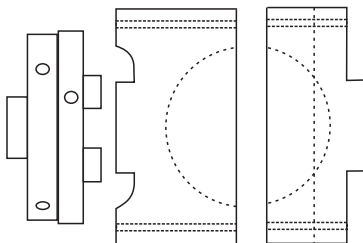
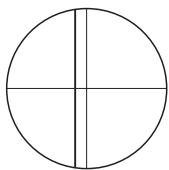
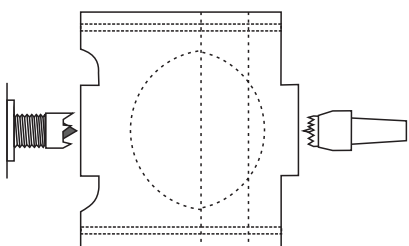


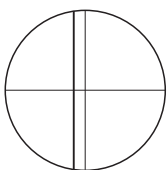
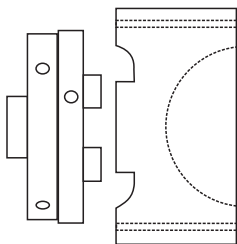
## A Sphere Holding Jig

This plan is for the jig to be a cylinder with no significant protrusions. Make a template of the size of your intended sphere as described in the Circle Template project in <https://sawg.org.nz/tipsnjigs/>. Cut the wood to 50% greater width than the sphere it is to hold to make at least a 30mm space each side of the sphere for the bolts and the length to 35% longer than the diameter of the planned sphere. After the wood is turned, find bolts of a suitable length.



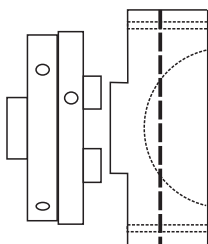
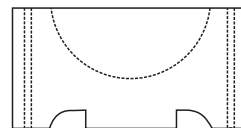
Mount the wood between centres, turn it to round with a spigot on both ends. Insetting the spigot on the headstock end can make later handling of the jig easier. On the tailstock end of the wood draw the diameter of the sphere you intend to make. Draw another line half way between that diameter line and the outer edge of the wood. Now use the index on the lathe to mark this line into quarters. At those points drill four holes the size of the bolts you have, from end to end of the wood.

Mark a new line on your circle template about 10% of the diameter of your planned sphere to one side of one of the central lines on the template. This smaller segment of the circle is the planned depth of the cavity to be cut in the jig.

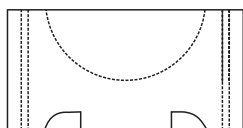
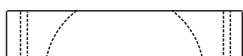


Mount the wood in a chuck. If this wood does not have distinctive grain to help put the two parts together later, mark it boldly with a fat pen. Use the segment of the circle on the circle template to determine where to cut the wood. Cut the wood into two parts.

Cut a segment of the circle into the wood that remains on the chuck. Do not allow this hollowing to get too deep as your sphere can jam very securely into a hemispherical hollow. Sand this inner surface. Set this lower part of the sphere holding jig aside.



Mount the top part of the jig in the chuck. Hollow and finish it exactly as you did the lower part. Now, separate this block along the bold dashed line so that it becomes a ring to hold the sphere into the bottom part of the sphere holding jig. The hole in the upper part allows you to drill, cut, decorate, etc., the visible part of your sphere.



You may drill a larger hole up each of the bolt holes so that the end of the bolt and the nut can be clear of the surface of the work bench.