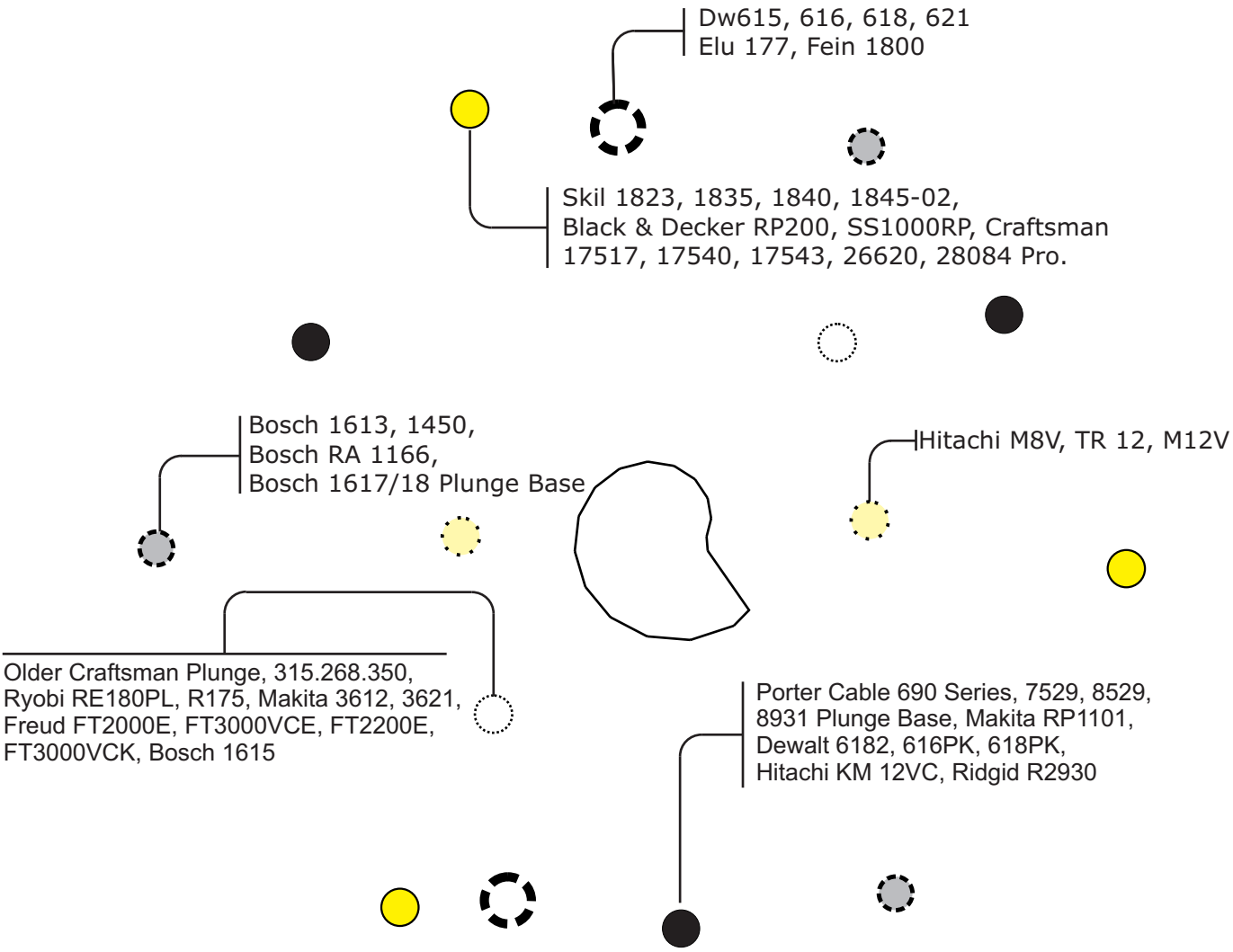
# M400 Instructions
# Router Layout




# Router Base Layout

JASPER TOOLS
4800 west 34th Street Suite C22
Houston, TX 77092
jaspertools.com

# M400 Instructions



This Circle Guide will make 105 different size circles from 1 to 7 1/2 inches in diameter in 1/16 inch increments. The scale is calibrated to make circular holes when a 1/4 inch router bit is used. A calibration disk is included that is used to calibrate the guide to your router.

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## INSTRUCTIONS

SAFETY: Read all precautions that came with your router. Make sure your router is unplugged while changing the bit and leave router unplugged until you complete your setup and you are ready to route your circle. Always use eye protection while routing.

MOUNTING THE GUIDE TO THE ROUTER: Your circle guide has a calibration disk installed with two dowel pins. Leave this disk in place. Remove the plastic base plate from your router. A 1/4 inch dowel pin has been provided in the hardware tube. Install the 1/4 inch dowel pin in the collet of your router, so that 7/8 of an inch of the pin is protruding from the collet. Plunge the router down and lock it so that the 1/4 inch pin protrudes 1/2 an inch below the base of the router. Note that you may need to use your 1/4 inch reducer to properly install the dowel pin. There is a 1/4 inch hole in the calibration disk. Hold the guide and calibration disk assembly by the calibration disk and install it on the 1/4 inch dowel pin. Rotate the guide around the router base until the mounting holes line up and mount the guide with the supplied screws. Release the lock on the router and remove the calibration disk from the guide by pressing on the top side with a screwdriver. Replace the 1/4 inch dowel pin with a 1/4 inch router bit. Your circle guide is now calibrated for your router.

REINSTALLING THE CALIBRATION DISK ON THE GUIDE: Save the calibration disk and 1/4 inch dowel pin for future installation. There are two 1/8 inch dowel pins pressed in the calibration disk. The pin that is closer to the 1/4 inch center hole should be inserted in the 1 1/4 inch pivot hole in the guide. The other pin should be inserted in the 1 3/4 inch pivot hole in the guide. The disk should be left on the guide when the guide is not in use.

HOW TO USE THE SCALE: This Circle Guide is designed to make circular cuts from 1 inch to 7 ½ inches in diameter. While looking at the guide, find the first radial line labeled 1 through 7. The next radial line in the counter clockwise direction is labeled $^{1}/_{16}$. As you continue in the counter clockwise direction around the guide, the radial lines are labeled in $^{1}/_{16}$th inch increments to $^{15}/_{16}$. Fractional pivot holes for each inch are connected by a line around the guide. To locate, for example, the 4 $^{5}/_{16}$ inch pivot hole. You find the 4 inch pivot hole on the first radial line and follow the 4 inch line around to the $^{5}/_{16}$ radial line. The pivot hole at the intersection of these lines is the 4 $^{5}/_{16}$ inch pivot hole. The scale is will face the work piece while routing the circle. When you have located the pivot hole for the diameter circle you wish to make, insert the pivot pin in that hole. The pivot holes are precision drilled so that the guide holds the pin in the selected hole without falling out. When you turn your router over the pin will not fall out of the guide.

CUTTING DISKS: The guide is calibrated to make HOLE cutouts using a ¼ inch diameter router bit. To make disks, use a ¼ inch router bit and add ½ an inch to the scale.

USING OTHER BIT DIAMETERS: To make a cutout with a bit other than ¼ inch diameter, select the pivot hole by using the following equation:

Pivot Hole Value = Cutout Diameter - Bit Diameter + 0.25

To make a disk with a bit diameter other than ¼ inch, use the following equation:

Pivot Hole Value = Disk Diameter + Bit Diameter + 0.25

### USE THE GUIDE FOR METRIC DIMENSIONS

(Note: These equations calculate the Pivot hole on the Guide in Inches)

To Make a Metric Cutout in MM:

$$\text{Pivot Hole on Guide (Inches)} = \frac{\text{Cutout Diameter(MM)} - \text{Bit Diameter(MM)} + 6.35}{25.4}$$

To Make a Metric Disk in MM:

$$\text{Pivot Hole on Guide (Inches)} = \frac{\text{Cutout Diameter(MM)} + \text{Bit Diameter(MM)} + 6.35}{25.4}$$

SETTING UP: Figure 1 shows a typical setup for cutting circular holes, mortises, or disks. The work-piece should be taped to the backup with double sided tape on both the inside and the outside of the cutout. Using a 1/8 inch diameter drill bit, drill a vertical hole through the work-piece and into the backup. This hole should be located at the center of the circle to be cut.

SETUP FOR CIRCLE ROUTING

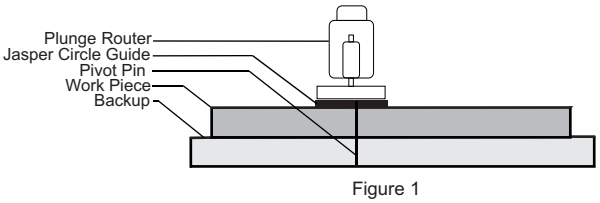


Figure 1

Made in USA