

Cutting neat holes in Balsa...

If you've ever tried making holes in sheet balsa with a conventional drill bit, you'll no doubt have found that normal drill bits don't like to drill balsa - they just like to chew it !! It goes all 'furry' and 'splitty' and generally behaves in a belligerent manner.

So, how exactly do you make those 'lightening holes', or holes to thread those wing ribs onto a carbon fibre round spar, or holes to feed your servo wires through?

I'll let the photo show you how.

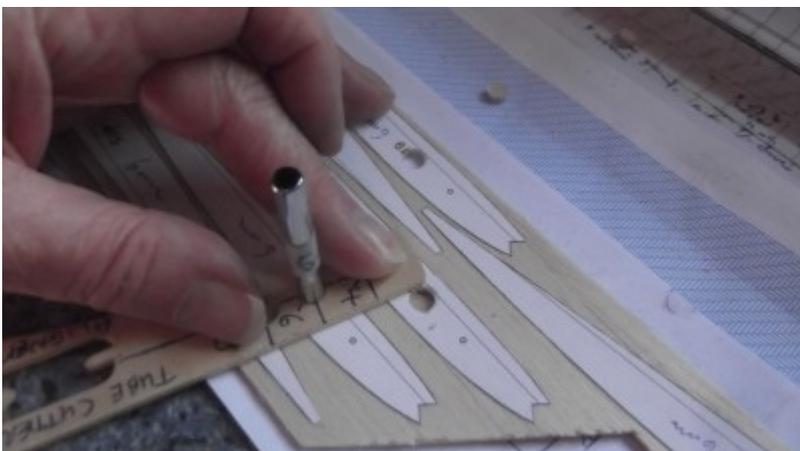


As you can see, what you do, is make a thin ply (about 2mm) alignment tool to fit a range of tube sized cutting tools.

The key point here is, because the tube drills don't have a central point like a conventional drill bit, it's the alignment tool that holds the tube drills accurately on station as they drill.

Holes in the ply need to be snug fit with the tubes to give accuracy... at a pinch, if you use thinish liteply to make your alignment tool, you can cut the holes in it with the tube cutters themselves, so then they will be spot on the right size with no slop.

In the above photo there are 8, 6 & 4mm tubes with corresponding sized holes on the ply alignment tool.



To cut a hole in balsa, position the hole of the alignment tool over the balsa, in the required position and hold firmly down with one hand. Inserting the tube cutter with the other hand through the hole in the alignment tool - then rotate the cutter between fingers while at the same time applying slight downwards pressure until it cuts right through the balsa.

So where do you get these tube cutters from?



For holes of around 4mm to 8mm diameter - can you find an old telescopic antenna from somewhere? do you remember those they used to put on 35meg transmitters?

I bet you even have an old 35Meg Tx, still kicking around.

These antennas tended to be made from chromed brass and cutting about 2 inch long pieces from the antenna's different diameters is just the job for producing a few useful sizes.



So, once you've cut some suitable short lengths, just file a few small teeth at one end of your 2 inch pieces and there you have it - your very own balsa tube drill bits.

For larger sizes - maybe for making lightning holes in plane structures - it's just a matter of using this procedure having sourced some thin walled metal tubes of larger diameters.

I've also used copper water pipe - comes in a couple of usable diameters, though the tube wall is a little thick and benefits from filing a thinner 'blade like edge' to it, as well as adding a few teeth.



Easy-peasy.

ps. Disclaimer: Just remember - if you subsequently do decide to use that donor 35Mhz transmitter again - those missing 2 inch aerial sections - they will reduce its range - and by quite a considerable amount !

Happy drilling.