

Kitchen clock

Walter Hall makes a wall clock to match a kitchen refit



PHOTOGRAPHS BY WALTER HALL

At the time of writing I had not been spending much turning time in my workshop due to undertaking a complete strip-out and refit of our kitchen. Enjoyable as this was, it took up a great deal of my time. But it did present me with the opportunity to design the clock for this article, which has now replaced the old kitchen wall clock, which no longer fitted with the style of the new kitchen units and worktops. Apart from the oak and slate colour scheme of the kitchen, other design influences were the steam-punk works of my fellow Northumbrian Woodturners Association member Nick Simpson and the clock and watch-part pen blanks of pen blank casters such as Brad Herrington.

While the design of my clock is neither truly steam punk, nor from genuine clock parts, it nonetheless draws on these

influences to incorporate an oak body with an insert from laminate to match the cabinets, floor and worktops, and uses imitation antique brass clock cogs where the numbers would normally be. The hands and mechanism are proprietary items of the type available from many clock suppliers. I chose bold brass 'spade' design pointers that can easily be seen from across the room.

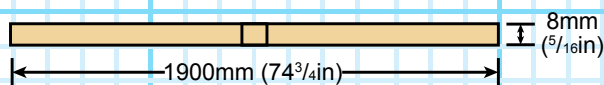
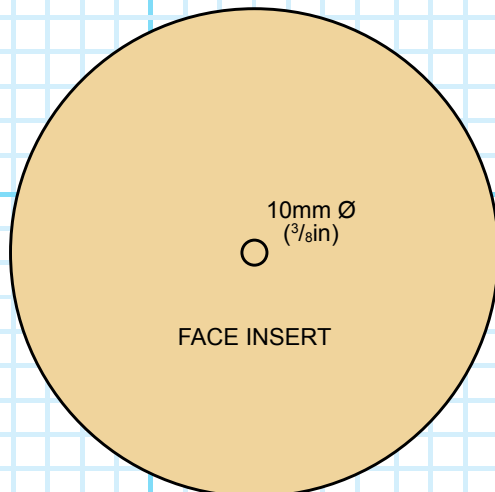
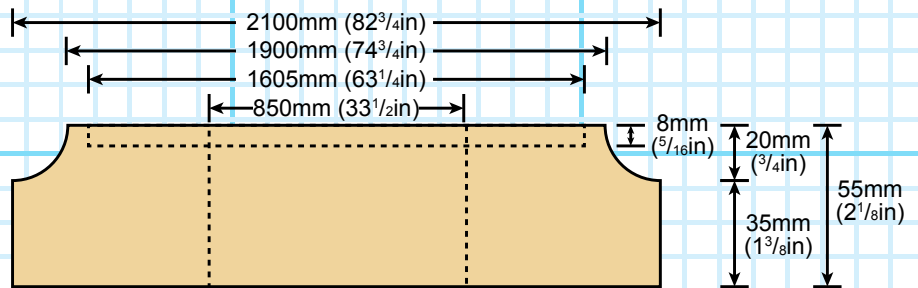
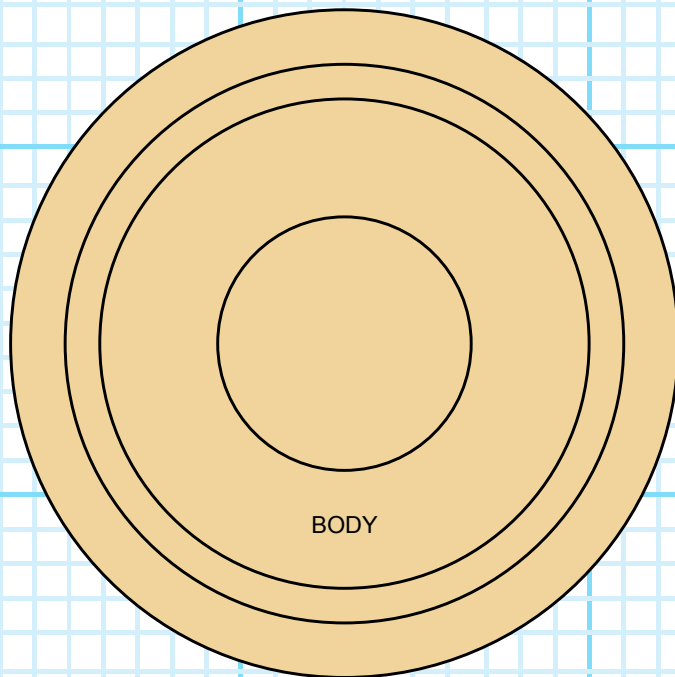
I chose to use my bandsaw to cut the insert to the correct thickness because I felt this would be the safest and most accurate method. Doubtless there are other ways that this could be done, but if your bandsaw is not large enough or accurate enough for the job, then simply turning to size and parting off to thickness on the lathe would be a good alternative method.

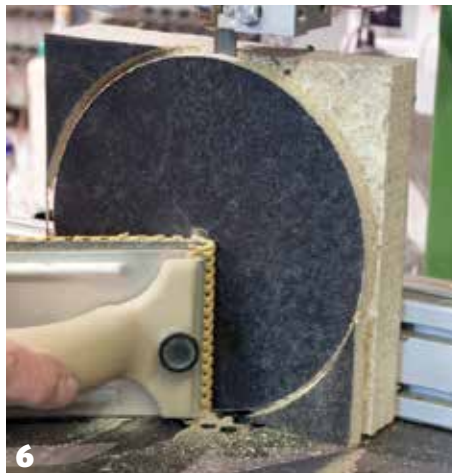
TOOLS AND MATERIALS

- Personal and respiratory protection equipment
- Bowl gouge
- Skew chisel
- Parting tool
- Beading and parting tool
- Abrasives
- Chuck
- Cordless drill/pillar drill
- Drill bits
- Router and keyhole bit

MATERIALS

- Hardwood blank
220mm Ø x 60mm
- Offcut of laminate worktop
- Clock mechanism and pointers
- Clock parts for number positions
- Brass escutcheon pins





Alternative designs

This clock was designed for a specific situation, but alternative face inserts could be made from other materials such as Corian or other solid surface material, coloured acrylic sheet or even a proprietary chapter ring. Clock mechanisms are available with various lengths of shaft to accommodate different thicknesses of face and a wide variety of alternatives are possible to mark the hours, ranging from actual numbers to the brass ends of shotgun cartridges. The only limiting factor is your imagination.

Clock insert

1 Begin by making the insert that will form the face of the clock. Cut a square of laminate just larger than the finished size of the insert. In my case the finished size was 165mm, so the bank required was 170mm square. Carefully mark the centre.

2 Using a pillar drill, or carefully by hand, drill a hole through the centre of the blank. This must match the size of the shaft of the clock mechanism you have chosen and will also be used to align the blank on the lathe for the next step.

3 Mount the work on the lathe. I used a friction drive made from plywood faced with rubber and screwed to a faceplate. Alternatively, a screw chuck could be used in the centre hole or the whole blank screwed to a faceplate. Whichever method you choose, bring the tailstock up to align and support the work.

4 Mark the diameter of the finished insert on the face of the blank. This will help to gauge where the initial cut needs to be. Then, with the point of a sharp skew chisel, make a clean cut through the laminate surface to exact size.

5 Once the laminate is cleanly cut you can switch to a parting tool or beading and parting tool to cut a groove to just slightly more than the thickness of the finished insert. This needs to be the correct thickness to accommodate the length of the clock mechanism shaft.

6 Remove the work from the lathe and, with the bandsaw set up to cut the insert to exact thickness, use suitable push sticks (mine is made from router mat in a decorator's sanding plate) carefully cut through the blank to release the insert. (See intro for an alternative method.)

7 Return the work to the lathe and use abrasives to tidy up and smooth the edges of the insert. A friction drive works well for this or you could simply do it by hand off the lathe.

8 Using a matching spirit stain, colour the edges of the blank to ensure a neat edge when fitted in the frame. This will also conceal any minor scratches or chips in the edge of the cut laminate. Set the completed insert aside.

◀ Main clock body

9 Drill a suitable-sized hole in the hardwood blank that will form the body of the clock and mount it on a screw chuck. When drilling the hole for the screw chuck make it a few millimetres deeper than the length of the screw so that you avoid catching it with the gouge at step 11. Use a bowl gouge to true up the face and edge of the blank. Check across the face with a steel rule to make sure that it is perfectly flat and even.

10 Measure and mark the diameter of the recess for the clock mechanism. Measure against the mechanism and then increase the size to match a suitable set of gripper jaws which will be used to hold the blank when it is reversed.

11 Open up the recess for the clock mechanism with the bowl gouge. Turn away the waste until you hit the bottom of the hole drilled for the screw chuck. Now you can see why the hole needs to be deeper than the screw. Continue turning away the waste as far as possible without hitting the screw and then square off the sides of the recess with a beading and parting tool or the point of a skew chisel.

12 Remove the blank from the screw chuck. If your lathe has a proper spindle lock then use this to lock the spindle and turn the blank to remove it. Otherwise remove the screw with the work off the lathe using a suitable spanner. Don't try to use the lathe's indexing system as it is not designed for this and you may damage it.

13 Reverse the blank and re-mount it on a scroll chuck fitted with suitable gripper jaws to match the recess. As with the screw chuck, ensure the jaws do not reach the bottom of the recess to facilitate breaking through later without hitting the jaws. Carefully measure the exact diameter of the previously completed insert and use a bowl gouge to cut a recess to fit. If you are not confident of achieving an exact fit with the bowl gouge you could use a parting tool or beading and parting tool to delineate the outer edge and work to that with the gouge.

14 Once the recess for the insert is finished, begin to turn away the centre of the blank to meet the recess on the back, working slowly and carefully to avoid hitting the jaws of the chuck. Use a beading and parting tool or skew chisel to match up the recesses.

15 Now use the bowl gouge to form the shape of the clock body. What shape you choose is up to you, it could be an ogee, torus, ovolo, cove or a combination of these shapes. I chose a simple cove to reflect the coving on the kitchen cabinets.

16 Once the shape is completed to your satisfaction, hand or power sand through the grits to a good finish. Don't forget to reverse the work on the chuck to tidy up the back too.





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17 Apply the finish of your choice. There is plenty of choice as the finished work will not be handled much, so anything from wax to acrylic lacquer would be appropriate. I used three coats of a finishing oil which gave a nice satin sheen.

Assembly & final fittings

18 Mount the clock mechanism on to the back of the face insert and tighten it firmly in place, making sure that any washers and inserts are correctly positioned. If a mounting bracket is included do not fit this as it will not fit in the recess and is not required.



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19 I added a decorative cog under the face washer to bring up the nut to the end of the thread and avoid any unsightly thread showing. Whether you need to do this will depend upon the length of your clock spindle and the thickness of the insert.

20 With the clock body face down on the bench and retained in position by bench dogs or a router mat, use a keyhole router cutter to cut a recess for a screw head to mount the clock on the wall. If you don't have the tools to do this you could simply drill a recess in the back of the clock with a Forstner bit and fit a picture hanging D-ring.

21 Glue the face insert into the recess in the clock body. Any good-quality wood glue will do but take care not to get adhesive on the finished body. Leave this to set before continuing to the next step.



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22 Re-mount the clock on the chuck and use the lathe's indexing system to mark the hour positions, starting at the top in line with the mounting recess on the back. If your lathe does not have an indexing system you can do this carefully by eye or using a protractor. Line up your selected cogs with the hour marks and pre-drill for the brass pins that will be used to attach them to the face. Pre-drilling will remove any risk of chipping or cracking the laminate and will make inserting the pins much easier.

23 Attach the cogs to the face using brass escutcheon pins. Make sure to remember to wipe away the marks on the face before hammering them into place as they can be difficult to remove afterwards. (Don't ask.)



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24 Once all the cogs are in place, all that remains is to press the hands into place, insert a battery into the mechanism, set the time, and your kitchen clock is complete. ●