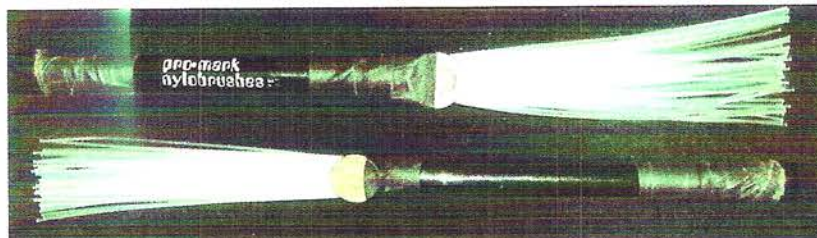


Do-It-Yourself Percussion

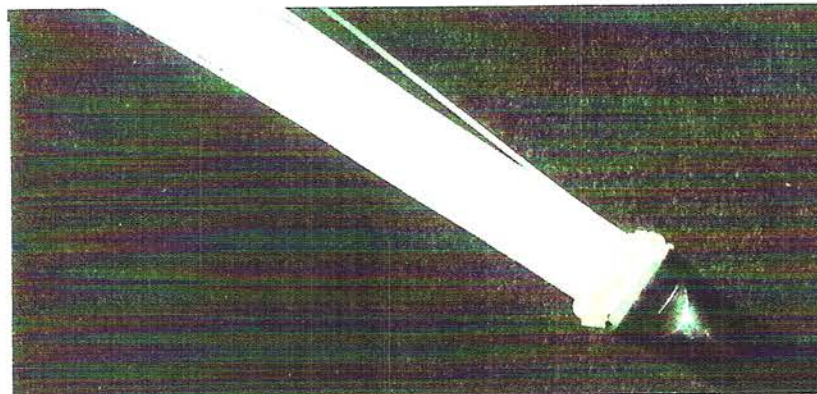
Modified Brushes, Superball Mallets, And Friction Sticks

by Glenn Kotche

This column is dedicated to providing drummers and percussionists with simple and inexpensive projects for building and modifying instruments and accessories. This month's projects include simple brush modifications, as well as some nifty devices that I call superball mallets and friction sticks.



^ Coin brushes



^ Banded brush

Coin Brushes

The purpose of the first brush modification is to get a better sound when playing your brushes on cymbals. All you need for this is a coin. I suggest a US quarter, although Euros and British pounds work well too. All you need to do is mount the coin flat onto one side of the brush, where the bristles meet the handle. (Please note that this modification isn't practical if you have retractable brushes that need to stay retractable.)

I've had the best luck mounting the coin so that half of it is over the bristles and the other half is over the handle. I affix the coin by putting a dab of super glue on the top edge of the handle and then wrapping a thin strip of gaffer's tape around the bottom half of the coin and the brush handle. This keeps the top half of the coin exposed.

When you're playing cymbals, you can use the

"coined" portion of the brush, getting a louder, more defined cymbal sound than the brush would get otherwise. I usually rotate the brush back to the side without the coin when playing on the snare and just pivot my arm a bit to get the coin side when going to the cymbals.

Banded Brushes

One other simple modification for non-retractable brushes is to control the breadth of the fan with a rubber band. All you need to do is wrap the rubber band around the handle of the brush several times and then roll it up the bristle portion of the brush. How far you roll it up will determine the spread of the bristles. This can be a handy tool if you're using non-retractable brushes both for their traditional swishing effect and as a softer, traditional stick.

Superball Mallets

Superball mallets can be used in a variety of performance situations where a unique, sustained tone is appropriate. They achieve a moaning sound when rubbed on drumheads and cymbals (not to mention gongs, washing machines, guitars, cars, heating ducts, or just about anything). Some people think they create sounds akin to whales or wookies.

The superball mallets that I'm referring to are not the ones used on tongue drums and waterphones, which are essentially extremely soft rubber keyboard percussion mallets. The mallets that I'm talking about are used more for rubbing or sliding across the drumhead than for actually striking it. The first person I saw using such mallets was Paul Wertico, when I was taking lessons with him.

The original Super Ball was invented by Norman Stingley and introduced by the Wham-O Corporation in the summer of 1965. The original material was dubbed Zectron, which is essentially polybutadiene (a type of rubber also used in tires, hoses, and gaskets) and sulfur. The balls were then formed under

intense pressure and high temperatures. Although the initial Super Ball fad faded, the balls have been widely copied and have stayed around to the point that most every American child has played with one at some point.

Why does a superball make a drum moan and sing? The ball may appear smooth, but it actually acts like a rough surface. The rubber molecules create a resisting force when moving against another surface. This resistance, or friction, causes the ball to bounce. When we apply pressure to the superball mallets as we're rubbing them across the head, the bounces are extremely small and rapid—which, in turn, creates a sustained tone.

In my extensive experimentation with making my own superball mallets, I've found one particular design to work best: half of a ball attached to a bamboo skewer handle. There are many different kinds of superballs available at toy stores and on the Internet. I've had the best results with the softer and larger, 2"- to 2 1/2"-diameter balls. The 12" bamboo skewers I use can be found at most grocery, kitchen, or dollar

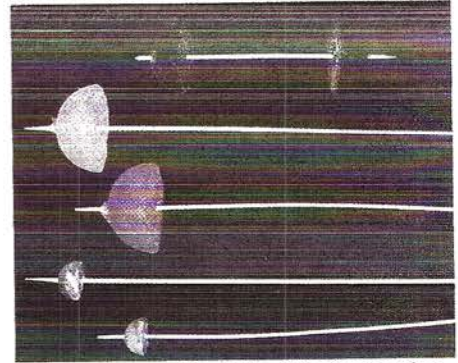
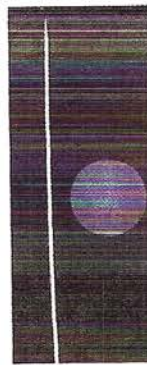
stores in inexpensive packs of 100.

Step 1. Carefully (remember, we need our fingers) cut the superball in half with any sharp or serrated knife or handsaw. I cut along the seam in a sawing motion and usually have no problem. Don't worry if bits of the rubber flake or are cut off. The mallet will still work just fine.

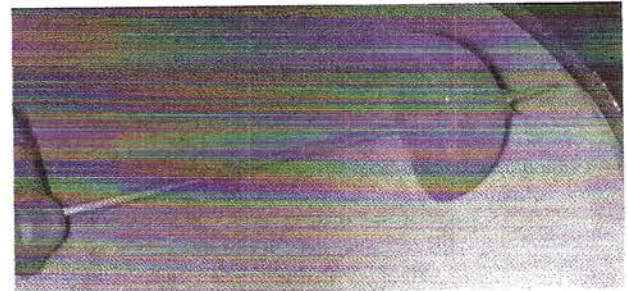
Step 2. (Again, carefully) push the sharp end of the skewer through the center of the flat, freshly cut underside of the ball. Do this slowly, holding the skewer near the sharp end to avoid breaking the bamboo. I push the skewer all the way through the half ball so there is about an inch of it sticking through the top of the ball.

Step 3. Reinforce the entry and exit

✓ The "parts" needed for a superball mallet



^ Superball mallets of various sizes

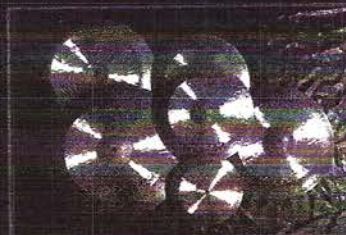


^ Dragging the superball mallet across a drumhead will create a "moaning" sound.

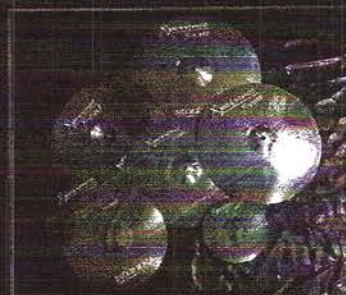
points of the skewer with super glue or hot glue. This helps keep the skewer in place and also helps prevent splitting of the ball,

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which is more common with smaller and firmer superballs. Let the glue dry and you're ready to go.

You can shorten the skewer and attach both halves of the ball (or two different-sized halves), facing opposite ways at each end, allowing the mallet to be played with both a pulling and pushing motion.

You can also make these mallets without cutting the ball in half. A full ball with a handle is the only way that I saw them until trying the half-ball idea myself. However, I've found the half-ball version to be much

more effective, since I don't need to use as much pressure when playing with it. Some drummers use a length of cable in place of a handle, attaching a ball at each end. But the pliability and pressure that the skewer affords has proven superior in my experiments.

The most common playing technique for superball mallets is to drag the mallet across the head from one side of the rim to the opposite side, starting from the far side of the drum and moving towards your body. This can be done in a straight line, a

zigzag, or a figure-eight motion. You can also hold two mallets at the same time and get a "chord." Experiment and use the technique that works best for you to get the sounds that you desire.

Superball mallets are commercially available for those looking for high-quality, pre-made models. But the cheap cost of materials and super-easy assembly make this an ideal DIY percussion project.

Friction Sticks

An implement that creates a sound similar to that of the superball mallet is the friction stick. This can be made simply, by waxing a dowel rod. I use $3/16$ " standard wooden doels available at any hardware, lumber, or crafts store. Then I rub beeswax or tambourine wax on the surface of the entire dowel. Beeswax can be found online, at crafts stores, or where didgeridoos are sold. Only a very small amount is needed.

The sticks are played by resting one end of the dowel on the drumhead, keeping the stick perpendicular to the head at a 90° angle. Grip the dowel gently at the top between your thumb and index finger, and glide your hand down to the base of the dowel. The friction of your fingers on the stick will cause a vibration that will be transferred into the drum, causing it to moan.

Experiment with pressure between your thumb and index finger to change the volume and pitch of the moan. (This technique can actually be used with any drumstick—waxed or un-waxed—if you have the right amount of pressure and your hands are clammy enough.)

How and when superball mallets and friction sticks are a musical asset is up to the individual. I've had great success with them when improvising in live situations, as well as in the studio when an interesting color is needed. (I used them on the last two Wilco records.) They can also be of value as a sound effect. It never hurts to have extra sound options on hand—especially small and inexpensive ones, and even more especially ones that offer a sustained tone.



Glenn Kotche is the drummer/percussionist for eclectic rock band Wilco. This past September he was a featured performer at MD's Festival Weekend 2006.

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