

## Making a friction holder for the miter slots By Don Hart

We have all seen those holders made of plastic that when tightened expand and hold in the miter slot by friction. The following instructions are how to easily make them yourself. These can be used for many purposes from holding a featherboard to holding a jig or anything else you can think of.

If you have made one of the polyethylene featherboards that I have written instructions for then you will have the necessary material to make these holders just by using the scrap from that project. If not you will need to go out and get an inexpensive white polyethylene cutting board, preferably one with a moat. I buy mine at a local closeout store and can get a 12" x 18" board for \$2.

1. You will need to trim down a piece of scrap or part of a new cutting board. You want a piece that has the moat in it. The moat is normally  $\frac{1}{2}$ " wide and we want a  $\frac{3}{4}$ " wide strip with the moat in the center. So trim your piece to leave  $\frac{1}{8}$ " on each side of the moat. If necessary you will then cut down the thickness of the piece so that it is slightly thinner than the depth of your miter slot. You should end up with something that looks like this:



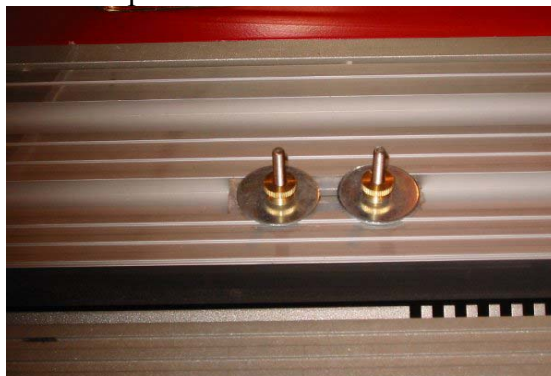
2. Next you will want to decide how long of a hold down you would like. This will depend on what you would like to mount to the miter slot. No matter what length you would like the next steps are the same.
3. First cut a slot in the center of the strip with your router. The slot should be slightly wider than a #10 machine screw. Cut this slot about an inch shorter than you want the total length of the holder to be. Watch the speed of your router at this stuff will melt at high router speeds.
4. Second cut the strip off  $\frac{1}{2}$ " past the ends of your slot on both side. You should end with something that looks like this:



5. Now if you wish you can spend some time cleaning it up and rounding the corners to make it look nice. After that you will want to take some rough sandpaper (I use 60 grit) and rough up the edges that will be in contact with the sides of the miter slot then gather you hardware. You will need 2 #10 x 32 flathead machine screws of an appropriate length for whatever you will be mounting with this. For general mounting I recommend a length of 1 1/2". You will also need two fender washers sized for #10 screws and either two knurled knobs or two wing nuts. As you can see from the picture below I chose the knurled knobs.



6. After I had made my first one I took it and some washers and mounted just the holder in the miter slot to test its operation. With it in the slot as shown below and tightened down I could not slide the holder in the slot. I could pull it out of the slot but that took some effort.



7. Now we just need to attach whatever we want to the holder put it in the slot and tighten it down.  
As you can see from the pictures below I am using this one to hold one of my poly featherboards.



That's all there is to it. If you have any questions just post a message in the forums at [www.bt3central.com](http://www.bt3central.com) and I will try to answer them.

Thanks to Sam Conder for running BT3Central one heck of a good site and thanks to all of the guys and gals there for their inspiration