

Right Handed Instructions

Success with the Circle System will be determined by your setup, glass cutting skills and practice. List "A" has items not included that make getting started easier. List "B" has things used with the more advanced setups.

Included

- **Turn Table & Pad** - Formerly Teeny Turn Table (TTO3)
- **Circle Guide** - Formerly Teeny Circle Guide (TCO1)
- **Glass Stop** - This is the same fixture as used in the PGO1B.
- **2 Black Cylinders** - (From CCO6)
- **Wire Support Rod**
- **Right Handed Instructions**
- **Left Handed Instructions**

List "A"

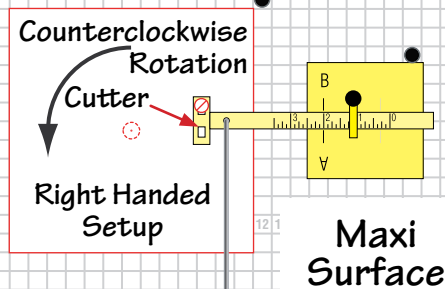
- **Paraffin Wax** - found at grocery stores in the canning supplies area. Wax is used as a lubricate and is rubbed onto the bottom of the Turn Table to improve turning.
- **Soft Lead Pencil** (wood) - will be used to make locating circles on the Turn Table.
- **Double Stick Tape** - used to hold the glass to the Turn Table when making smaller circles.
- **Old Table Knife** - used to remove taped down glass from the turn table.
- **Window Glass** - both single and double strength glass will be helpful to practice making circles.

List "B"

- **Portable Glass Shop**
- **Masking Tape** - 3/4" wide.
- **Ruler** - any kind will work.
- **Small 90° Square**
- **Plastic Strips** - you can find Plexiglas strips at a window replacement center. Usually they have scrap that is inexpensive or free.

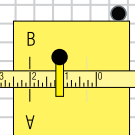
Teeny Circle System (TCS1)

You can use the Circle Guide and Turn Table anywhere on your surface but it is important to turn your Mini or Maxi Surface as shown here!



Mini & Super Mini Surface

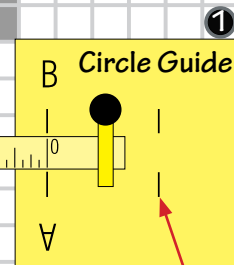
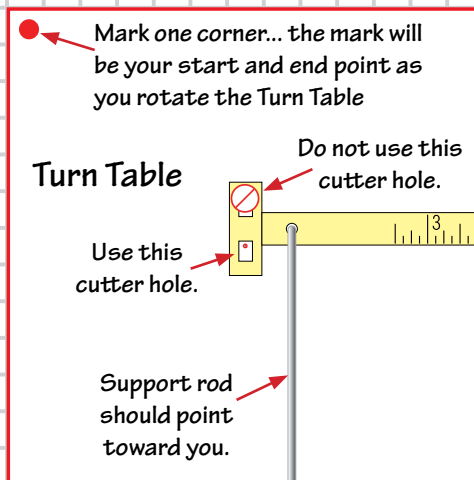
Counterclockwise Rotation
Cutter
Right Handed Setup



Insert one of the black cylinders as shown to mark the position of the Turn Table.

Anchor the Circle Guide by inserting one of the black cylinders into position 1 or 2.

If you are willing to wrap a few layers of masking tape around the top half of the cylinder, 2 is the better placement.



The support rod is important... make it the last thing you do before using the Circle Guide.

The short end is placed in the arm as shown.

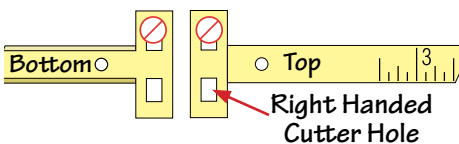
The yellow Circle Guide is located three rows over and three rows down from the top right corner of the Turn Table... study the shaded area.

To Check Your Setup: Set the scale to zero... insert a pencil into the cutter hole and spin the turn table. If your setup is correct you will draw a dot or small circle on the turn table... a larger circle means your setup is not correct. The center of the dot or circle is the center of the turn table.

The concept of the Circle Guide and Turn Table is one where the glass is turned and the glass cutter is stationary. All other circle tools are the reverse. This basic difference was our way to let you use your regular glass cutter. Our design is built around the popular Toyo Glass Cutter. Their pattern head was introduced in 1978 and has remained the same through the years. The pattern head of most glass cutters will be about the same size. The cutter holes in the arm of your Circle Guide will very likely need a few minutes of tweaking to properly work with your glass cutter. Use the information below to get the best fit possible..



Your cutter must fit into the cutter hole. It is desirable to have a fit where the cutter head will slide into the arm but not be loose and allow side to side tilt. If the cutter head will not fit into the hole, you can use a small file, nail file or emery board to remove some of the plastic. The emery board will do a good job but you must first split it in half so it is narrow enough to fit the cutter hole. Because the hole is slightly tapered it is best to turn the arm over and work from the bottom.



Remove a little plastic from each side until the cutter head fits.

Right Handed Instructions

Find the center of the Turn Table.

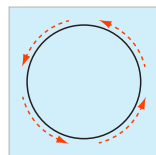
Use the standard right handed setup and **set the scale to zero**. Place a lead pencil in the cutter hole and spin the Turn Table. If you are set up correctly you will draw a dot or small circle. The center of small circle is the center of the Turn Table. A larger circle means the setup is wrong.



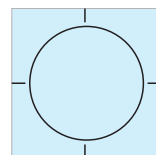
It is helpful to draw circles on the Turn Table with the pencil. Set the arm to 1"... draw a 2" circle. Reset the arm and draw a 3", 4", 5", 6" and 7" circle on the Turn Table.

Correct allowance for the circle scrap is important.

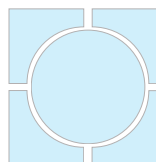
The idea is to score the circle and then separate the outer scrap from the circle cleanly. When you do this well, little or no grinding is needed. The breakout will be easiest if you start with a square. For a 2½" circle or larger you should make the square 1" larger than the circle. This will give you ½" of scrap on all sides. For smaller than 2½" circle make the square ¾" larger than the circle.



After scoring the circle you must make the score run completely before adding any relief lines.



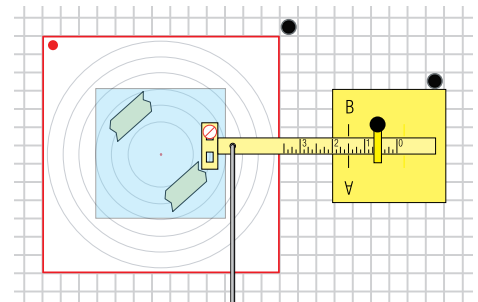
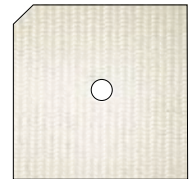
Make 4 relief scores by starting each score near but not touching the circle. Score off the outer edge of the glass.



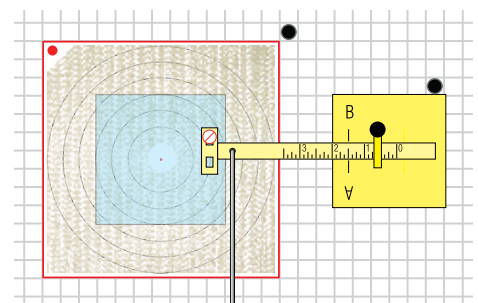
Carefully break the relief scores to remove the scrap from the circle. Practice with single strength window glass.

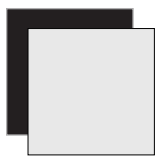
Holding the glass to the Turn Table

can be accomplished by using double stick tape or the included rubber pad. Double sided masking tape is the best type of tape to use. It is used by engravers to secure their work and by golfers to hold the grip to the club's shaft. Other types of double sided tape will work but not quite as well. You may find it helpful to make a couple of modifications to the pad that came with your Turn Table. Cutting a small hole in the center and removing a corner allows you to easily see a center dot and corner reference mark.



Size of the circle, thickness of the glass and texture are factors that will determine whether tape or pad should be used. If you are making smaller than 3" circles, the tape method shown above is usually the best choice. If the glass is single strength the tape is usually best. If the glass has texture on one side the pad method shown below is best. If the glass is smooth on both sides and the circle size is 3" or greater, either method is okay.

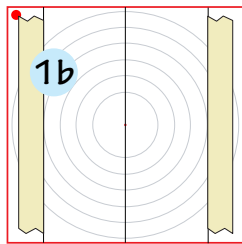
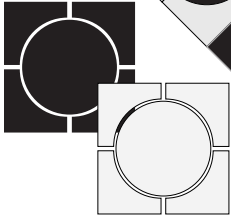




1a

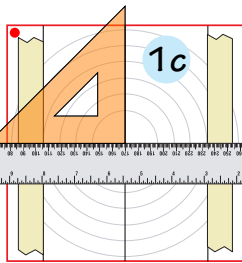
Circle & Scrap Swap

The example shown here is black and white glass in 5" squares. The circles are 3 3/4" with a radius setting of 1 7/8" (See 1e). After you score the circle and run the score you can use your Glass Shop to make accurate relief scores.



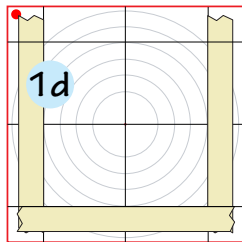
1b

- Draw a straight line through the center of the Turn Table (See 1b).
- Measure 2 1/2" to the left and right at the top and bottom of the center line (See 1b).
- Draw lines on the left and right side of the center line. Add masking tape to lines (See 1b).



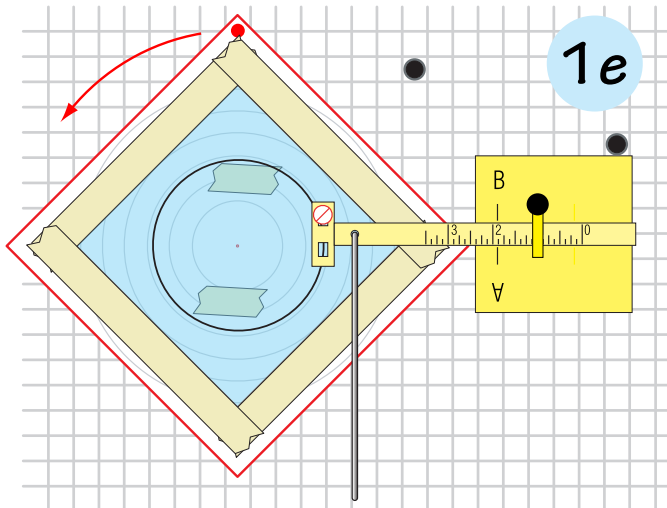
1c

- Use a square and ruler to draw a cross line (See 1c).
- Measure 2 1/2" from the center line. Draw lines, add masking tape (See 1d & 1e).



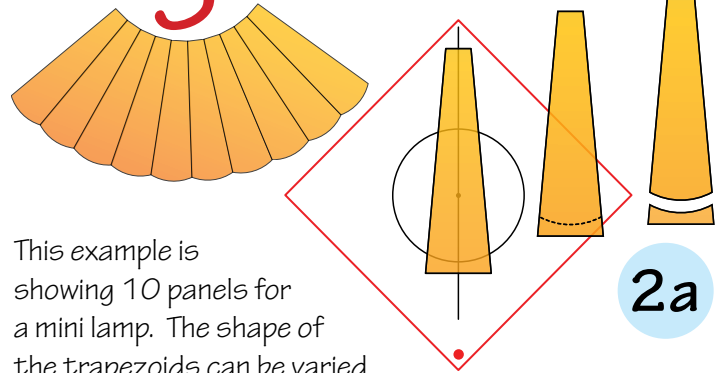
1d

- Use the masking tape border and double sided tape to position and hold the glass (See 1e).
- **With your right hand**, place the glass cutter in the cutter hole.
- **With left hand**, rotate the Turn Table counterclockwise (See 1e).
- After the score, follow the breakout techniques on page 2.



1e

Scallops & Trapezoids

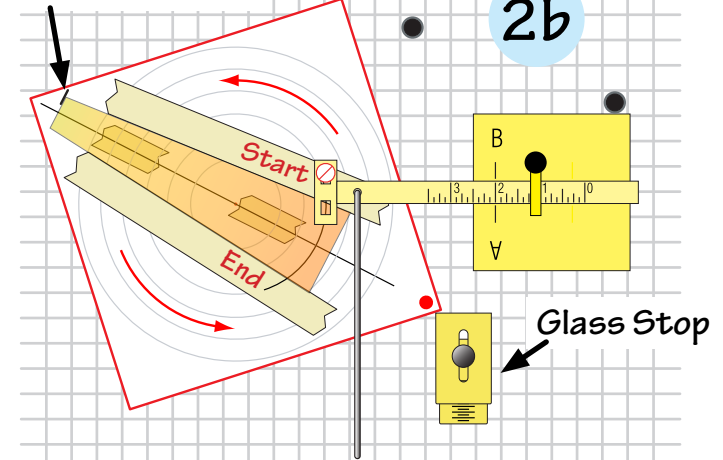


2a

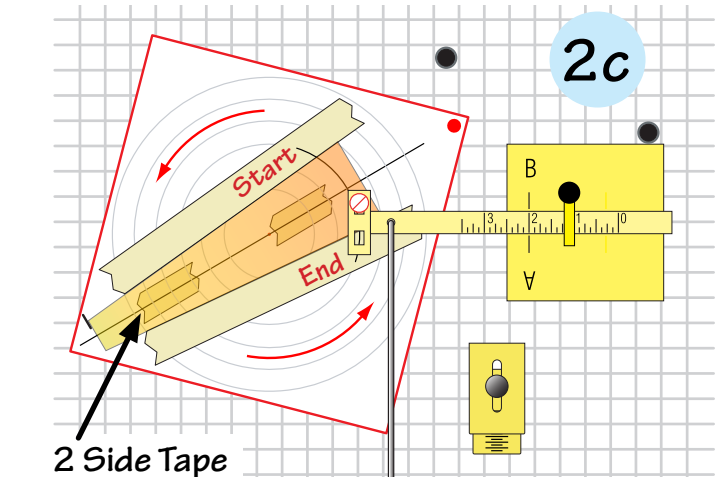
This example is showing 10 panels for a mini lamp. The shape of the trapezoids can be varied to suit your needs once you understand the concept.

- Draw a straight line through the center of the Turn Table (See 2a).
- Pick a circle size that gives the desired arc (See 2a).
- Center the trapezoid on the center line (See 2a).
- Use double stick tape to hold glass (See 2c).
- Use masking tape (See 2b) as a placement guide.
- Mark the location of the narrow end (See 2b).
- **(Optional)** Control the start of the score with the yellow Glass Stop (See 2b).
- **With right hand**, place the glass cutter in the cutter hole.
- **With left hand**, rotate the Turn Table (See 2b & 2c).

Location Mark



2b



2c

2 Side Tape



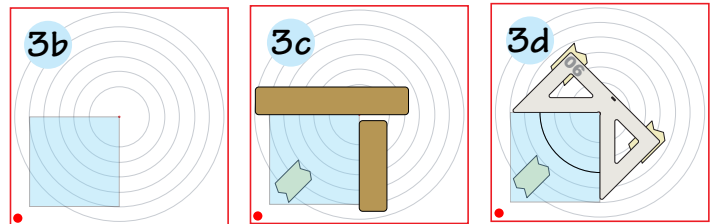
Quarter Circle Quilting Design

This very old quilting design is called the "Drunkard's Path". The pieces can be arranged into dozens of other designs. With a little practice, the score and breakout is easy to do. **Start with 16 three inch glass squares (8 one color, 8 another color).**

The quarter circles are made with a modified Turn Table and a Cutter Guide setting of 2". If this were a full circle its diameter would be 4". If you put four 3" squares together you have a 6" square.

Modifying the Turn Table

- Position the 3" glass square as shown in **3b**. Be sure the corner of the glass is on the Turn Table center.
- In **3c** a border is created using plastic strips. Strips are held in place with double sided tape. Be sure the strip thickness is the same or thinner than the glass.
- In **3d** the 90° Fast Angle from the PGO1B is used. If you have this fixture it is the better option. Use double sided tape to hold the Fast Angle to the Turn Table.
- **(Optional)** Use the yellow Glass Stop to control the starting point of the score (See **3e**). To use the Glass Stop you must remove a corner from the Turn Table (See **3e & 3f**). Because the corner will never be needed, this modification will not reduce the function of the Turn Table. Use scissors or utility knife to remove the corner.



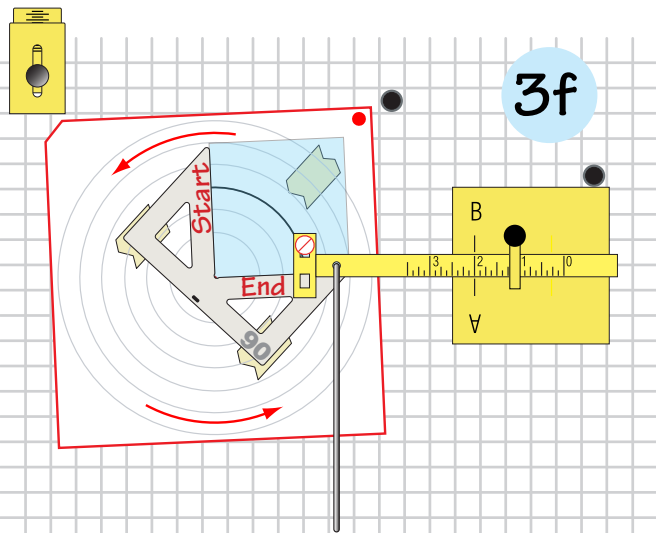
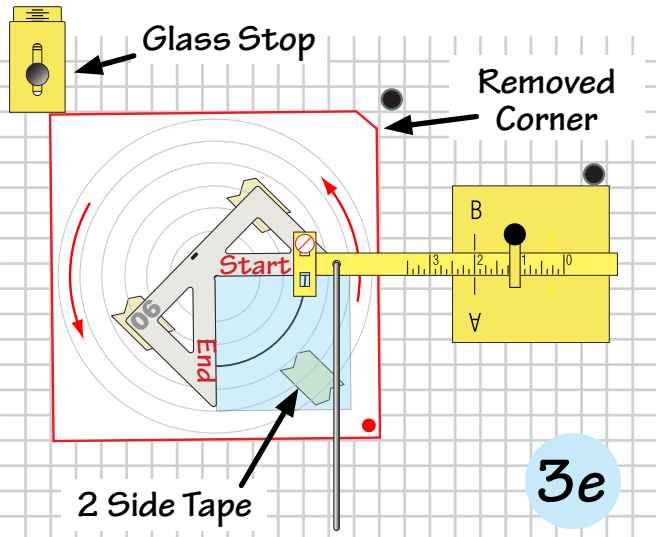
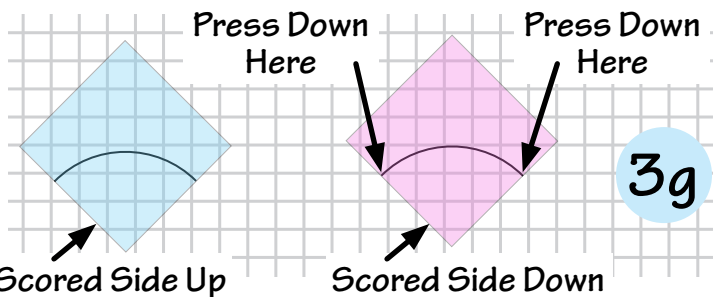
Scoring the Glass

- **(Review 3e)** A small piece of double sided tape is used to hold the glass in place. The Cutter Guide arm is set to 2". **(Optional)** Adjust the yellow Glass Stop so the cutter wheel is starting on the edge of the glass.
- **(Right hand)** Place your glass cutter in the Cutter Guide.
- **(Left hand)** Rotate the Turn Table counterclockwise until the cutter falls off the edge of the glass (See **3e**).

Running the Score

The shape of the score will make the breakout prone to flares at the start and end of the score. To decrease the chance of flares you can do the following:

- Turn the scored side down on the surface (See **3g**).
- Using your finger or thumb push down on the glass with steady pressure in one of the two marked areas (See **3g**). Press until you see or hear the glass break... do both marked areas. **If the pieces have not separated, press in the middle of the score line to complete the break.**



Right Handed Instructions