

Instructions for making your Astrolabe

What you need to supply to make your astrolabe

- 1 Piece of craft board – for the base
- Card for printing the templates – about 10 sheets, depending on the number of latitude plates you decide to print out.
- 1 sheet of clear transparency – the sort used in an overhead projector and readily available from stationary shops.
- 1 pin or thin nut and bolt to secure the instrument.
- Glue and cello tape.
- You will also need a computer printer to print out the templates – colour is best but they can be printed out in black and white.
- A pair of scissors.
- A sharp point, like the end of a drawing compass.

Templates supplied are

- a) The Mater – print out on card or paper
- b) Latitude plates - print out on card or paper
- c) 1 Rule template - print out on card
- d) 1 Equation template print out on card or paper
- e) 1 Rete – print out on a clear transparency

Making the Rule and the Alidade:

1. Cut out the stencils for the Rule and the Alidade.

Constructing the Base:

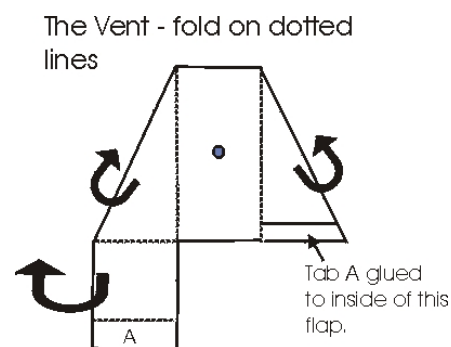
2. Cut the Equation and the Mater from the card.
3. Using a pencil, use the Mater as a stencil to trace an outline on to the white card. This is the Base.
4. Cut the Base out from the card.
5. Glue the Mater to the base
6. Pierce the centre of the Mater and the card with the point of a compass making sure that you do so at the point marked as the centre of the Mater.
7. Carefully pierce the centre of the Equation, making sure that you make the hole exactly on the centre dot.
8. Place the compass point through the Mater and the base and then using the compass point protruding through the instrument, place on the back the Equation (on the point on the compass). Glue the Equation to the back of the board. This will ensure that both the Equation and the Mater are glued onto the bases correctly aligned to each other.

Making the Latitude Plates:

9. Cut out all Latitude plates making sure that you do not cut off the tab at the top of each plate.
10. Make a hole in the centre dot on each latitude plate. Do this one at a time so that you do not “miss” the centre on any plate.

Making the Vents

11. Cut out the two vents from ruler template.
12. With your compass point make a hole in both vents, as shown – do this BEFORE you fold them.
13. Fold and glue the vents as shown



14. Glue one vent to each end of the alidade as shown in diagram on the stencil sheet.

Making the Rete

15. Cut the rete from the clear transparency. Place a small strip of clear cello tape either side of the rete over the centre dot. This is to reinforce the area into which you are going to make a hole to ensure that that plastic does not tear. Use your compass point to make a hole in the centre. – Take care in making the hole, it needs to be in the centre

Assembling the Instrument

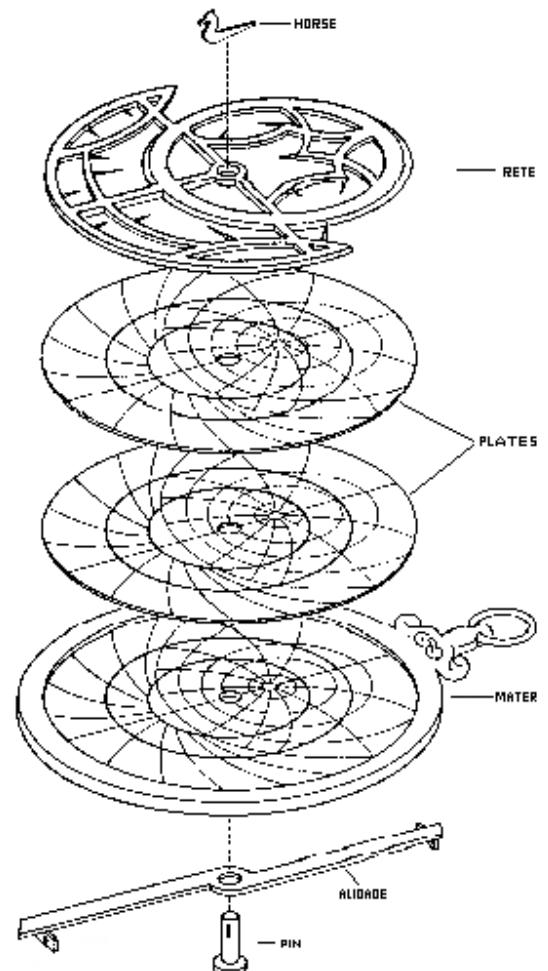
16. The single most important point in assembling your astrolabe is to ensure that the centre hole of each piece is through the centre and not off to one side.

So with your compass, if you have not done so already, piece a hole through each piece separately. With this hole as a guide you may have to widen this hole with the point of your scissors. Place the bolt though the following pieces – bottom of the bolt should be at the back of the Equation plate. The order is:

- a) The Alidade,
- b) the base plate - the mater and equation glued together
- c) the latitude plates sitting in the Mater base
- d) the Rete
- e) the Rule (*not shown*).

With all these in place, secure the instrument by screwing down the wing nut (horse in diagram) which is placed on the Mater side of the instrument.

17. Later you can make a hole through the top loop of the Mater and insert a ring or hook.



You now have the finished instrument.