
<i>* Tax Not Included</i>		Total	\$17.86

## Attachments / Accessories / Tools List

Dremel Rotary Tool (*templates were designed for model 4000 but can be modified to fit any model*)

Dremel - Mini Saw Attachment (*model 670*)

Dremel - Sanding Drum (*either model 407 or 470 will work for this application*)

5/32" Drill Bit

5/64" Drill Bit

7/64" Drill Bit

1/4" Drill Bit

Phillips screw driver

Elmers glue

Utility knife (*or other razor*)

### Optional Dremel Attachments/Accessories:

*(only needed if you plan to build this project \*exclusively with a Dremel Rotary Tool)*

Dremel - Plunge Router Attachment (*model 335-01*) **"OR"** Multi Purpose Cutting Kit (*model 565*)

Dremel - Circle Cutter and Straight Edge Guide (*model 678-01*)

Dremel - Brad Point Drill Bit Set (*model 631-01*)

*\*Note: the top plate cover screws require a tapered 1/4" counter sink. The Dremel Brad Bits are not tapered and Dremel does not currently make a tapered 1/4" drill bit with a 1/8" shank. This will require the need for an additional drill (preferably drill press) that can handle standard 1/4" drill bits or 1/4" tapered counter sink bits.*

# Assembly / Directions:

## Step One - Cut the wood to proper length:

I suggest when purchasing the supplies, have the hardware store cut the wood for you. This will save time and assure clean straight cuts. The following are the cuts you will need to make this table.

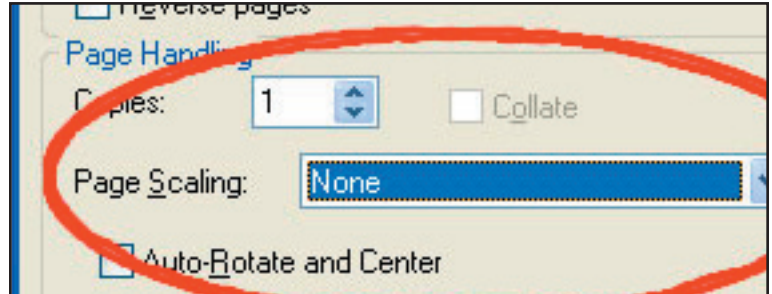
### 1x8x4:

- 2 - 10" in length (*table top and back plate*)
- 2 - 4" in length (*left and right side panels*)
- 1 - 8" in length (*optional table extension*)

### 1x2x4:

- 4 - 5-1/2" in length (*braces and brackets*)
- 2 - 12" in length (*optional extension arms*)

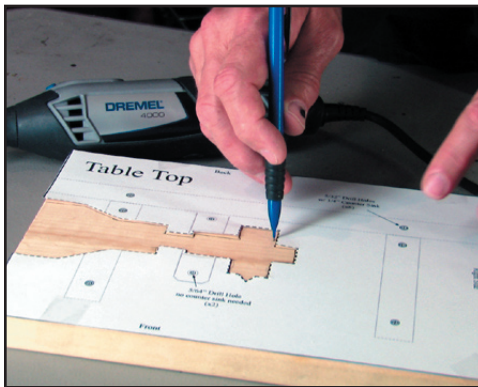
\* Select **None** for Page Scaling in the printing options!



## Step Two - Cutting / Drilling the Table Top and Back Panel:

Once you have all the wood cut to length, \*print out the templates and look through them. For best results print the templates on 100 pound card stock. **Be sure to select None for Page Scaling in your printer options!**

Starting with the Table Top template you will notice a bold boarder, several faded dashed lines, some drill hole placements and a bold dashed line that represents the cutout for the Dremel rotary tool and Mini Saw Attachment. There is also a faded solid line that represents the pipe strap that will be mounted underneath the Mini Saw Attachment between it's directional guide and coupling (*see Mini Saw Attachment operating instructions*). The faded lines in each template represent items on the opposite side of the viewing perspective (*as if the template were transparent*). Cut the template along the boarder and also cut along the dashed line for the Dremel and Mini Saw Attachment.



1

Select one of the 10" panels (*cut from the 1x8x4*) to be your table top and lay the template over it. Secure it with some scotch tape or simply hold it in place while tracing the outline of the Dremel and Mini Saw Attachment (1). Use a punch, nail, or screw to mark the drill holes. Put an indentation into the wood to help steady the drill bit when you start to drill the holes.

Clamp the panel down and route out the area you traced using a Dremel Plunge Router or Dremel Multi Purpose Cutting Kit (*follow the instructions for those tools using appropriate routing techniques*) (2). If you do not own one of these attachments, then use a jig saw or other means of cutting the wood. The template was designed so the Dremel tool and Mini Saw accessory will fit snug, so continue working the edges until they are just able to slide through the top plate.



2

Once you are finished routing, drill the holes using the appropriate bits (*labeled on the template*). Note that if you are planning to build this project using only Dremel tools and accessories you will need the Dremel Brad Point Drill Bit Set for the 5/32" and 1/4" drill holes / counter sinks.

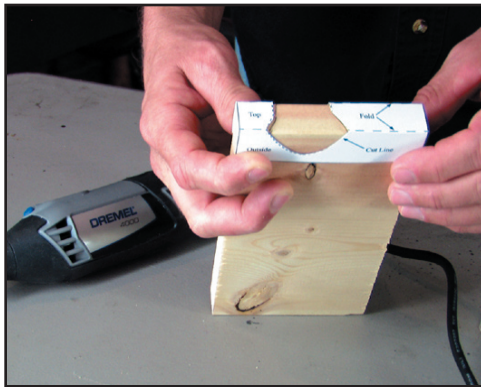
**Here's a tip** - if you don't have access to a drill press to counter sink the holes, use the 1/4" drill bit to first drill into the wood just enough for the counter sink. Then finish drilling the hole using the smaller drill bit.

Follow the above instructions for the Back Panel. No routing or cutting is necessary - only drilling.

### Step Three - Side Panels:

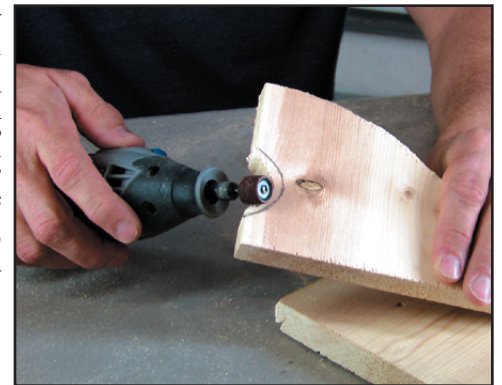
The side panels are already the size we need for this project. However, you will notice on the template there is an optional decorative cut line. Feel free to use this if you would like to dress up your project a bit. On the bottom of the side panel page you will find what I call a “*contour template*”. This is for the left side panel only. The right side will need no additional cutting or shaping.

Cut out around the boarder and along the cut line. Fold along the lines and place the folded template directly over the top of the **LEFT** side panel (3). Make sure the side of the template labeled “*outside*” is on the side you want to be seen (one side of the wood usually looks nicer than the other). Trace the outline and use the Dremel to shape the wood until the contour matches “close” to that of the line. **DO NOT sand this down too much at this time!** For now just get close to the outline and later you can make for a perfect fit.



3

This contour will brace the body of the Dremel Rotary tool and help hold it in place. If you own a Dremel or rotary tool other than the model 4000, you will need to shape this area to fit the contour of your Dremel model. For the whitewood board used in this project a sanding drum will suffice when shaping the contour (4). If you wish to use a harder wood, you may need to use a different dremel accessory for this step.

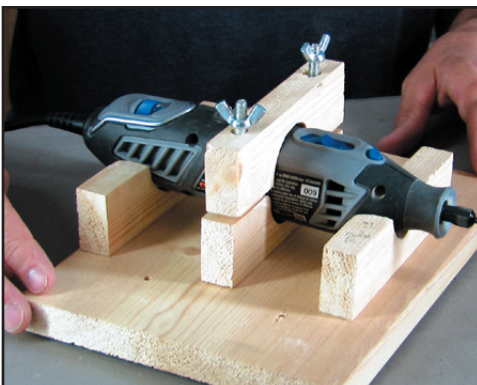


4

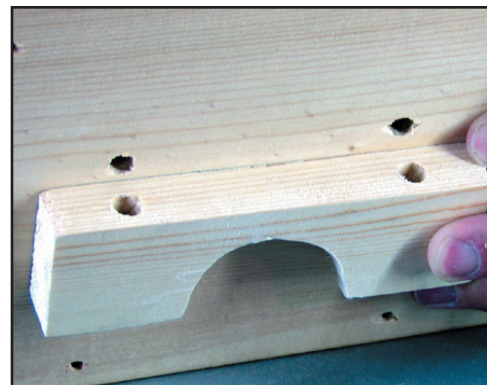
### Step Four - Brackets and Braces:

There are two brackets and two braces (*for use with rotary tool in vertical position*). The two brackets will clamp the tool in place while the top and bottom braces will simply keep the tool from moving as you apply pressure when routing / shaping a work piece (5). Follow the same procedure for these four pieces as you did when shaping the rotary tool contour for the left side panel. When drilling the 1/4” holes for the brackets, make sure they align nicely with the 1/4” holes you drilled in the back panel (6). You may even want to set them in place and mark them using the holes in the back panel.

**Remember the rule - measure twice, cut once (in this case drill).** It is recommended to use a drill press for this procedure. If you do not have access to a drill press, start by using a small drill bit first making sure to get good alignment, then increase the hole in steps until you reach 1/4”.



5



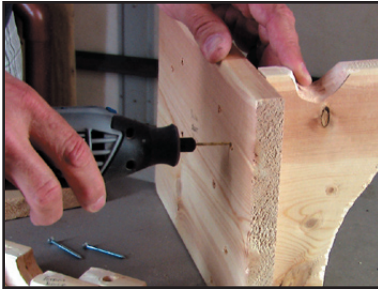
6

### Step Five - Assembly:

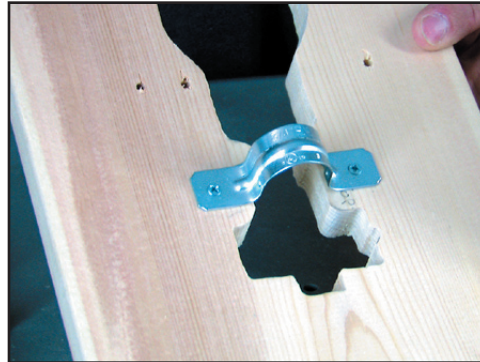
Once all of the pieces are cut, drilled, and shaped, it's time to put it together.

Using the #6 x 1-1/2" screws, screw the side panels, top brace and bottom brace to the back panel. It is a good idea to drill pilot holes to keep from splitting the wood (*the 5/64" drill bit should work nicely for this*) (7). Before you can set the Table Top in place you will need to attach the 3/4" pipe strap to the bottom of the Table Top using two #4 x 5/8" screws. The 5/64" holes have been previously drilled so the center of the strap should line up very nicely over the cut out for the Dremel Mini Saw Attachment (8).

When you turn the Table Top over and try to set it in place, you should notice the strap will not allow the top to sit level. The edge of the strap overlaps the back panel. The easiest solution for this is to use a sanding drum to groove out a place on the back panel for the edge of the strap to sit into (9). Now screw the table top in place and assembly is complete.



7



8

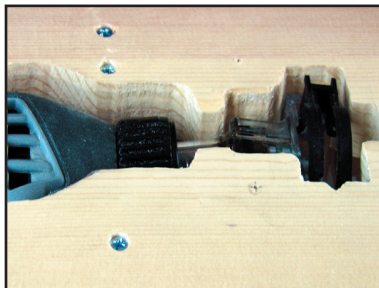


9

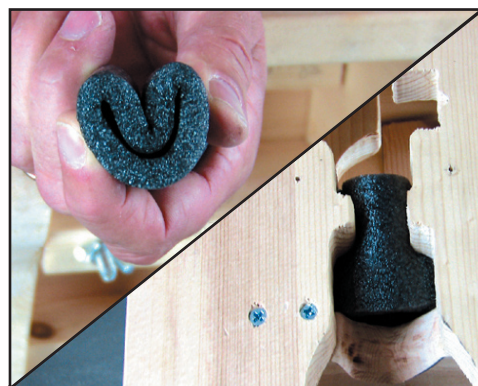
Note that if you try and set the Dremel rotary tool and Mini Saw Attachment in place, the Mini Saw Attachment will not sit level with the Table Top (10). Cut a 2-1/4" section of foam pipe insulation. Squeeze it together then bend it so it is shaped as if it is smiling at you (11a). Place it into the cavity of the Mini Table Saw attachment turning it so the folded side is down (11b). Now when you place the Dremel rotary tool and Mini Saw Attachment in place you should have to push it down to hold it level with the Table Top.

Now go back and finish the left side panel contour for your rotary tool. Set the Dremel rotary tool and Mini Saw Attachment in place (*the on/off switch should be facing the front of the table saw and facing slightly downward*). Hold the tool in place making sure the Mini Saw Attachment is level with the table and look to see how high the rotary tool sits above the table. Using a sanding drum, sand down a little of the side panel contour and check it again. Continue shaping and contouring the side panel until the rotary tool sits just below the surface (12). You will need to repeat this process for the brackets and braces so the rotary tool is centered when in the vertical position. Remove just enough of the contoured areas of the brackets and braces to glue in place some foam insulation where the Dremel rotary tool will sit (*see image on cover*).

11a

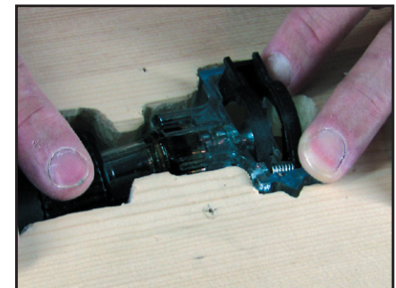


10



11b

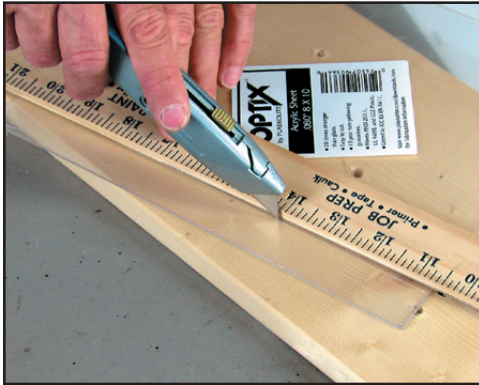
12



### Step Six - Table Saw and Router/Shaper Cover Plates:

When configured as a mini table saw, the cover is used to hold the rotary tool and Mini Saw Attachment in place. The acrylic sheets are 8"x10" so they will need to be trimmed down to fit the table top. To do this,

simply measure and mark a line at 8 inches and score the acrylic with a utility knife (*run the utility knife along a straight edge or ruler*) (13). Move the acrylic to the edge of a table or board and snap it off (14). Once the acrylic sheets are the correct size, follow the templates to make the covers for the Table Saw and Router / Shaper respectively.



13



14

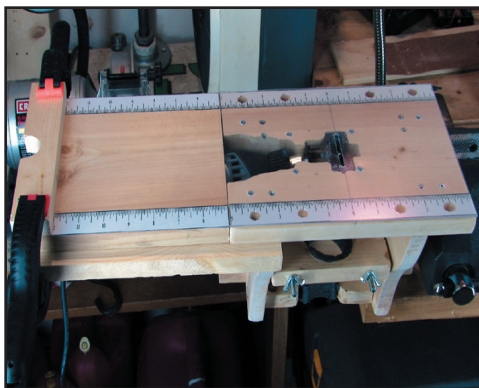
### **Step Seven - Fence for Table Saw / Router:**

To make the fence simply follow the same instructions for the Brackets and Braces. One side of the fence can be used when this project is configured as a router, and the other side can be used when this project is configured as a table saw.

### **Step Eight - Optional Table Extender and Rulers:**

The optional Table Top extender allows the table saw portion of this project to extend to a full 12" on either side! You will need 3" spring clamps to use the Table Top Extension. In step one of the directions I noted to have the wood pre-cut which includes the necessary pieces for the Table Top Extension (15).

Print the rulers (*page 18*) onto bumper sticker paper (*available at Office Depot or Office Max*), and you have a nice measuring system for your table saw.



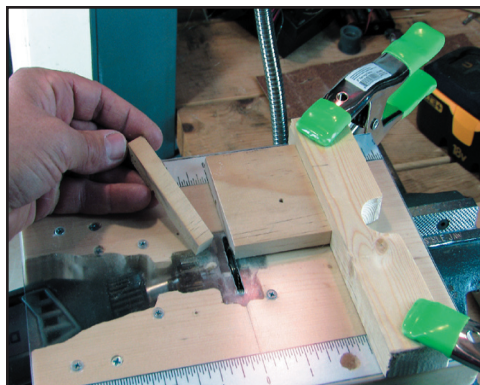
15

### **Step Nine - Enjoy Your Mini-TableSaw / Router / Shaper:**

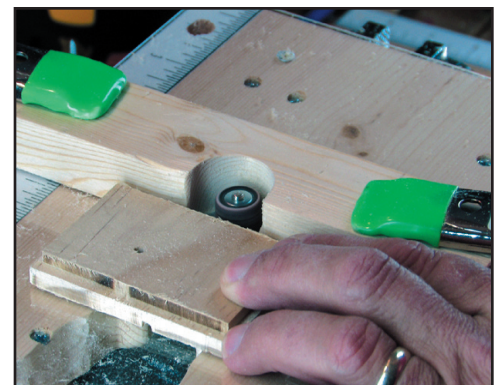
**WARNING - BE CAREFUL!** This mini-tablesaw / router does not use any guards so pay special attention to how close your fingers are to the saw blade and router bits.

Always use eye protection and follow all procedures for standard table saws and routers. Common sense will go a long way in keeping your fingers attached!

Now have fun!



16



17

10"

# Table Top

Back

5/32" Drill Holes  
w/ 1/4" Counter Sink  
(x6)

7-1/8"

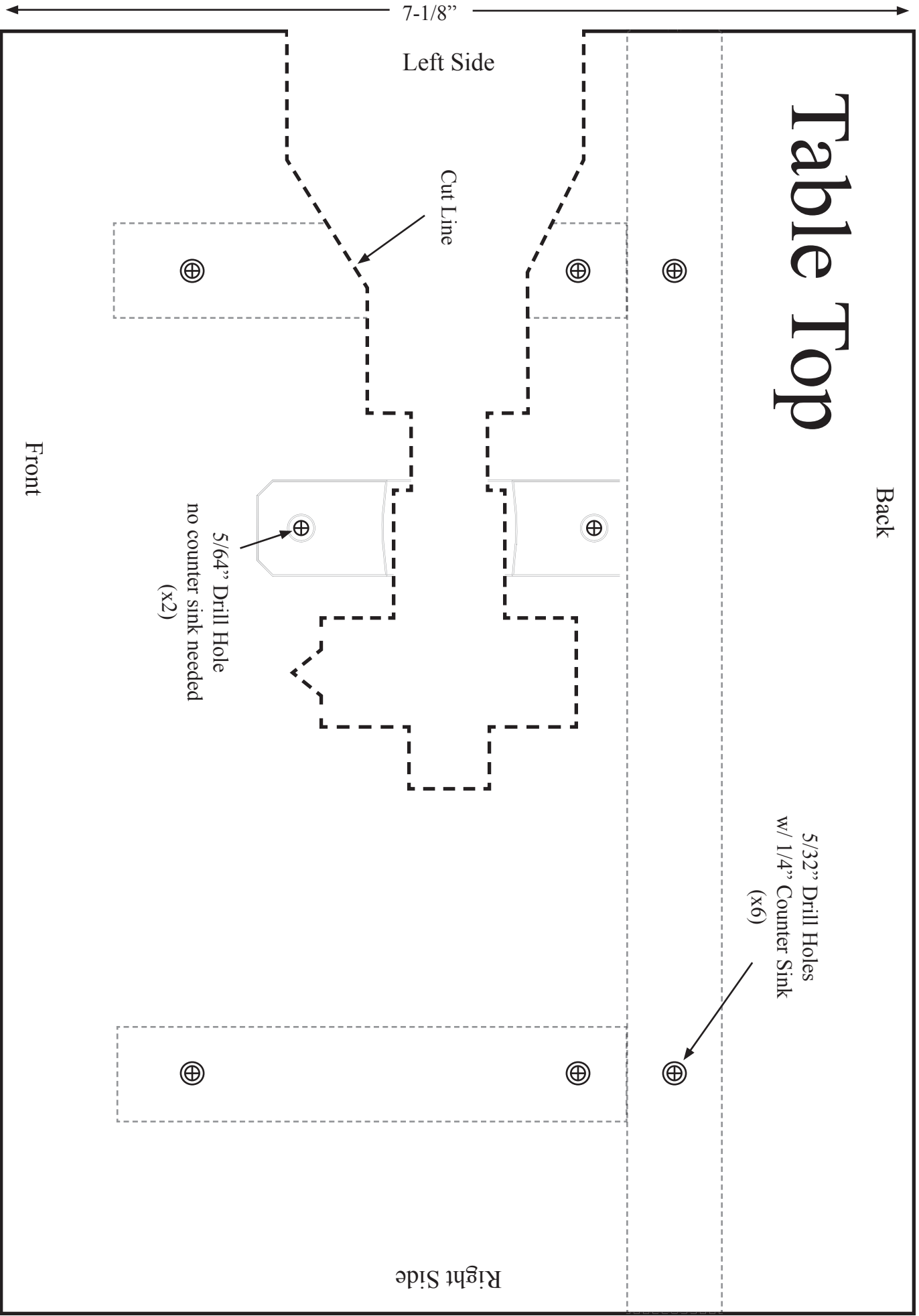
Left Side

Cut Line

Right Side

Front

5/64" Drill Hole  
no counter sink needed  
(x2)



7 1/8"

10"

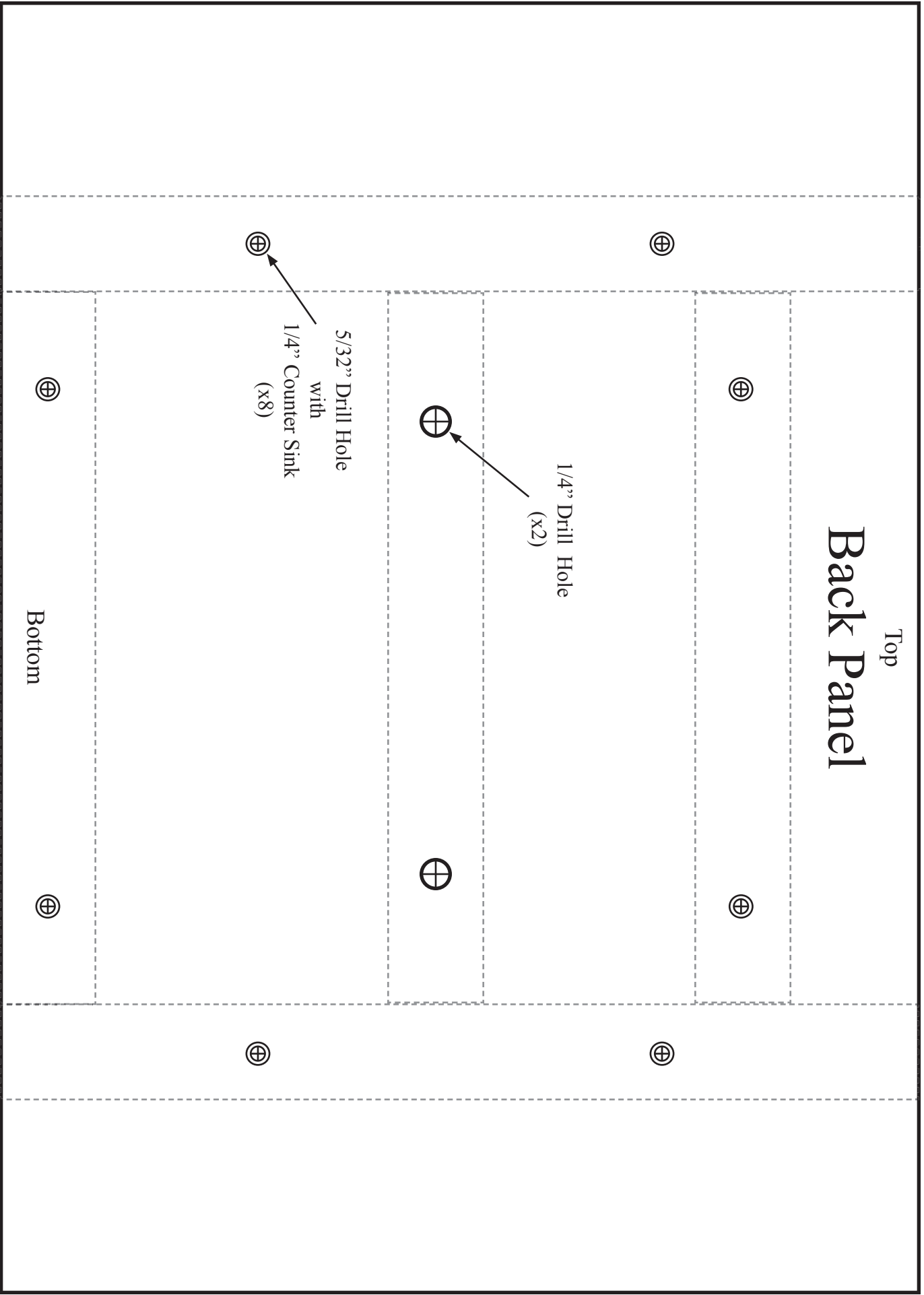
# Back Panel

Top

1/4" Drill Hole  
(x2)

5/32" Drill Hole  
with  
1/4" Counter Sink  
(x8)

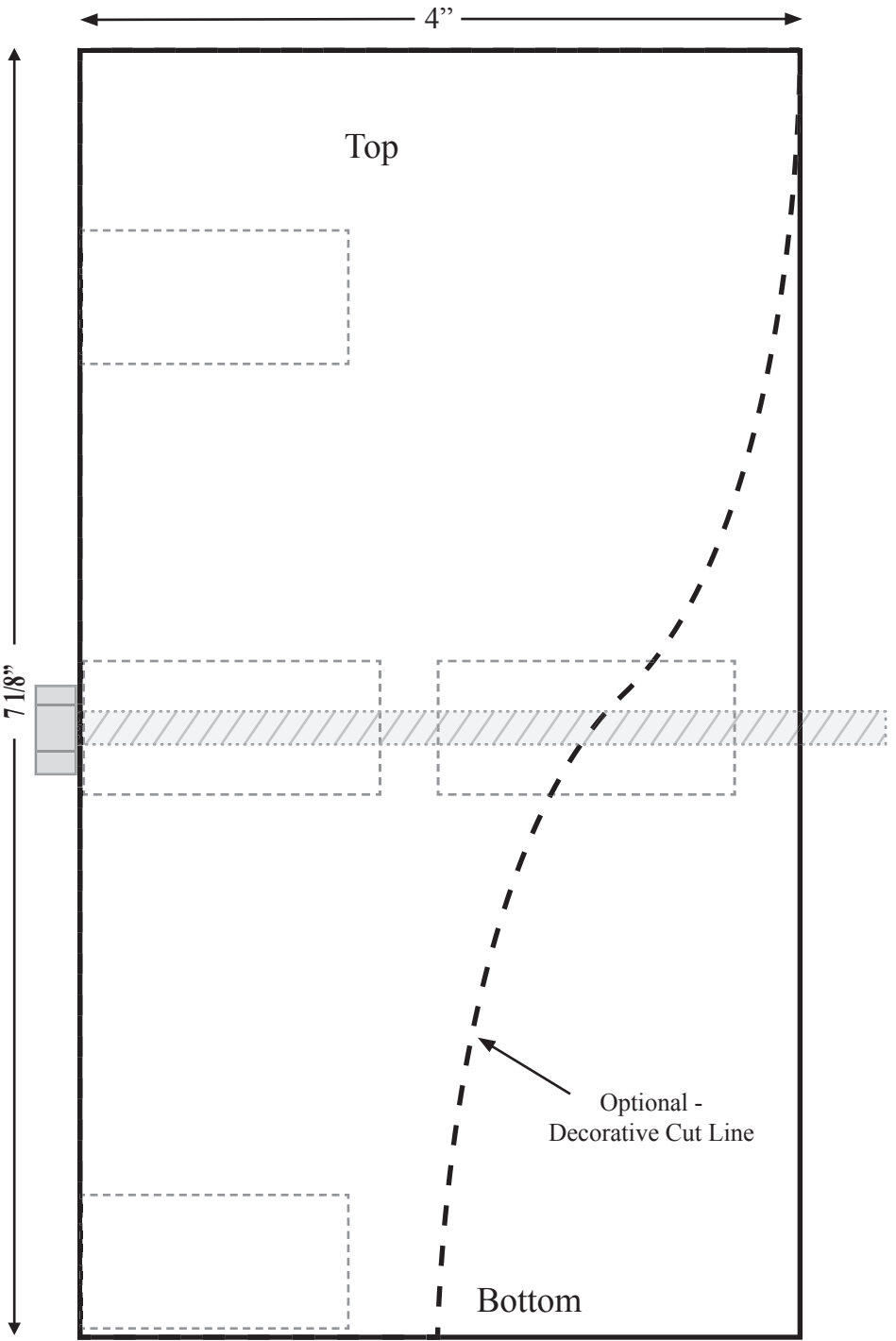
Bottom



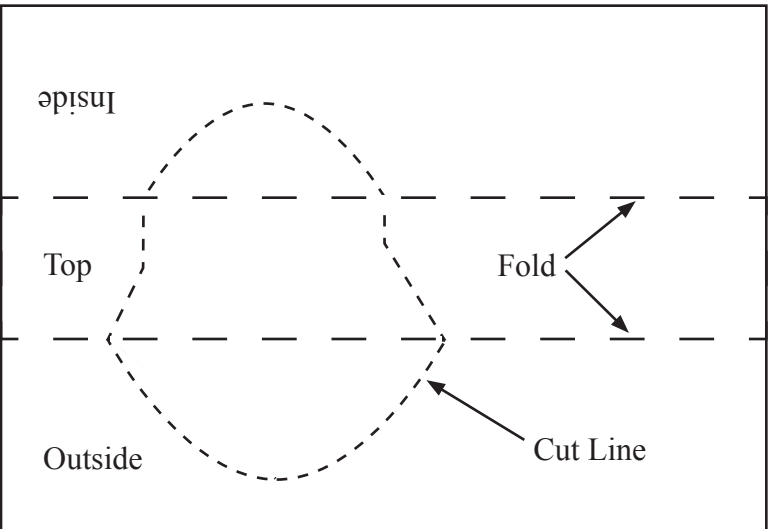


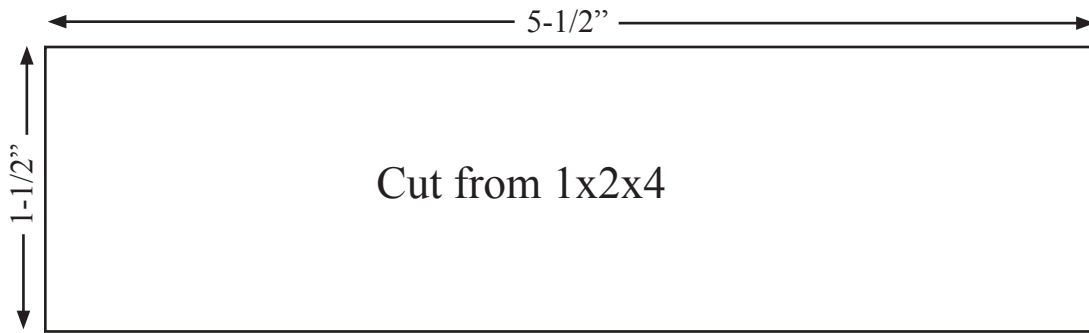
# Side panel

(x2)

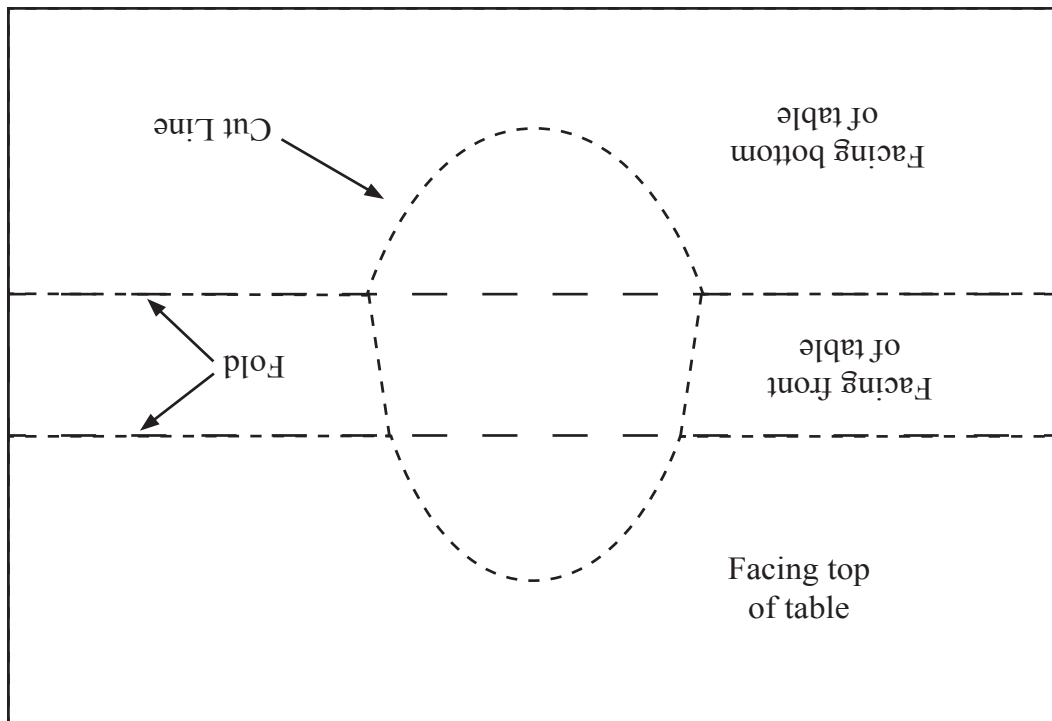


# Left side contour template

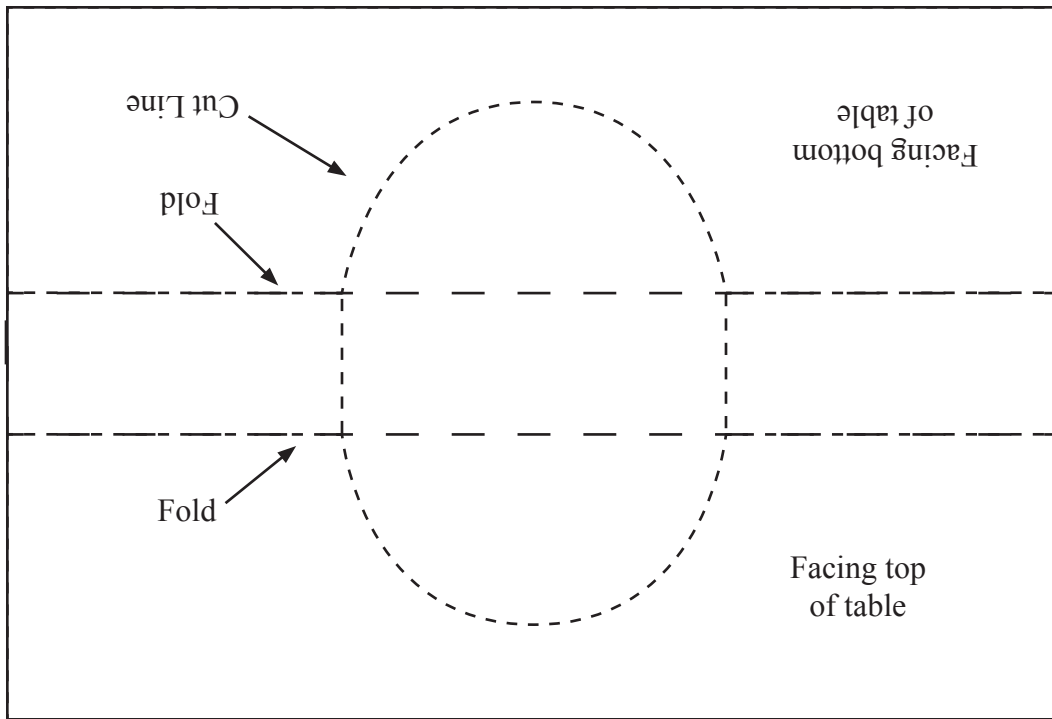




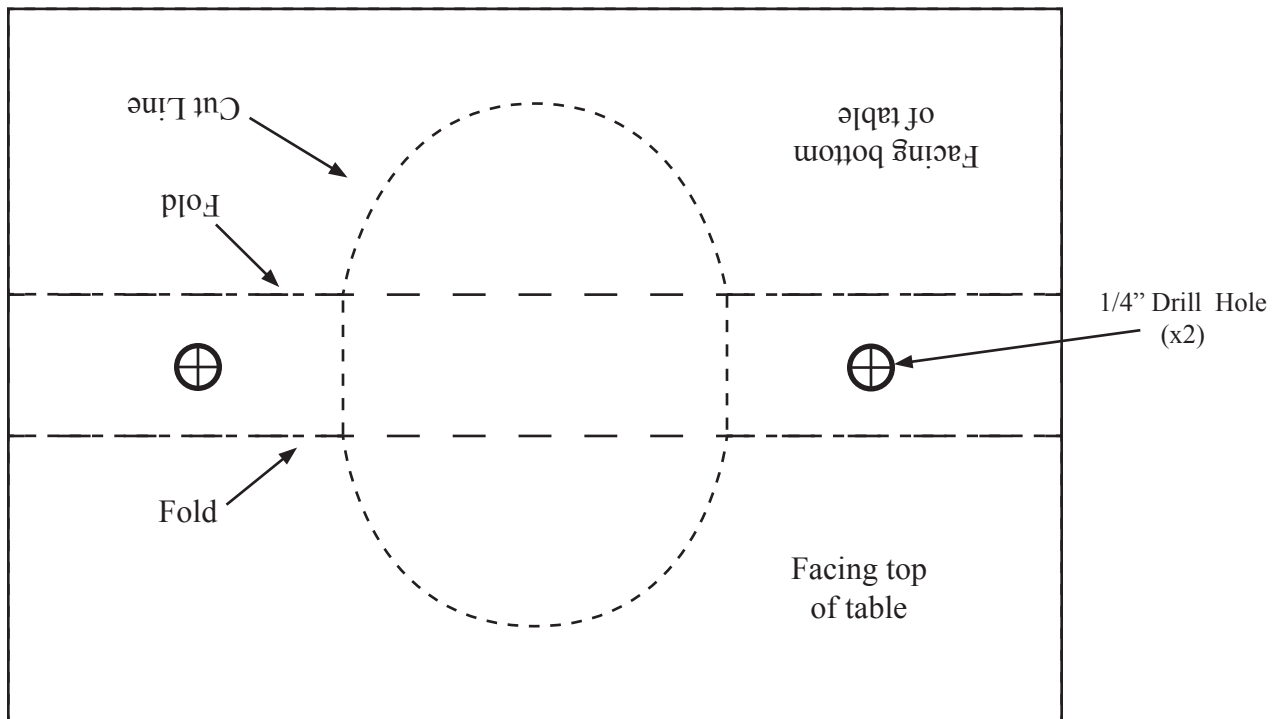
## Brackets and braces (x4)



## Top brace contour template



Bottom brace contour template



Clamp bracket contour template  
(x2)

10"

# Table Saw cover plate template

Back

7/64" Drill hole  
with  
1/4" Counter Sink - *must be tapered*  
(x8)

Left Side

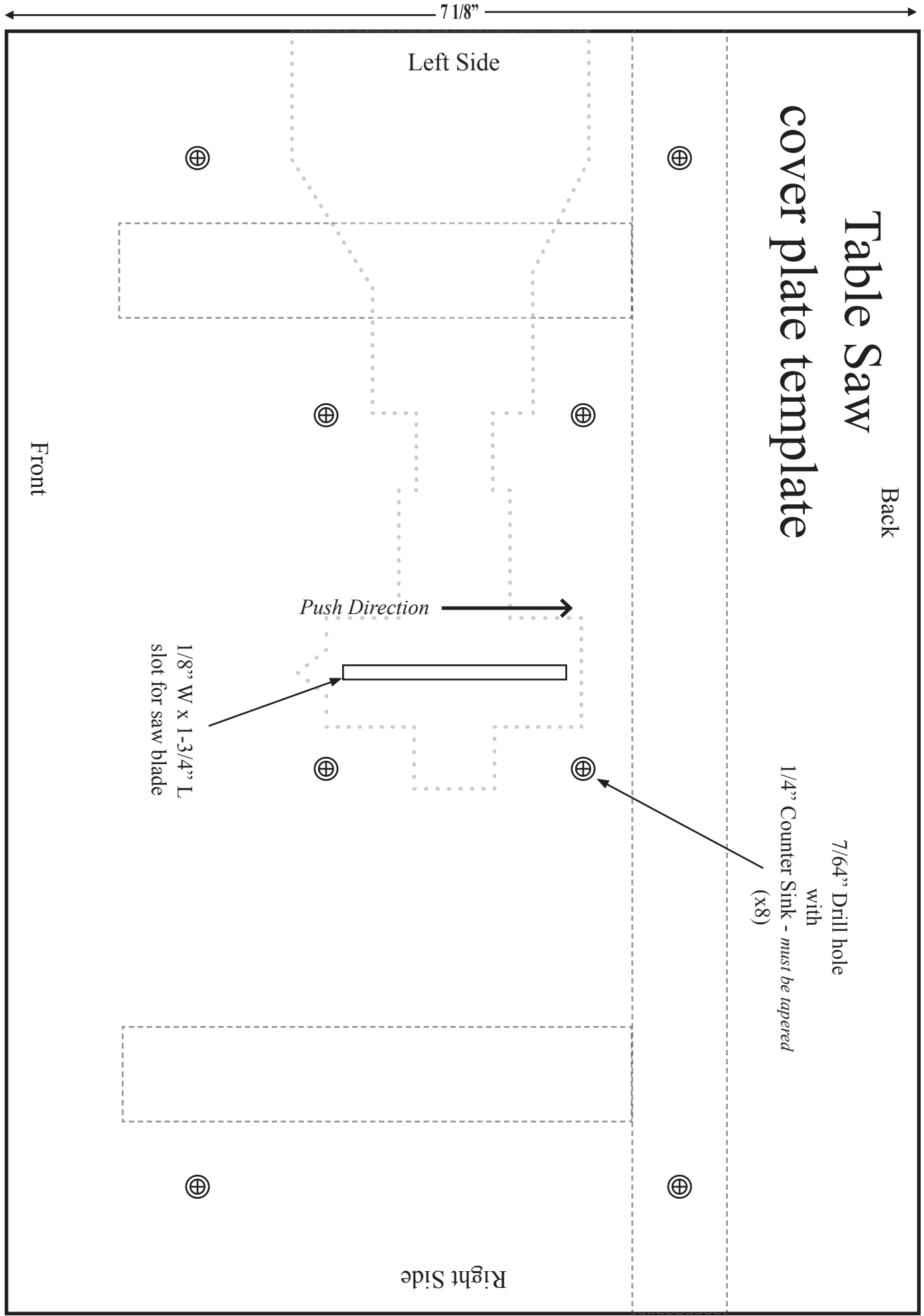
Right Side

7 1/8"

Front

Push Direction →

1/8" W x 1-3/4" L  
slot for saw blade



10"

# Router / Shaper cover plate template

Back

7/64" Drill hole  
with  
1/4" Counter Sink - *must be tapered*  
(x8)

Left Side

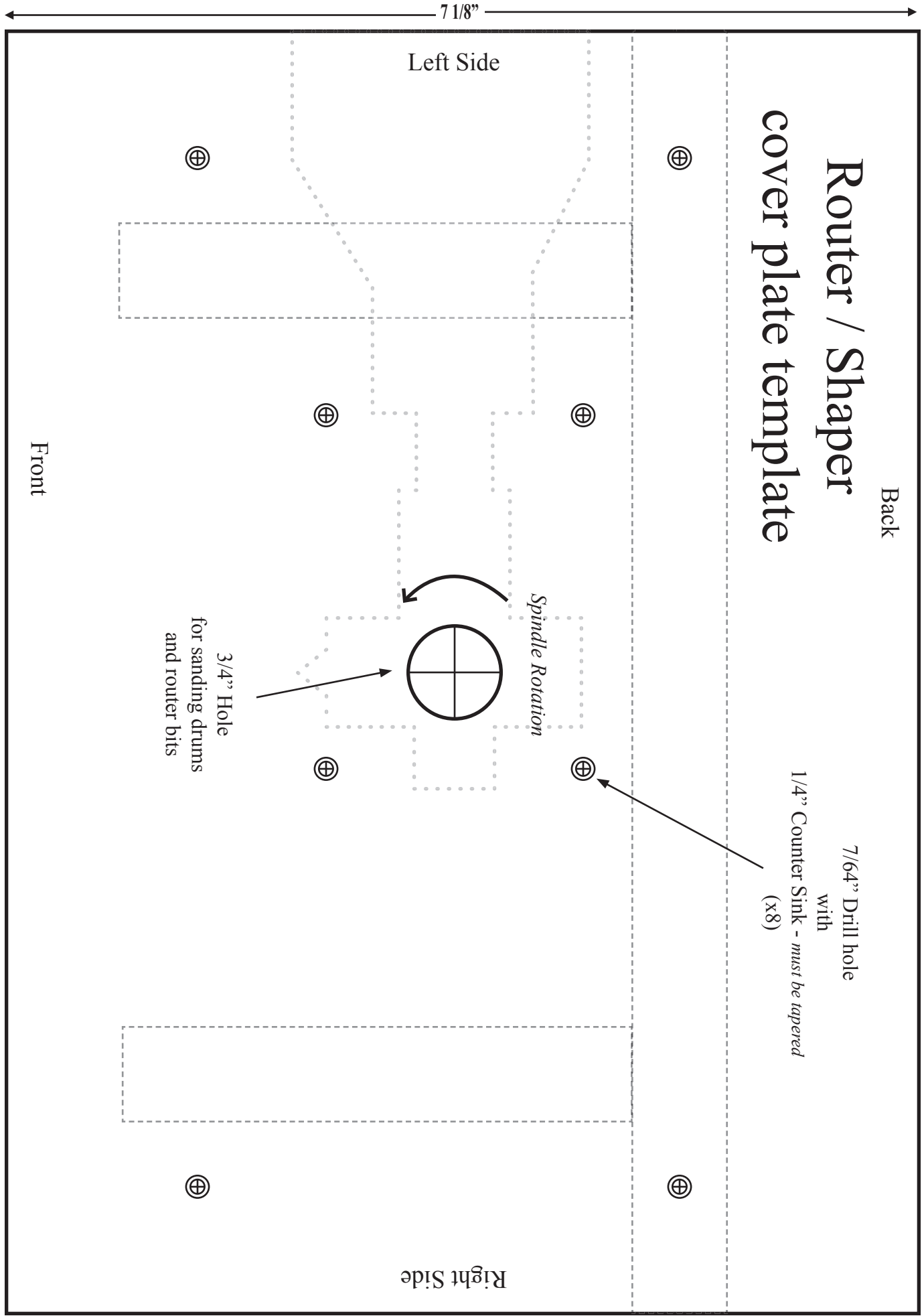
Right Side

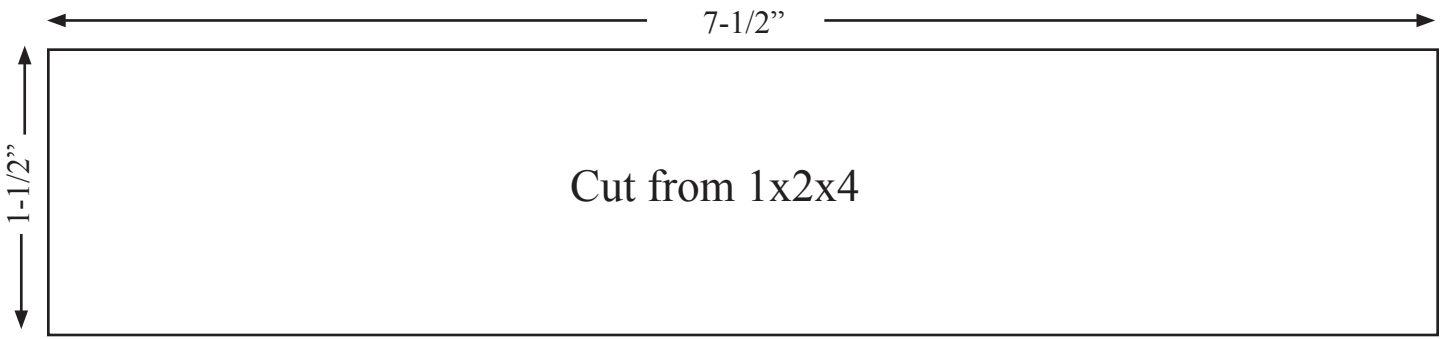
7 1/8"

Front

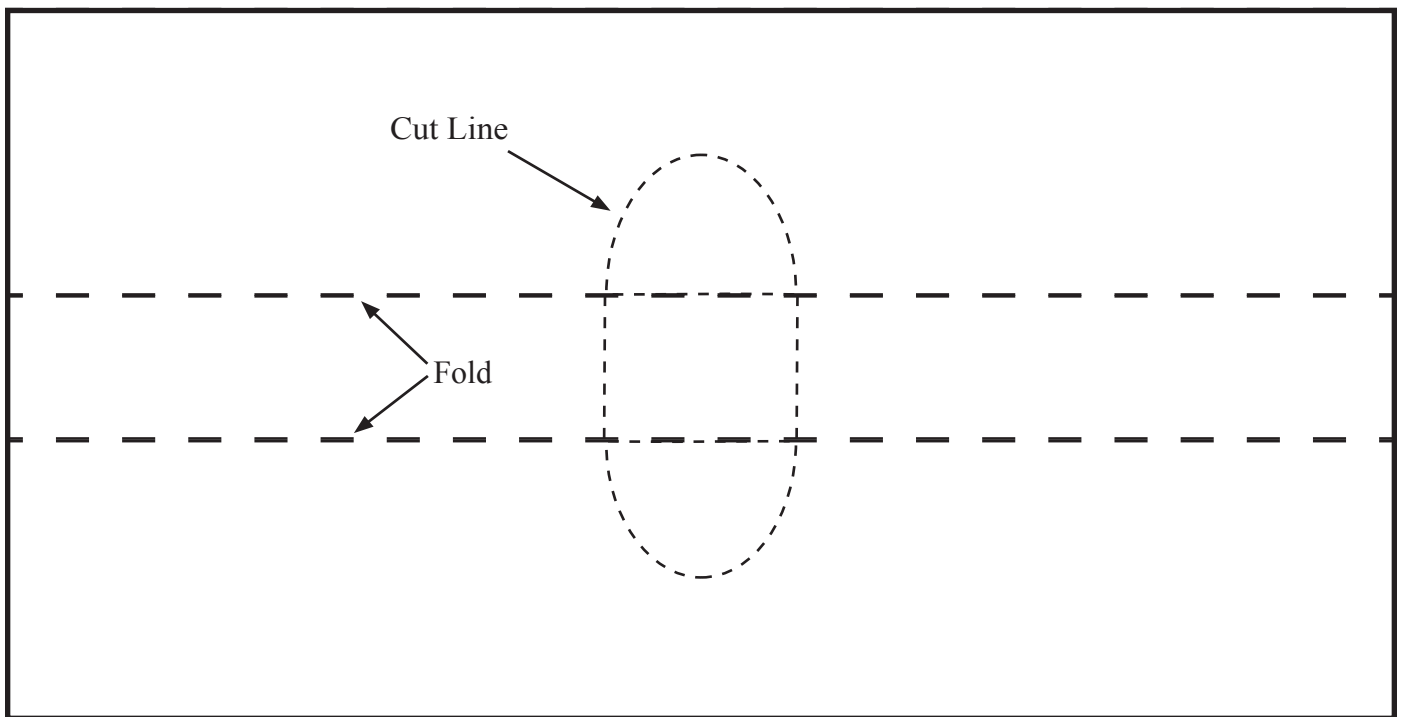
3/4" Hole  
for sanding drums  
and router bits

Spindle Rotation



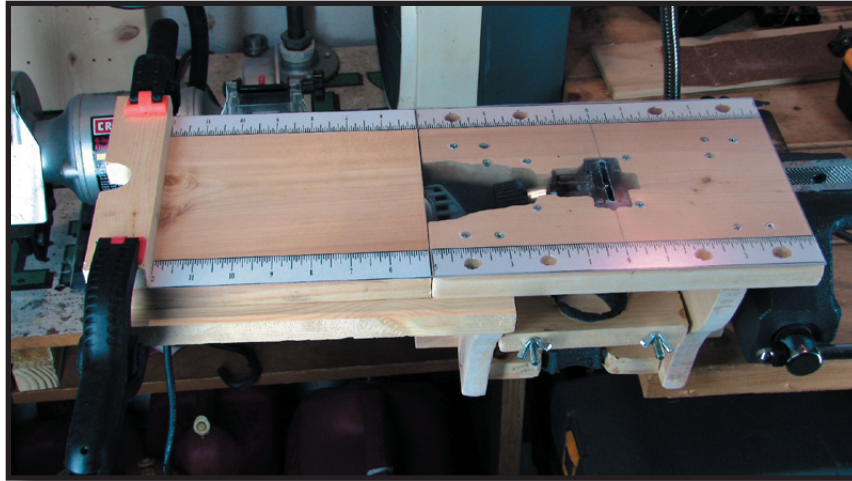


## Fence for Table Saw / Router



## Fence contour template

# Optional: Table Top Extension Plans



## Supply List:

- 1 bag - Round Combo Machine Screw with Nuts #6-32x1-1/2" (8pc/bag)
- 1 - 1x8x8" board (pre-cut from step one of instructions)
- 2 - 1x2x12" board (pre-cut from step one of instructions)
- 2 - 3" metal or plastic spring clamp
- 1 - 9/64" drill bit
- 1 - 1/4" drill bit

## Instructions:

- 1) Measure and mark the Table Top and Extension Arms for the additional drill holes according to the templates.
- 2) Drill and counter sink holes (do not countersink Extension Arms).
- 3) Assemble the Extension Arms on the left side of the Table Top.
- 4) Place the Dremel rotary tool in the table saw position and carefully lay the Table Top Extension in place.
- 5) Trace the outline of the Dremel rotary tool from underneath the Table Top Extension.
- 6) Now contour the bottom of the Table Top Extension so it rests on the Extension Arms and lays flat over the Dremel rotary tool (*see pictures 3 and 4 at the bottom of the template page*).
- 7) Place the fence the desired distance from the saw blade and clamp down using the 3" spring clamps. The clamps should provide plenty of support to hold the Table Top Extension in place with no additional clamping. However, if you notice the extension slipping when sawing, you may need to use additional machine screws through the Table Top Extension.

**Note:** *Once finished the Table Top Extension can be interchanged between the left and right side.*

7-1/8"

10"

# Optional:

## Additional drill holes for Table Top Extenders

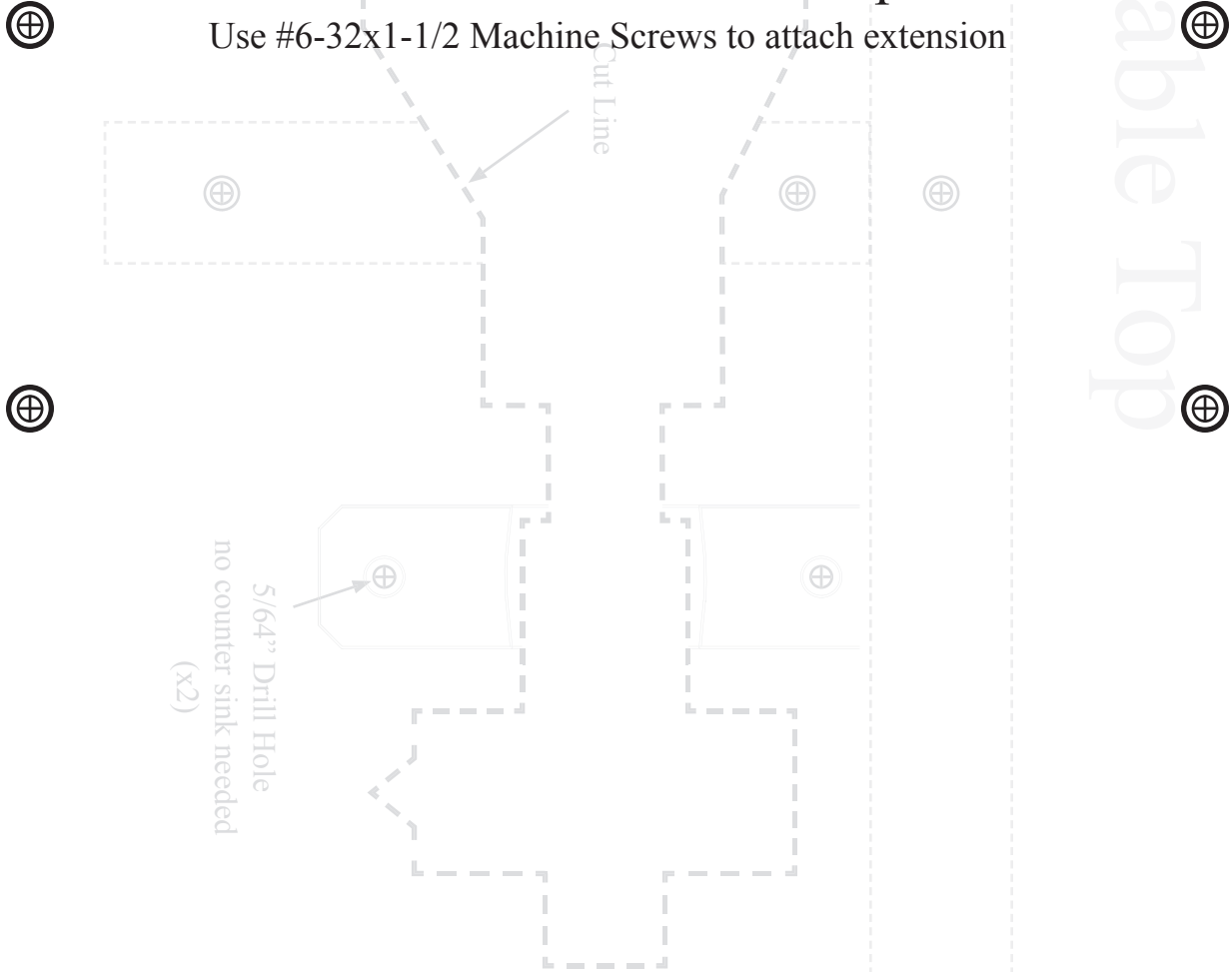
Use #6-32x1-1/2 Machine Screws to attach extension

Table Top

Front

Back

Right Side

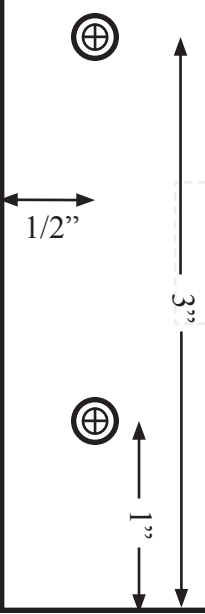


5/32" Drill Holes  
w/ 1/4" Counter Sink  
(x6)

9/64" Drill hole  
with  
1/4" Counter Sink  
(x8)

5/64" Drill Hole  
no counter sink needed  
(x2)

Repeat on all 4 corners

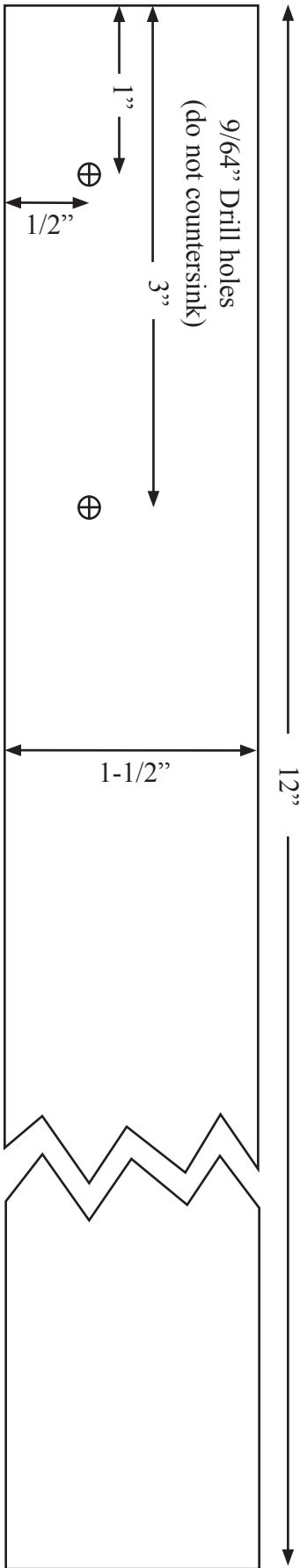




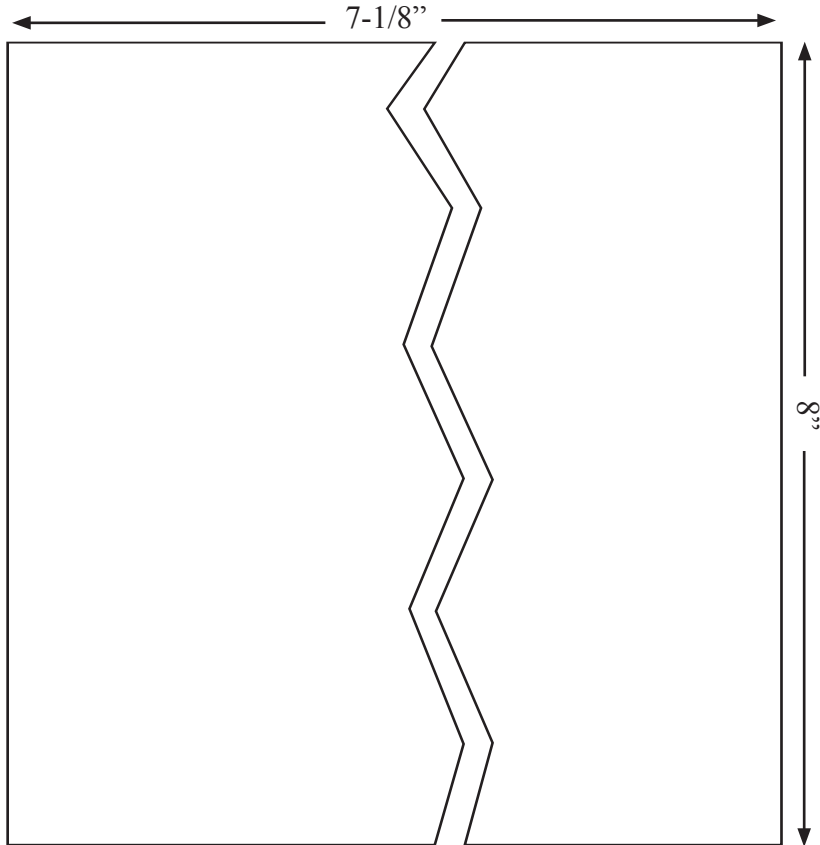
# Optional:

## Table Top Extension

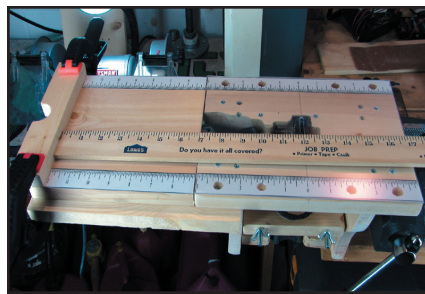
*\* drawings NOT actual size \**



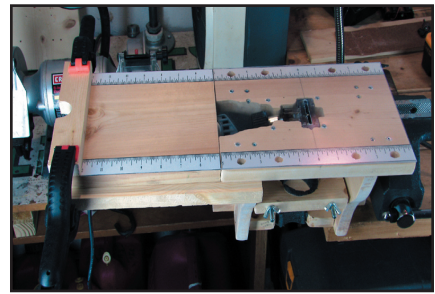
Extension Arms (x2)



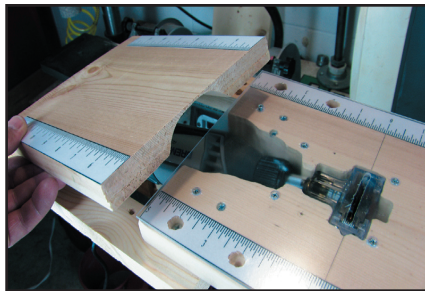
Extension Table (x1)



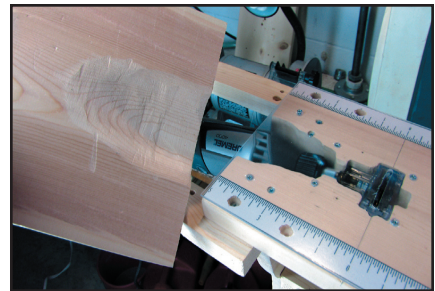
1



2



3



4

# OPTIONAL Rulers for Table Saw and Extension

