

The Moon Clock

AstroMedia offers another astronomical instrument for home use with its [cardboard kit for a moon phase clock](#), which is modelled on old astronomical clocks. A model with a two-colour rotating sphere that displays the moon phase for each day can be found in the Vienna Hofburg, among other places.

The phases of the moon occurring during a lunation lasting 29 days, 12 hours and 44 minutes are displayed by a corresponding clockwork mechanism with precisely this duration for one revolution of the 'hour hand'.

Pictures for the building instructions

The text of the assembly instructions describes the individual steps very precisely, making it easy to build the moon clock. The following pictures illustrate the construction of the model.

A construction time of approximately 4-5 hours can be considered realistic, provided that the model is built carefully and the open cardboard edges are neatly coloured. With less effort, 3-4 hours should be sufficient for construction.

Due to the detailed construction instructions, only the pictures are accompanied by comments below.



Freshly unpacked – a manageable number of parts



Tools required for construction, some essential, some helpful:

- Toothpicks for spreading glue
- A steel ruler as a folding aid
- Model clamps for fixing glued joints
- Tweezers for breaking out windows within individual cardboard parts
- An 11 mm spanner for assembling the clockwork mechanism



Step 1: Check that the two hemispheres are exactly the same size.



Making the guide cuts for the wooden rod in step 2

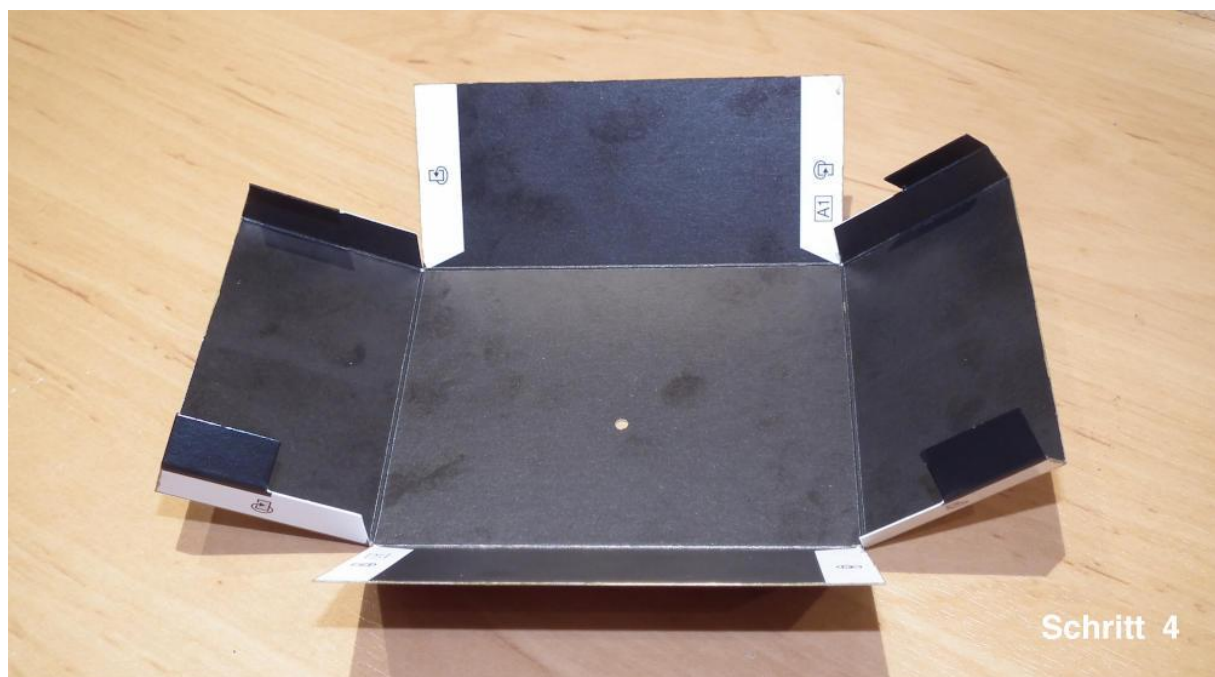


Alternatively, the centre point can also be determined using a calliper gauge. Set the gauge to half the diameter and make 2-3 marks on the flat side of the spheres using the measuring tips. The centre point is where the marks intersect.

In step 3, the hemispheres are glued together.



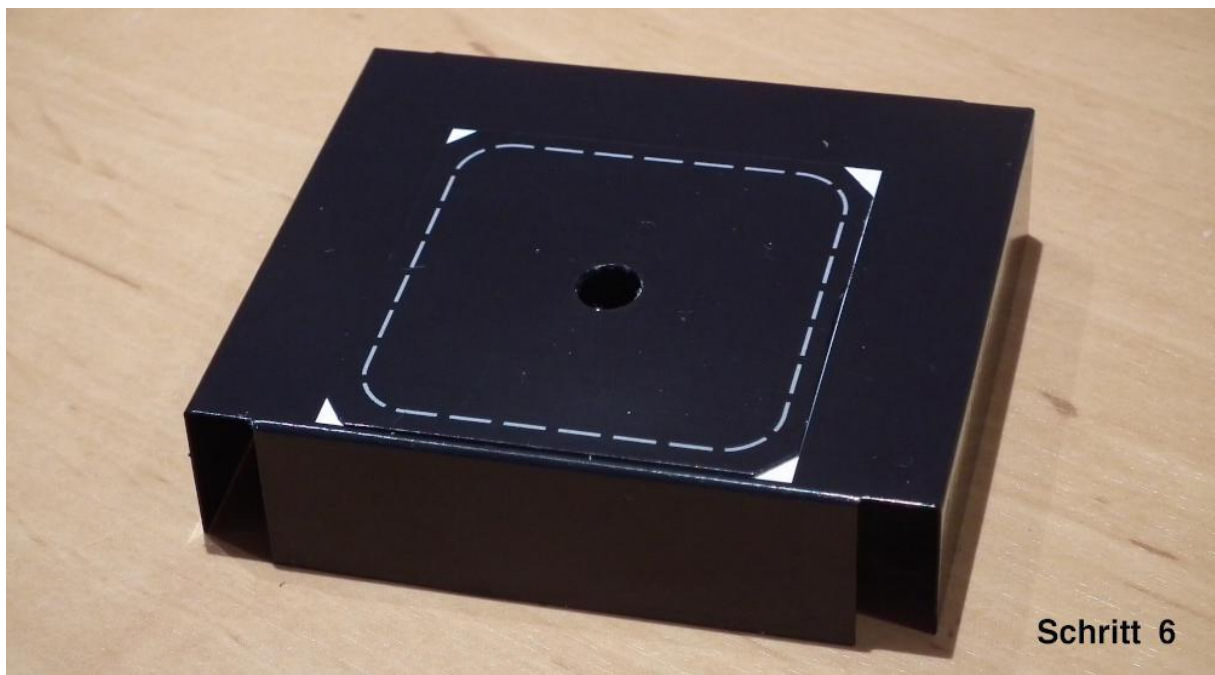
Parts required for steps 4 to 6.



Base prepared in accordance with step 4.



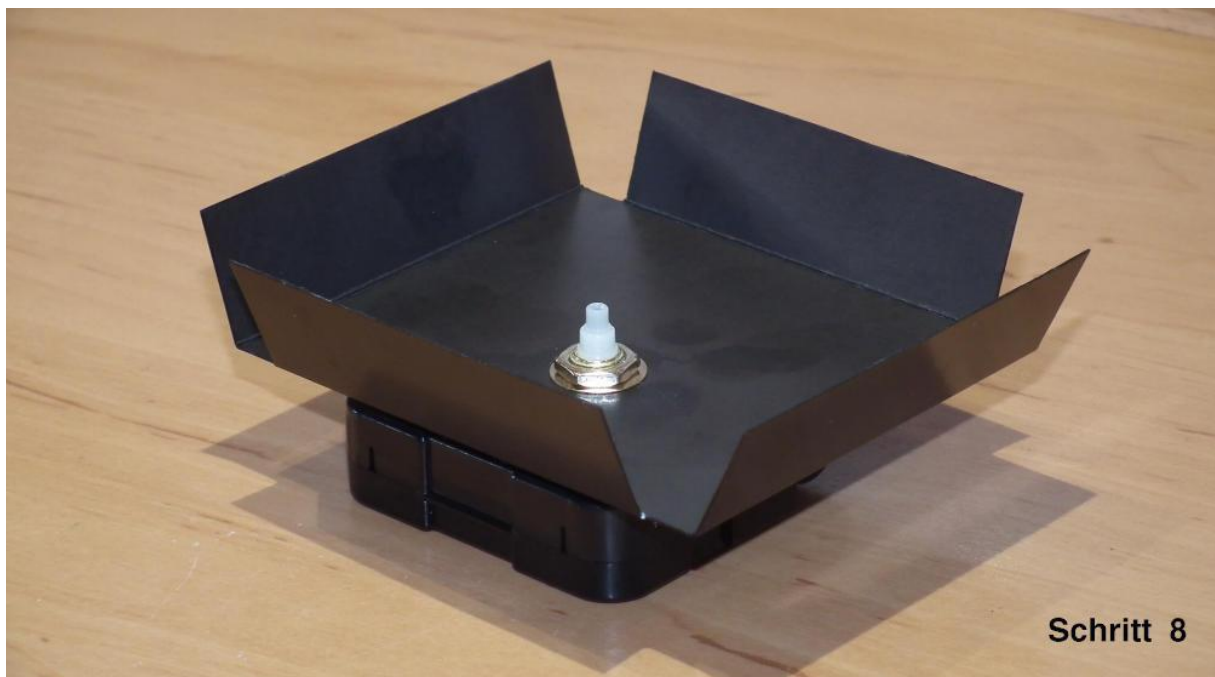
The base after completing step 5.



Step 6: Clockwork holder with reinforcement glued on.



Moon ball with wooden rod.



In step 8, the clockwork is mounted on its holder.



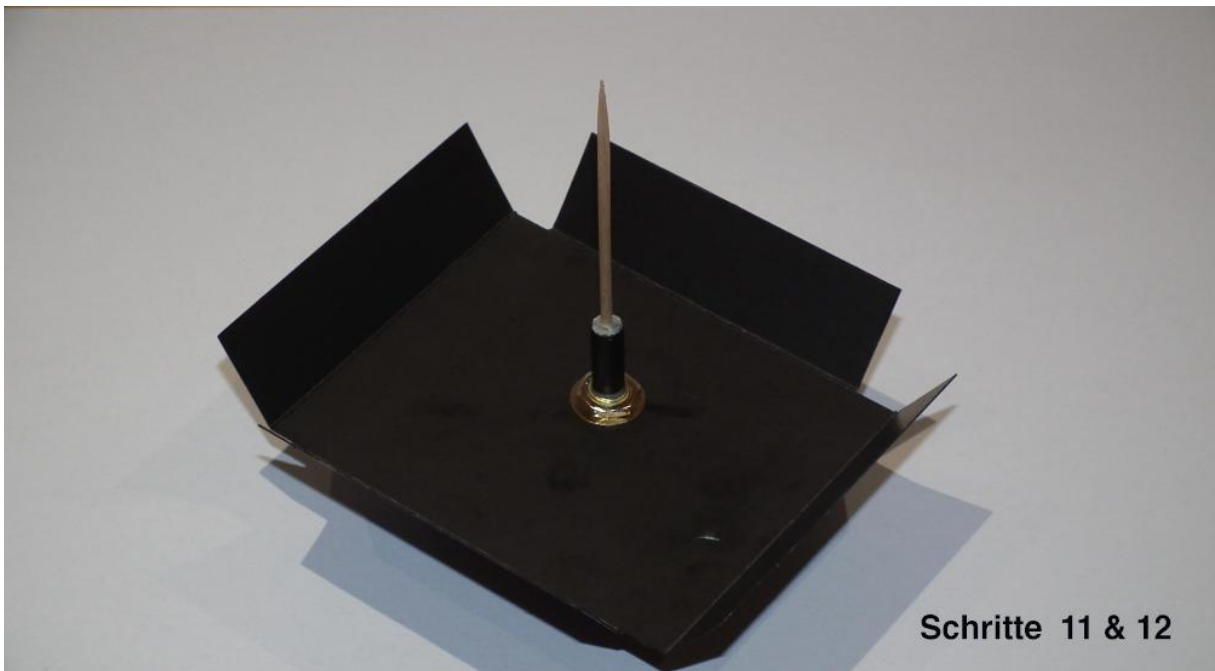
Parts required for steps 9 and 10.



Checking the rolled-up paper strip for accuracy of fit.



The gluing process is easier than described in the instructions if the paper strip is first fixed to the wooden stick without any additional glue, rolled up and then secured at the end with a drop of glue. To stabilise the roller, apply a few drops of superglue to its ends. Once the glue has hardened, glue the drinking straw to the roller.



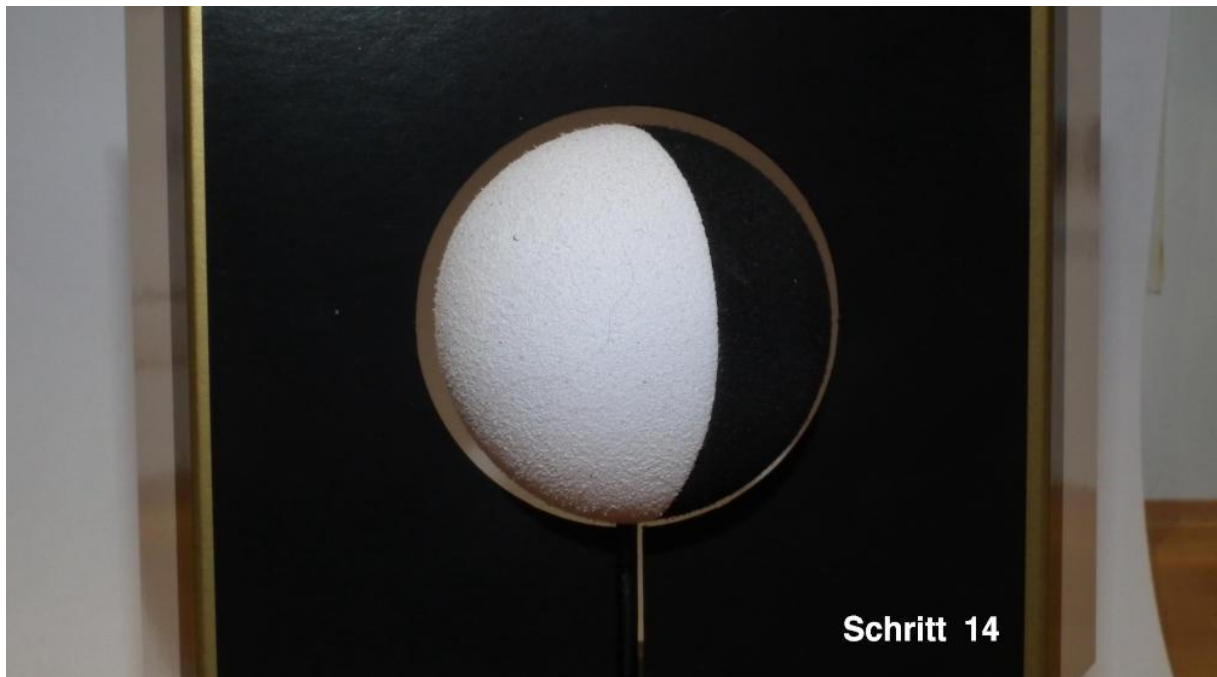
Mounting the reduction sleeve on the moon shaft of the movement.



Connecting the clockwork holder to the base as described in step 13.



In step 14, the moon sphere is adjusted on the 'drive shaft'. The front moon rim [part C1] is helpful here..



The adjusted moon sphere, which can rotate freely in its setting.



The main part of the frame required for step 15.



Schritt 15

Main part of the frame after machining according to step 15.



Schritt 16

The parts required in step 16.



Upper inner wall, folded and provided with hole reinforcement.

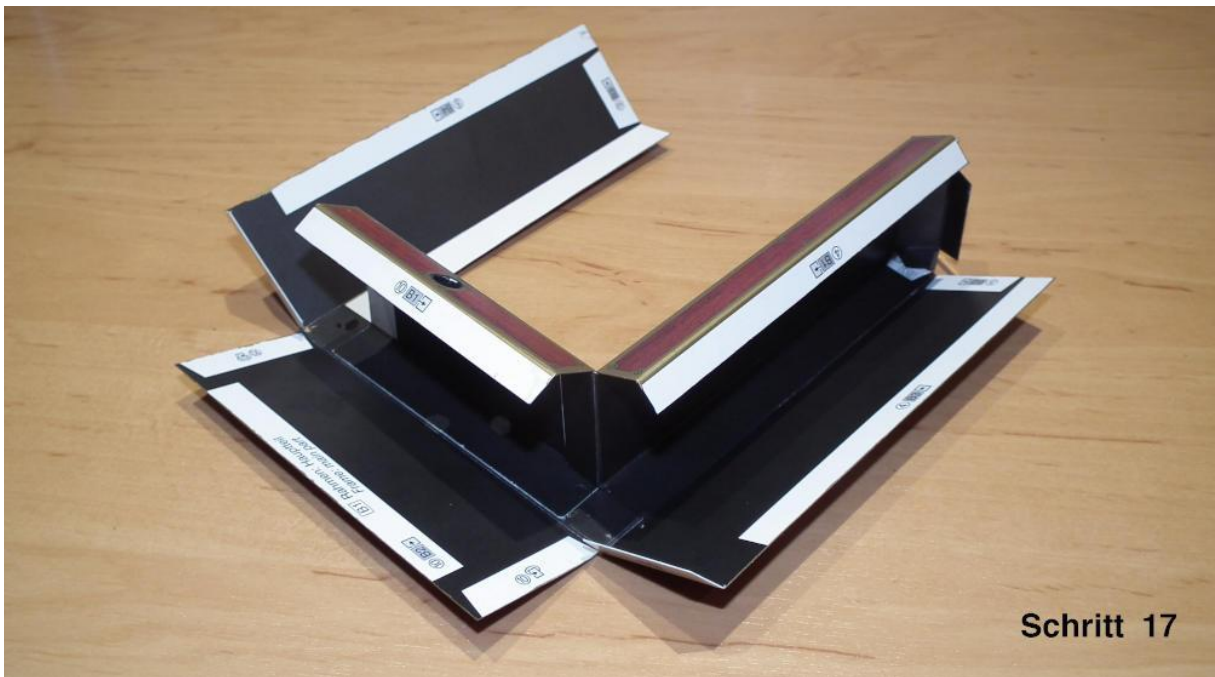


Main part of the frame glued to the upper inner wall.



Schritte 17-20

Parts for the side walls required for steps 17 to 20.



Schritt 17

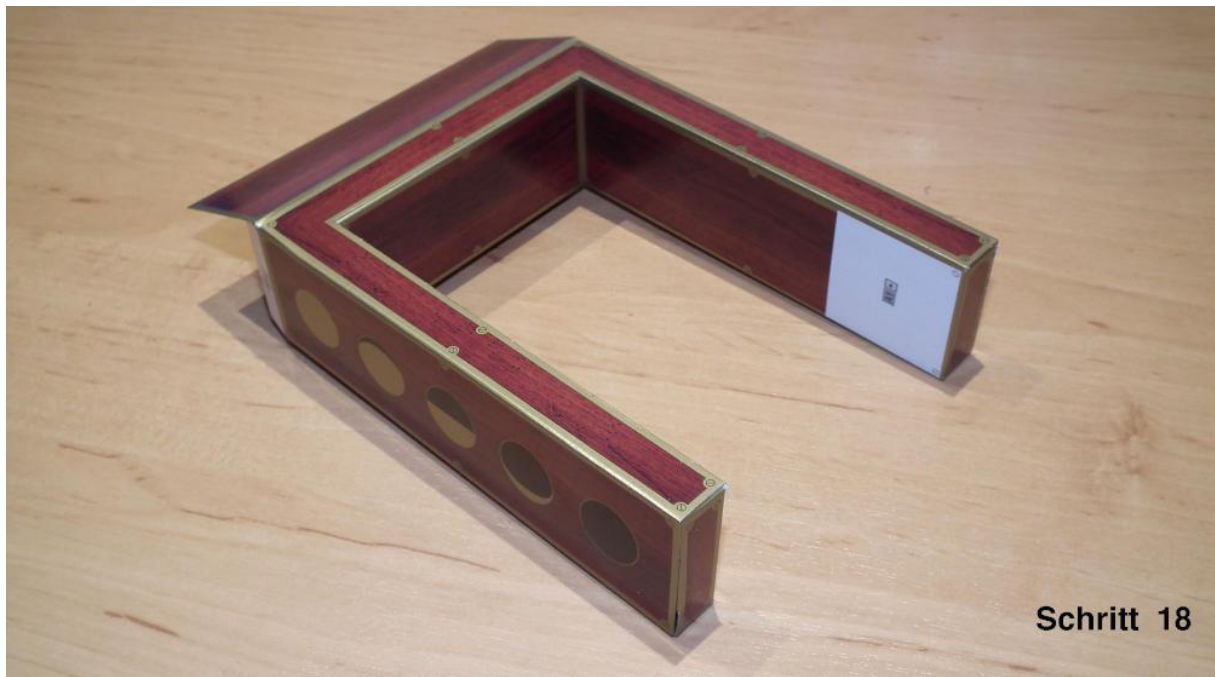
Right side wall folded and glued to the main part of the frame.



Right side wall completed.



Model clamps are useful for neatly gluing the tabs to the undersides of the right and left frame parts.



In step 18, the left inner wall is assembled in the same way as in step 17.



The open tab on the upper inner wall was glued.



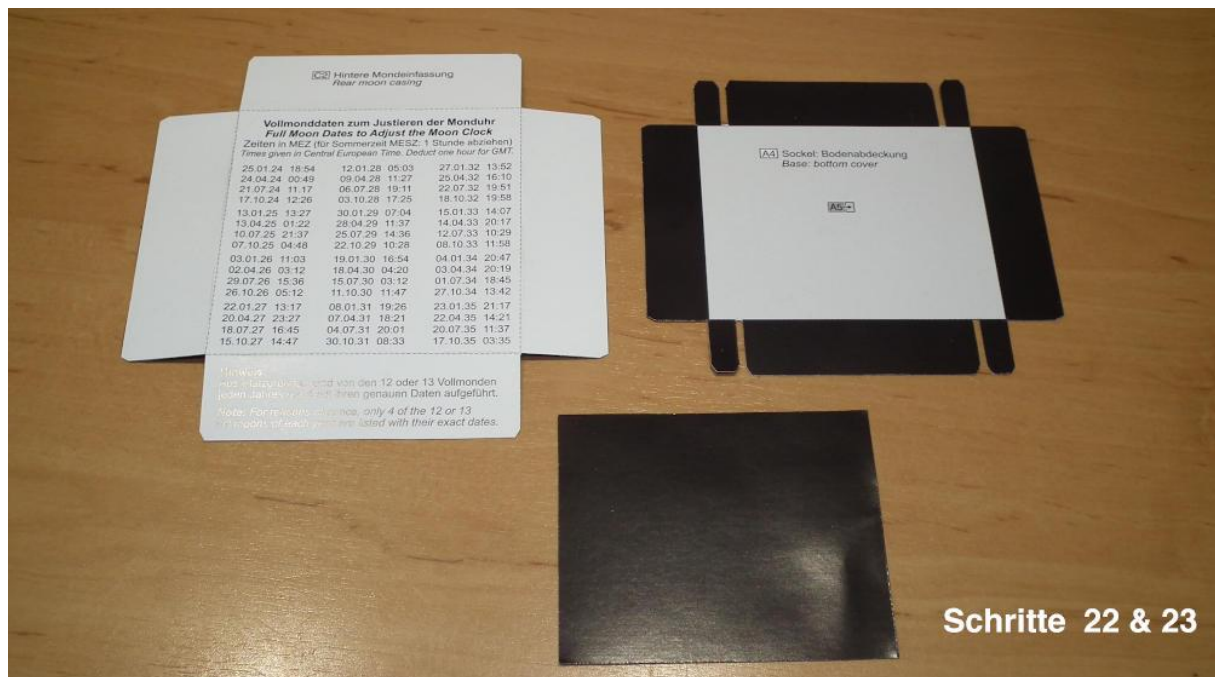
Schritt 20

After checking that it fits correctly, the frame is glued to the base.



Schritt 21

The front moon frame, which was prepared in step 14, is inserted into the frame...



Hintere Mondeinfassung und Bodenabdeckung...



... placed into their respective places.



A plexiglass cover protects this attractive and useful instrument from dust and the need to remove it...

A functional eye-catcher with an astronomical-scientific background.