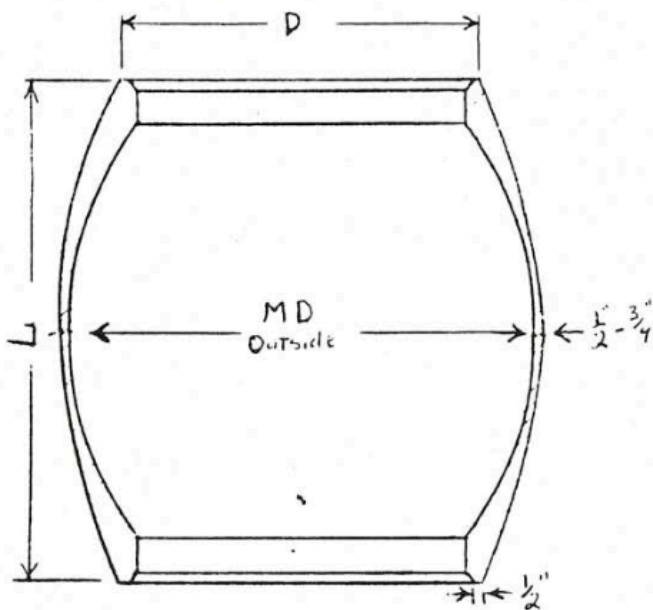


DIMENSIONS by Henry Nakata



TAIKO CROSECTION

The only controllable dimension of a barrel is its length. Taiko are more round/fatter in the middle than barrels.

APPROXIMATE TAIKO PROPORTIONS

$D$ =diameter of head *ex. 17*

$L$ =length *ex. 22*

$MD$ =outside diameter at middle *ex. 23*

$L:D$  ( $L/D=120-129\%$ )

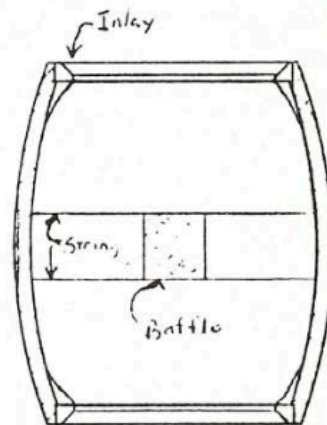
$MD:L$  ( $MD/L=104\%$ )

$MD:D$  ( $MD/D=125-135\%$ )

*1.29 = 129%*  
 $17 \overline{) 22}$   
 $22 \overline{) 23}$  *1.06 = 106%*  
 $17 \overline{) 23}$  *1.35 = 135%*

For appearance and strength an uncut barrel can be glued between each stay. Then the metal bands can be removed. When this is done there is a great possibility the barrel will loose its circular shape. The rim of a Taiko is much thicker than the middle part. A barrel is the same thickness at all places. By inserting a circular inlay at the edge of a barrel it can reinforce and hold it in a circular shape when the pressure of the fuchi (skin) is attached. It can also be contoured to a shape similar to a carved Taiko.

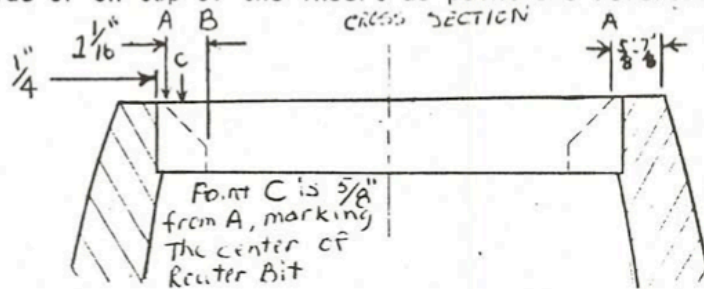
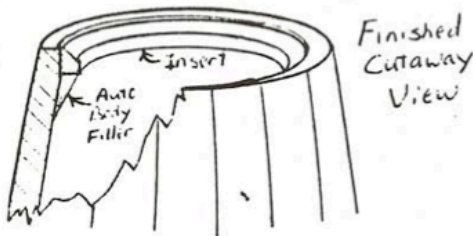
Inherent ringing of high frequency vibrations in most barrels can be countered with a small amount of baffling inside the barrel. Depending on the size of the barrel, a small piece of sound absorbing material (i.e. 1/4-1/2" thick foam) about 8" square/round (for 65gal. barrels) can be suspended in the middle of the barrel perpendicular to the fuchi. This can be experimented with frequency generators and oscilloscope, or just by ear. Too large a baffle will muffle the sound, too small has no effect.



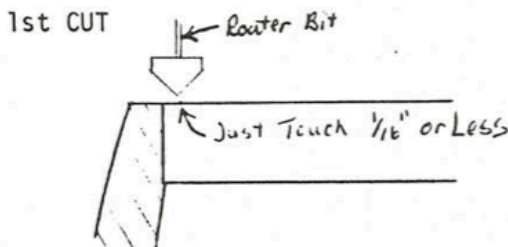
MODIFIED BARREL CROSECTION

### INSERT SHAPING

1. If necessary level edge of barrel flush with insert using a belt sander.
2. Measure  $5/8"$  to  $7/8"$  in from outside edge, this point A should leave the outer  $1/4"$  of the insert that will form the rim the fuchi (skin) sits on. From this point measure in  $1-1/16"$  toward the center, this point B is where the insert will be cut all the way through to form the opening of the rim. Mark router position at point B on router circle guide or on top of the insert as point B's reference will be cut away.



3. All cuts done by router with circle guide using  $45^\circ$  V-grove bit with  $7/8"$  cutting edge (except 2nd & 5th cuts). Cuts 2-4 require several passes to obtain full cut.

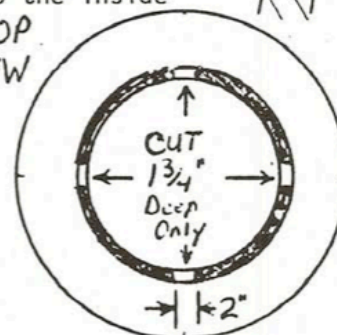


score point A to prevent splintering on CUT#3

2nd CUT

With long shank straight cut bit ( $1/4"$ ) cut to the inside edge of point B to the depth of  $1-3/4"$  only. Mark 4 points  $2"$  wide, this area is NOT to be cut completely through at this time (very important). Proceed to cut completely through in area outside of 4 points but not through the 4- $2"$  points. This holds the center of the insert in place until all cuts are made.

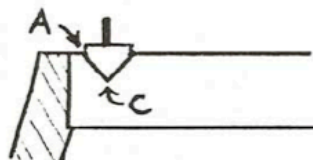
TOP VIEW



Area Cut Completely Through

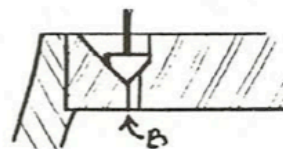
3rd CUT

Make a V-grove at point C to depth where edge of bit touches point A.



4th CUT

Make V-grove at point B to depth flush with 3rd CUT



SAN JOSE TAIKO  
For Internal Use Only

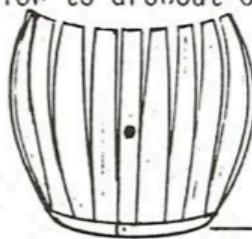
5th CUT-hammer 2-3 screwdrivers into inner part of insert to hold it from falling through when cut out. With saber saw cut remaining 4 points uncut in 2nd CUT.

4. Fill back of insert with auto body filler ("LONG & STRONG" is embedded with fiberglass and most flexible of bondo's).

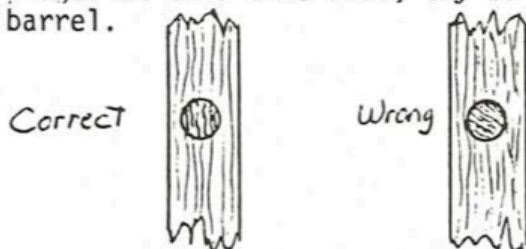


## GLUEING STAYS

1. Mark position of bands, make note all rivets align with bung hole stay. Attach handle of some sort to both lids, so the lid can be replaced after glueing.
2. Using large cold chisels, remove bands #1-5, do NOT remove #6 or the bottom one. Barrel must be on flat surface and NOT moved when bands are off.
3. Carefully open stay one at a time, do not allow to drop out of bottom lid. Apply glue (plastic resin glue is slow setting and allows greatest working time) to both sides and down as far as possible. Close back and repeat for each stay. Work quickly, 4-5 people glueing at same time before glue dries.



4. Replace bands #1-3 and the lid, working ALL bands down ALITTLE at a time until in original position.
5. Remove band #6 open opposite end of barrel (bands #2 & 3 may have to be removed also) glue remaining unglued portion of stays. Barrel must be turned over for this.
6. Replace all bands and lid as in step (4), remove ALL excess glue with wet rags before it dries, it becomes very difficult to remove once hard and the bands won't come off later.
7. Extra glue can be mixed with saw dust and used to fill gaps between stays. Remove handles from lids.
8. Bung hole can be plugged at this time also, try to align the grain of plug with the stay on barrel.

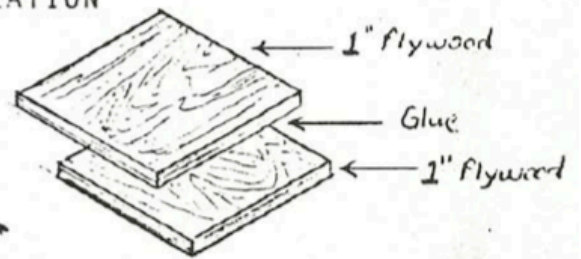


NOTE: when using a mixed glue be sure to prepare enough to complete job, as time required to mix additional glue may allow glued portions to set and harden weakening the bond.....WORK QUICKLY WHEN GLUEING IT CAN'T BE REDONE

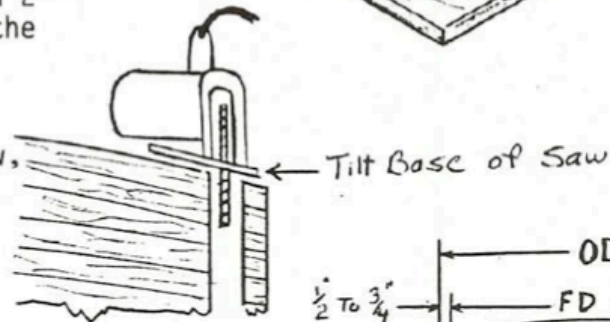


## RIM INSERT INSTALLATION

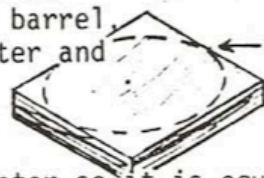
1. Determine barrel dimensions (see Barrel Dimension Sheet). The insert must be prepared 2 days in advance. Glue/laminate pieces of quality plywood together (1" Exterior A-C is good) to obtain 2" thickness and big enough to cover the opening of the "cut" barrel.



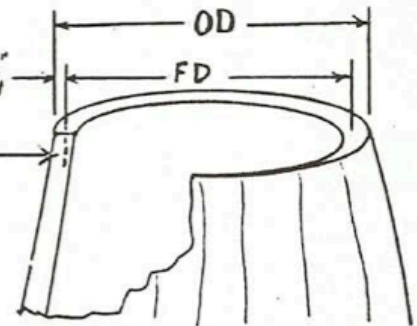
2. Cut end of barrel off with Skil saw, adjust cut of blade so parallel to opening. Move or remove bands only if necessary.



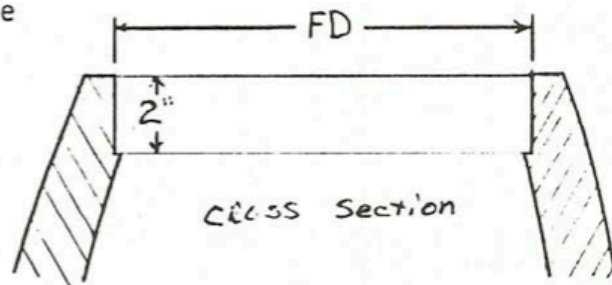
3. Measure opening outside diameter-OD reduce this diameter to allow 1/2"-3/4" to remain on the rim, this will be finished inside diameter-FD of barrel. Cut insert to FD size with router and circle guide.



Must be 2" Deep  
& Perpendicular to Rim



4. Place insert on top of rim, center so it is equal distance from outside edge of barrel. Trace outline of insert onto rim of barrel to give guideline for cut.
5. Use router with edge guide to cut inside edge of barrel to insert size-FD. Cut to depth of 2".



6. Glue insert into rim of barrel and place a 3/8" dowel 3" deep through each stay alternating between the laminated pieces. Remove band(s) if necessary, trim all dowels flush with stays, remove ALL excess glue.

