Tips to help with Orthographic Drawing

1st Angle is the European version, preferred in Asian Countries such as India

3rd Angle is the USA/Australia version

2nd/4th Angle does not exist

Preference to which one to use does change due to time and fashion

Scale

1:2 = Half full size 1/2

2:1 = Twice full size 2/1

1:1 = Full Size

1:12 = The main scale we use in our models. You take a full-size measurement and divide it by 12 i.e. Table height 720 - Model height – 60, to get your model size. Many purchased extras are 1:12 scale



Remember, do the drawing in ‘Construction Line’ first and avoid using an eraser., When you have checked it, carefully then go over it in a final dark line.

- Plan always goes below the Front view

- The side you look at always goes the other side of the front view

- Side view goes next to the front view

Arrows for Dimensioning



Use a black fine liner to go over the final design – 0.6/0.8 is a good size

Hidden Detail is shown with the line below



1st Angle Projection



Things that are the same: Orthographic Drawing is the same as Orthographic Projection. Side View is the same as end view, end/side view is the same as End Elevation. Plan is always Plan, and never known as Top view

Dimensioning

Orthographic Drawings are used as ‘Working Drawings’, they are to provide information for manufacturing. They are usually drawn to scale and contain the necessary measurements and dimensions

Rules

1. Always draw accurately and to scale

2. Never put a dimension on the drawn object

3. Keep dimensions to a minimum

4. All dimensions are in millimetres

5. Never repeat the same dimension on another view

6. Never write ‘mm’ on a drawing, just the number is needed as it is an international standard

- Popular with some Exam Boards

- the views are next to where you see them



3rd Angle Projection

These must be on your drawing to indicate which type you’re using

Diagram, shape, engineering drawing

Description automatically generated