-Threaded Acorn Box **Dave Atco**

!. Get two pieces of wood that will take a thread – any close grained hardwood should suffice. I've used Boxwood for the acorn and Mopane for the shell piece.

2. Rough the pieces down to round. My pieces were around 40mm. Here's the Mopane roughed out.

3. Both pieces ready to go. You'll see a shoulder on the Box as it is a bit bigger than the Mopane. I used my 35mm jaws and the Mopane just fits – any less and it would fall out – hence no shoulder. It doesn't matter as long as it runs true.

4. Firstly, with any new piece in the chuck I bring it back to round again and then face off the end – you can see here the small shavings you can get off this sort of timber.
I usually hollow out with my spindle gouge using it as a drill to get the depth and then turning it so the flute is about 8 – 9 o'clock and then pulling it out. Take care not to let the top wing catch though!

5. I've hollowed out the base and am using a swan neck hollowing too to create an undercut, leaving about 6mm for threads at the opening. Once you have got the inside completed, sand and polish as you won't be able to do it later. I used Melamime on this one.

6. I've roughly shaped the end now and here you can see me creating a small chamfer on the edge. This makes it easy to start the thread. The sides of the opening are parallel - I use spring callipers for this.

7. I use an armrest (see later for a better view of the tools) and here you can see how the female chaser is held on the armrest. Using a clockwise circular motion the chaser on brought into contact with the chamfer – the lathe speed is about 400 – 450 rpm. A light kiss is all that is needed, keep repeating the motion and "the kiss" and run the chaser all the way to the end. It is quite easy to do this with this box as there is no back wall to hit.

8. Here's another view of the chaser and its position relative to the box. Don't use the leading tooth of the chaser until the thread is established.

9. Continue with the action and gradually the threads will start to form. Don't think about it!! Magic will happen and once the threads have started to form like this bring the chaser round and using the leading tooth you can chase all the way to the end. Once the thread is complete, apply a little wax and use a toothbrush to wipe it through the threads.

10. Here I'm just getting an idea of how big the spigot needs be in both length and width. I've also marked off the length of the acorn itself. (Sorry it's a bit blurred)

11. Before I start making a thread, or indeed any spigot on a box I take out the inside. Then if the wood moves, it moves before I create the spigot and the spigot will remain true. Turn the spigot as a slope and bring the base of the acorn up to the revolving spigot. Here you can see the shiny witness mark left by the polished threads. This is the size of the spigot. Turn the spigot parallel to this size and make a small recess at the shoulder so the chaser can be removed before it hits the shoulder. If it hits the shoulder the thread will strip and you'll have to make a new spigot.

12. Set the toolrest about 12 – 15mm away from the spigot with the left hand end level with where you want the thread to stop – when you get there you lift the chaser away from the thread. Put a small chamfer on the spigot and with the chaser at 45 degrees to the spigot move it in a circular anti-clockwise movement and just kiss the chamfer, keep repeating this motion and the thread will start to form. As it appears gradually move the chaser parallel to the spigot and create the full thread.

13. Here the thread is completed and waxed.

14.And the base fits!

15.Now it's a simple matter of shaping and sanding the base and starting to shape the acorn bit.

16. Now for the final thread, using the scrap left in the chuck (having parted the acorn off) create a recess that can be threaded so that the acorn can be finished.

17. Here the threads are just being formed. Note the recess at the back of the area being threaded – this enables the chaser to go to the end of the thread and removed before it hits the back wall.

18. The acorn is screwed into the scrap and then it can be finished and sanded.

19. These are the special tools used in this project – from left to right – the armrest used when forming female threads. The female and then the male chasers, the point tool ad finally the relieving tool used to create the recess at the back of the female thread.

20. I use the Beall buffing system (from the Toolpost) on these small boxes. The first stick to be used is on the left – Tripoli which acts as a mild abrasive, the middle an even finer abrasive and lastly on the right carnauba wax. I put the pigtail in a Jacobs chuck which is securely held in my chuck. Only use the area around 7 o'clock on the buffing wheel – and keep tight hold! (otherwise the bits will fly all over the workshop – yes I've done that too!!!)

21. Here's the final item all screwed together.

22. And finally in two pieces.

Enjoy!