

TOTALLY TUBULAR

USING A FLEX-SHAFT TO PERFORM A 60-SECOND TUBE SETTING

BY KAREN CHRISTIANS

Editor's Note: The following tip was excerpted from the upcoming "Orchid in Print" book, Making the Most of Your Flex-shaft by Karen Christians. A collaboration between MJSAAJ Press and The Ganoksin Project, the book is sponsored by Rio Grande (prime sponsor), Freedom (patron), and 3M (patron).

Tube settings are an elegant way to add height and intrigue to a finished jewelry piece. They can spice up toggles or add decorative architecture to a ring. But the best thing about tube settings is that they're quick and easy to

make. With a few simple tools and your handy flex-shaft, you can fabricate tube settings in a jiffy—60 seconds to be exact.

Andy Cooperman of Seattle—professor of metals, goldsmith, studio jeweler, and contributor to the Orchid e-mail forum on www.ganoksin.com—demonstrated the tube setting technique described here at a pre-conference workshop for the 2002 SNAG (Society of North American Goldsmiths) Conference in Denver. This time-saving technique takes advantage of the versatility and speed of the flex-shaft. It's suitable for use on dia-

monds, sapphires, rubies, or any lab-grown stones that can withstand the heat from torch soldering.

My studio-mate, Jamie Sachs, tested this technique. He had never previously fabricated a tube setting, but created one perfectly using this method. It's truly a bench tip that's eye-opening for novices and professionals alike.

To perform a tube setting using this technique, you'll need the following tools:

- a setting bur and a ball bur appropriate for the size of stone you are setting



- #30 Foredom handpiece
- lubricant
- a stone, cabochon or faceted
- a ring clamp or Benchmate
- gold, copper, sterling silver, or brass tubing
- a brass or steel burnisher

1. Select the appropriate size setting bur for your stone. In this example, I am using a 3.5 mm machine-faceted natural blue sapphire and sterling silver tubing that has a 4.07 mm outside diameter and a 3.27 mm inside diameter. Cut the tubing to 6 mm and insert it into the #30 handpiece. Leave about 3 mm to 4 mm exposed.

2. Insert the ball bur into a Benchmate or a ring clamp and fasten securely (A).

3. This may seem antithetical to the way you normally do tube settings with your flex-shaft, but it's really a better method to

use: Rather than attempting to balance the setting bur in one hand and the flex-shaft in the other, grip the flex-shaft handpiece in both hands. This balances your center of gravity over the setting bur.

4. Ream out the tubing with the ball bur (B). Doing so establishes a center point in the tubing for the setting bur. It also chews away excess metal, thus extending the life of your setting burs. Once you've reamed out the tubing, replace the ball bur in the Benchmate with the setting bur. With the rotating tubing still in the handpiece, lower the tubing onto the setting bur and cut the seat for the stone.

5. To quickly determine the correct depth of the setting, just rest the stone on the tubing with the culet pointed upward; because the tubing is secure, there is no need to use wax to position the stone. The girdle of the stone should sit just below the rim of the tubing. At this point, the walls of the tube are ready to collapse around the stone.

6. The next step is the beauty of this technique. The tubing and the stone are already in the #30 handpiece. Slowly increase the speed on the flex-shaft by pressing $1/4$ of the way down on your foot pedal.

7. Hold either a burnisher or a flat brass sheet against the wall of the tubing, as demonstrated in photo C. Slowly push against the wall of the tubing while it is rotating. *Voilà*—the stone is set (D).

8. Polish to the desired finish. I like to use 3M polishing papers for this step. I tape them to a piece of wood to create a handy tool for polishing metal.

Now look at your watch. You'll be amazed how little time has gone by since you started this project. I suggest practicing a few settings in copper at first, but you'll be a pro in no time! ♦

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