

Hex Bit Bars, version 1.1

By R. G. Sparber

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Over the years, I have accumulated a nice selection of hex bits that fit into my impact screwdriver plus various manual screwdrivers. Most came in a flimsy case or in one of an odd size. The last set of bits came with no case at all.

One problem I have with some bit holders is poor access. The bits are packed so close together, it is impossible to get my fingers around them.

Sometimes I find the opposite problem. The bits are too spread out and in an odd case. It is easy to extract one hex bit but how do I store the holder efficiently?



My solution was to make a set of $\frac{1}{2}$ " wide bars $3 \frac{1}{2}$ " long. Each bar holds 10 hex bits. It is easy to pull a bar out of the box and have full access to each bit.

The bars are made of expanded PVC. Search for "expanded PVC trim board" and look for 1" thick by 4" wide (actual dimensions are $\frac{3}{4}$ " x $3 \frac{1}{2}$ "). It is easy to machine and has a nice finish on the top and bottom. It also has a little bit of "give". I can push a bit into its hole and it doesn't fall out. Yet it pulls out just fine.

Glued to the bottom of each bar is a strip of weak magnetic material. It provides just enough pull to keep the bars in their sheet metal box.

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I started by sawing $\frac{1}{2}$ " wide strips of the expanded PVC on my horizontal bandsaw. Laying the stock flat helps give a square cut.

I then deburred all edges of each bar on my belt sander. Use a light touch.

Using a $\frac{9}{32}$ " drill, I cut the 10 holes per $3\frac{1}{2}$ " bar. From the end of the bar to the center of the first hole was 0.24". Then I moved 0.33" for each subsequent hole. The holes are 0.6" deep.

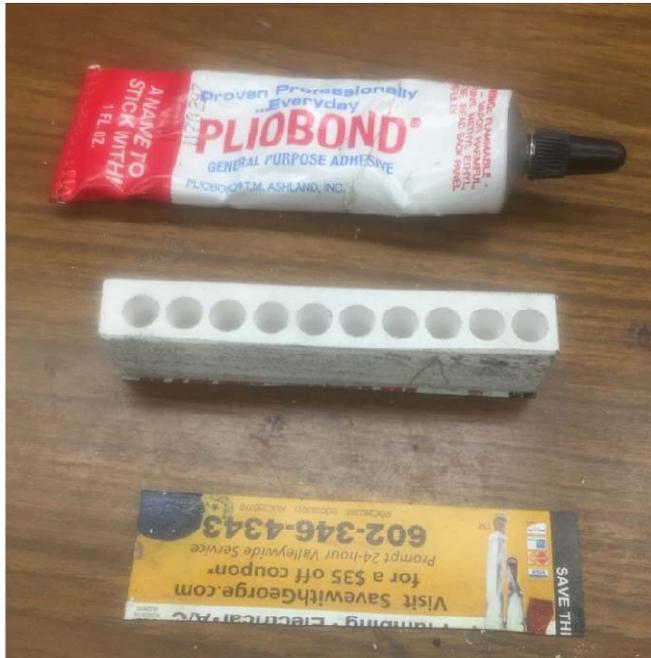
I used CNC but it wouldn't take long to drill the holes manually on a drill press. Set up a fence to keep the holes in a line.

Ron Thompson suggested that both the holes and separation cut can be done with CNC. There might be an advantage to cut hexagonal holes rather than round ones.



Next find the hex bit or adapter with the tightest fit. Press it into each hole to form the hex recess. You may need to move it in and out plus twist it slightly before it stops grabbing.

I oriented the hex so a flat was parallel with the sides of the bar. This makes it easier to put the bit back into its hole.



If you want to put a strip of flexible magnet on the bottom of a bar, you will need contact cement and a source of magnetic plastic. I have plenty of these magnets and never paid for any of them.

Start by spreading a thin coat of contact cement on the bottom of the bar and also over the plastic magnet sheet.



When tacky, press the bar down firmly and wait a few seconds.

Then trim the plastic away from the bar. A quick pass over the belt sander cleans up any edges that stick out.

Acknowledgement

Thanks to Ron Thompson for seeing how to take better advantage of CNC in the making of this part.

I welcome your comments and questions.

If you wish to be contacted each time I publish an article, email me with just "Article Alias" in the subject line.

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