Stopper Mandrel System – 3040

The Stopper Mandrel System is to be used in conjunction with and prior to the Tone Board/Stopper Jig. These instructions indicate how we use the system so that it works well for us. If you come up with any alternative techniques we would appreciate hearing of them.

The System consists of two parts; namely:

1. A Blind Mandrel
2. A Reamer

Procedure:

A. Select a piece of wood or other suitable material 1 ¼" x 4 ¼" long. On one end draw a cross hatch to determine the center point. Secure the blank in a drill press. Place a mark on a ¼" drill bit to drill at a depth of 3 3/8". Drill the hole as precisely as possible to the 3 3/8" depth.

B. Without moving the stopper change from the ¼" drill bit to the reamer. Insert the pilot of the reamer into the ¼" hole and ream out the stopper blank to the desired depth. If you lower the reamer to its maximum depth it will produce a funnel ¾" wide at the outside. (Note: According to most experts the outside diameter of the aperture should not exceed 3/8". The larger the opening the more you have reduced the back pressure and increased the volume. However, the increased volume will have made the call harder to blow. We strongly suggest you experiment to find the volume that suits you best.)

C. You are now ready to turn the stopper blank on the lathe. Insert the blind mandrel into the open end of the blank. Make sure the flare of the mandrel is engaged in the corresponding flare in the opening of the blank. Place the ¼" end of the mandrel into a split #1 Morse Taper or a chuck in the lathe head stock. Bring the tail stock live center up to the free end of the blank. Exert only moderate pressure on the tail stock adjustment. Excessive pressure is not needed to keep the blank turning while shaping the stopper. It is helpful if the corners of the blank have been removed with a cornering jig before starting to turn.

For specific information on dimensions for the stopper please refer to the instructions supplied with the Tone Board/Stopper Jig (3033). This is a generic system and may be used to produce stoppers for most call systems.