



Mag Ruffman's Anything I Can Do

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Clock It To Me

Anything I Can Do DVD Volume 11 – *Highly Individual Projects*

You can make a clock out of anything.



Here is a list of meaningful treasures I've seen made into clocks:

Souvenir goose lawn ornament

Ukulele

Plastic novelty vomit

Snowshoe

Circular saw blade

The mind reels doesn't it? All you really need to know is where to get clock kits ([Lee Valley Tools](http://www.LeeValleyTools.com), woodworker's supply places, some craft shops) and how to drill a hole for the clock stem.

Materials:

- Wood, sheet metal, baskets, lunch boxes, purses - almost anything can be made into a clock
- Clock parts - clock mechanism, hands, numbers and battery
- Paint or stain depending on the desired finish
- Copper nails or paint used to mark the numbers

Tools

- Drill
- Drill bits appropriate to the material being drilled into
- Files
- Chisels
- Hammer or mallet
- Compass
- Needle nose pliers



Clock made from a silver colored plate



Clock made from a metal lunch box



A wicker purse clock



A rough wood clock



A Clock made from a brass plate



A clock made from a wicker basket

Select the item to be made into a clock.

Here's a quick primer on how to drill into a variety of materials:

Ceramic plates etc. - use a glass/tile drill bit

Metal - use carbide-tipped drill bits for sheet metal, or a cobalt drill bit for thicker plate metal.

You may want to lubricate with a little drilling oil, since the bit gets quite warm.

Also, make a dimple in the metal first using a hammer and nail or a compression punch.

This lets you start drilling without the bit skating around.

Concrete - use a masonry bit with a hammer-drill, a heavy-duty tool which pounds as well as grinds into the material.

Wood - use a normal drill bit.

You'll also need sharp chisels to mortise a square hole in which the clockworks will sit.

Acrylic or polycarbonate - use a plastic tapping bit.



Steps:



For a ceramic clock, mark the center point for drilling



Use a ceramic and glass drill bit

While almost anything can be made into a clock, the material's thickness is the only limiting factor. The stem or shaft of the clock must be able to pass through the chosen material and a nut and hands put on the front side.

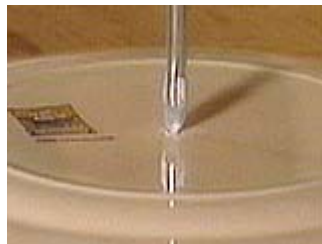
Choose the clock mechanism that fits your selected material. The common range is from about 1/16th of an inch to about three quarters of an inch.



Use a sharp compass point, nail point or knife point to scratch the surface in the center



Start slowly and then increase speed when the bit starts to cut



Drill from both sides until the hole is large enough to accept the shaft

Drill a hole in the material where the center of the clock face will be. It doesn't always have to be in the center of the object, it can be off to one side if desired.





A hole must be made in a thick wooden clock to hold the clockworks and to let the shaft pass through



Place the pilot drill of the hole saw on the mark where the shaft will pass through



Cut a hole just deep enough to accept the clock mechanism

If a thick piece of wood has been chosen, a hole the size of the clockworks mechanism will have to be chiselled in the back at a depth that will allow the stem to protrude enough to put the retaining nut on it.

Choose a hole saw at least the size of the widest point of the clock mechanism - about four inches - and drill into the wood to a depth that will allow the stem to pass through. The easiest way to determine the depth is to put the nut on the mechanism and hold it to the side of the wood with the nut just touching what will be the face of the clock.

With the mechanism still in place, measure the distance from the front of the mechanism to the back of the wood using a tape measure or a thin piece of wire.



Use a piece of wire to test the depth of the hole saw cut



Chisel the wood out to the depth cut by the hole saw



Try to get the bottom as flat as you can

Place the hole saw's pilot bit over the center mark for the clock and drill a hole to the depth measured in the previous step. Use a thin piece of wire to check the depth in the groove cut by the hole saw. Chisel out the wood in the center, breaking it along the grain, to the edge made by the hole saw.

Try to get the bottom of the hole as flat as possible. Use the chisel with the bevel side down.





For a sheet metal face, scribe a cut line with a compass



Tin snips cut to the left or to the right



Use the tin snips that best suit you and cut out the circle

If sheet metal has been chosen, scribe a circle or other shape on the surface and cut it out with tin snips. Tin snips either cut to the left or to the right so choose the one that works best for you.

Try some cuts on some scrap pieces first. Never cut to the very tip of the tin snips or it will leave a sharp bend that is difficult to remove. Instead, make cutting strokes the way you would use a pair of scissors, never quite closing them all the way down.

Use gloves and a file to take the sharp points and edges off the metal.



Use a nail or compression punch to make a dimple in the center



Enlarge the dimple first with a very small drill bit but don't go through



Use one or two more intermediate sizes to enlarge the dimple but don't go through



Finally, use a drill bit just larger than the shaft on the mechanism

Next, find the center of the metal and drill a hole large enough to accept the stem of the clock mechanism. When drilling metal it is necessary to make a dimple in the surface to give the bit some purchase in the beginning or the bit will 'walk' around on the surface of the metal. Use a nail and hammer, a nail set and hammer or a compression punch to make the dimple.

It is also necessary to start the holes with a small drill bit first and use several others graduating in size up to the desired size. Use the smaller bits to enlarge the dimple but don't drill all the way through the sheet metal because subsequent bits will bind and it will be difficult to enlarge the hole.





Use a file to clean up any burrs or sharp edges on the metal



Use a grinder to make a decorative finish on the clock face

After drilling, clean up the hole using a round file and complete any desired surface decoration.



Pass the shaft of the mechanism through the clock face



The parts used to attach the mechanism



Slip the brass washer over the shaft and then the nut - tighten it snugly

Assemble the clock by passing the shaft of the mechanism through the drilled hole. Be sure to add the hanging clip and the rubber washer first. Next, slip the brass washer over the shaft on the front of the clock and then add the brass nut and tighten it down using needle nose pliers or a small flat wrench.





The hour hand goes on first and is pressed into place



The minute hand is next and has a special slotted opening for the oval shaft



Use the open nut if using a second hand



Press the second hand over the center pin on the shaft

The hour hand goes on first and is pressed snugly onto the shaft. The minute hand goes on over a specially shaped portion of the shaft. Be sure to align it carefully before pushing down into place.

A tiny brass nut goes on next. Use the one with a closed cap if a second hand is not to be used. Use the tiny brass nut that is open if a second hand is to be used. The second hand fits over a tiny post in the center of the mechanism. Press it into place.



Use the closed finish cap if not using a second hand



Use copper nails in wood to mark the numbers

The numbers can be attached or painted every thirty degrees around the face of the clock. Usually the numbers have an adhesive back with peel off paper protection.





Finished ceramic plate clock with stick on numbers



Finished aniline stained pine clock with copper nails for numbers



Sheet metal clock with decorative ground face and painted numbers

Don't forget the battery.



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