

Coping with Cutting Corners



Alan Goodsell
sees if he can cope with baseboards

PHOTOGRAPHS BY THE AUTHOR

A major challenge for most people who are remodeling a home is to get good inside corner joints when installing their baseboards. The outside corners usually present no problem, as a simple miter will give a good joint and can easily be cut to allow for angle discrepancies. Inside corners however, present a lot of other problems. If you have ever tried to miter a baseboard's inside corner you know that the results are almost never good as most walls in houses, even new ones, are rarely built at exactly 90° to each other – I have never understood how this happens, especially with modern measuring instruments. As a result of this a cope joint provides the best results. The cope joint is where the end of the molding or baseboard is cut to match the face profile of the baseboard, and therefore they fit together. This method allows for wall angle discrepancies especially for acute angles. For obtuse angles the cope can be undercut so the face of the molding still fits tight. Traditionally this cope joint is cut with a fret

or coping saw, or if you are feeling brave a jigsaw. The end of the baseboard would usually be cut with a miter first so it shows the profile of the cope on the inside of the miter, another method would be to use a drawing compass, with a point and pencil, to follow the shape of the molding and transfer it on to the end of the other piece of baseboard. These are time consuming tasks, with results that vary from the good fit to a joint that looks like it was created by a hungry rat with blunt teeth.

The Coper

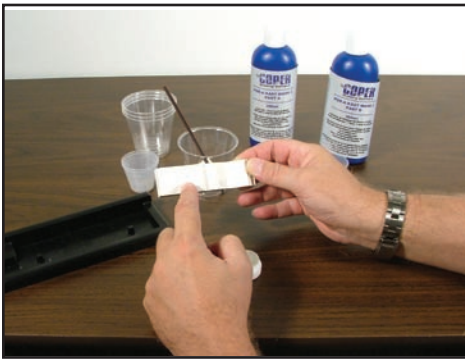
A new jig on the market that promises to make the task of coping an easier and quicker one, as well as providing good results, is 'The Coper'. The jig uses some interesting, modern and traditional materials and techniques that are brought together to create

copies with our favorite tool – the router. The body of the jig is a sturdy plastic channel that needs no assembly apart from attaching the toggle clamps that hold the baseboard in place while cutting. The channel will accept boards up to 1" thick and 6" wide, which will account for most types of baseboard. On the end of the jig is the platform for routing the ends of the board, and also where the template is fitted. Everything you need is included in the kit and if you run out of the original supplies you can get more from The Coper company directly.

Coping With The Jig

The first step of the process is to make the template and this is done using a 1" wide piece of the baseboard and the plastic casting tray. The piece of molding has a thin coat of wax applied to its face as a release agent and





above Apply wax to the edge as a release agent



above Place the baseboard piece on edge in the casting tray- I chose to use the orientation for hardwood



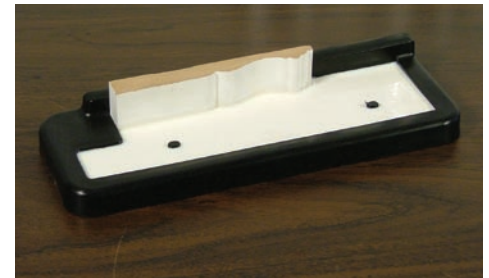
above Measure equal parts of Por-A-Kast A and B



above Carefully mix the two parts together to avoid bubbles



above Pour the mix into the casting tray



above As the resin cures, it turns from clear to white

is then placed, on edge, in the casting tray. A piece of scrap the same thickness as the body of the baseboard is placed on the end of the baseboard, the purpose of this piece is explained later. You can use a clamp to hold the board in place but the piece seems to stay in place without it.

The next step is to mix the two parts of the resin, rather inventively called Por-A-Kast. There is a part A and a part B that must be mixed in equal quantities of 30ml of each part to make 60ml, which is the correct quantity for the capacity of the mold. Pour the two parts into the mixing container and carefully stir to mix together. This process must be done gently to avoid getting air bubbles into the mix, which will affect the quality of the casting. Pour the mixture into the casting tray and the resin cures in about 15 minutes. Through the drying process the resin will turn from clear to white when it is set.

The template is then removed from the tray and the baseboard piece released from

the template, and this is when you will see a reproduction, in reverse, of the baseboard profile. The baseboard piece can be removed soon after the resin is cured, but the longer you leave it the less chance there is of the template distorting. Check the profile of the template to see if there are any nibs that will transfer to the cope when routed. If there are, trim or sand them off, and any tight corners that will not fit the 1/4" diameter flush trim bit can be sanded to fit with the supplied 1/4" diameter file.

Screw the template into the jig, there are holes cast into the template for this, and you are nearly ready to go. Slide the baseboard into the jig's channel so it is a fraction past the highest point of the template then clamp it in place. Pop the 1/4" diameter flush trim bit into the router and set it to depth so the bearing runs fully on the top part of the template. Start up, and pass the router along the end of the baseboard keeping the bit's bearing running on the profile of the template. Bingo - bango you have a perfectly

formed cope in the end of the baseboard that when I tried it, fitted perfectly on the first try. The channel of the jig has a slight taper so that the cope is gently undercut to make a good fitting joint and if you want more just slide in some shims under the end of the baseboard.

Earlier on, I mentioned the piece of scrap baseboard that is molded along with the full 1" wide piece of baseboard. This is to create a run-on for the router bit, there would be a problem as without it the bit would want to cut instantly, with the result of a bent bit or damaged baseboard. This is if you are fitting the baseboard around the room in a counter clockwise direction using a composite baseboard like MDF that is less prone to tearout when routing the cope. When using a solid wood baseboard you will need to fit the baseboard around the room in a clockwise direction so the cope can be routed from the top of the baseboard down to eliminate tearout. This means that the template is made in the reverse, with the top of the baseboard



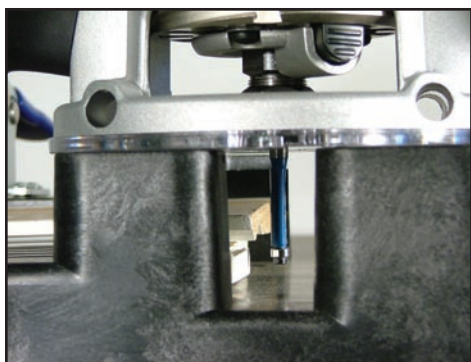
above File the template so any corners match the flush trim bit



above Bolt the template into the jig



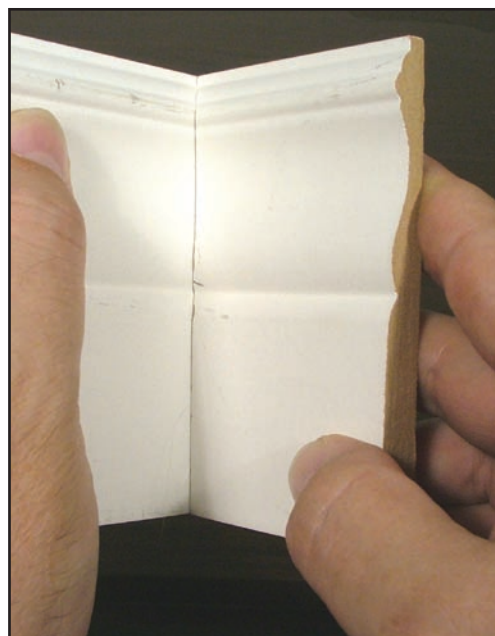
above Slide the baseboard into the jig so the end is just past the template



above Set the depth of the bit so the bearing runs on the top part of the template



above Carefully rout the cope into the end of the baseboard



right The result is a perfectly fitting cope

molding to the right when looked at from the top when casting a template. No extra piece is required to create a run-on as the bit is brought into the cut by the shallow part of the molding.

If you are planning to repeat the same coping profile time and time again it is recommended that you make templates from Plexiglas™. This is a bit more time consuming than using the resin but will last much longer. You first make a template with the resin as usual and the cut a strip of the Plexiglas™, and rout the cope in it as if it were baseboard. This becomes your new template after you have cut and drilled it to fit the template holder.

You will notice that there is a length of weather strip included in the kit and this is to support a joint if the wall falls away behind it. Just cut a short strip and use it behind the baseboard as packing.

The kit comes with an extremely good instructional DVD that you can play on either your TV or computer – good as long

as you have one of these but if not the printed instructions will do. They also have a very informative website where you can find many answers to questions about The Coper.

Conclusion

I found The Coper to be not only an extremely practical jig if you have a fair amount of baseboards to fit, but it was fun too. The results of routing the joints with The Coper was very impressive, and sure beats the pants off trying to cut a bunch of copes by hand. The time saved more than pays for the jig and would be a good investment for the contractor or if you have a reasonable sized remodeling project in



PRICES

- The Coper Kit: Approx. \$115
- Extra Por-A-Kast Kits: Approx. \$11.50
- Extra Router Bits: Approx. \$13.50

■ For more information contact:
 The Coper
 RR8-30-1
 Lethbridge, Alberta
 Canada T1J 4P4

Tel: 403-381-4461
 Fax: 403-380-4571
 Website: thecoper.com
 Email: information@thecoper.com