

Sizing Images for Projection

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Aspect Ratio

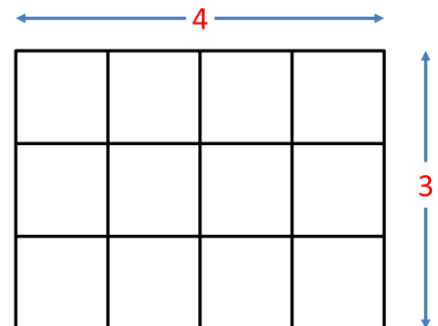
When you want to project images at home, at a camera club or wherever, you need to resize the images to fit the projector. Yes, the projection software will do a good job if you don't bother, but the file sizes might get rather large and the process of resizing "on the fly" can slow things down.

Most projectors use an aspect ratio of 4:3. Imagine you have twelve squares. Arrange them in a rectangle four across and three high. That is the shape we are talking about.

This is the same as old cinema screens and old televisions. Things will undoubtedly change eventually but for the moment 4:3 is what you get. The actual dimensions vary from one projector to another and, therefore, from one organization to another.

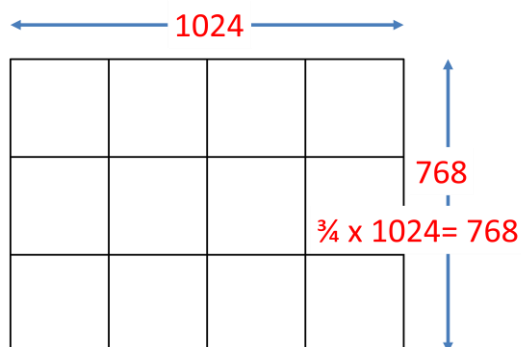
Among the Camera Clubs in Thornbury there are two common sizes. In pixels (px) they are:

	Width (px)	Height (px)
Thornbury Camera Club	1600	1200
Thornbury U3A	1024	768

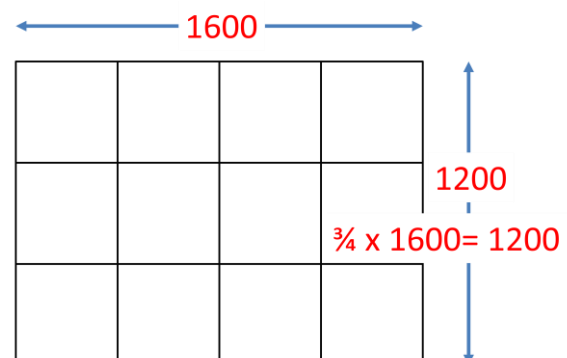


Aspect Ratio of 4:3

In both cases, the height is three-quarters of the width.



Projection at 1024 x 768



Projection at 1600 x 1200

Fit the Picture to the Format

A portrait will fit in the frame as high as it can go.

If the dimensions of the frame are 1600px x 1200px, for example, the portrait will be 1200px high with gaps at the sides. Just because the format allows for 1600px horizontally does not mean you can make a portrait 1600px high.



A Portrait in the 4:3 frame

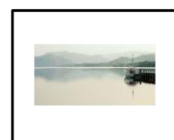
A landscape will fit in the frame as wide as it can go.

If the dimensions of the frame are 1600px x 1200px, for example, the landscape will be 1600px high with gaps at the top and bottom.



A Landscape in the 4:3 frame

In Summary....



Changing the Image Size

There are several ways to change the image size in Photoshop. There will be similar options in other software.

The easiest way is to simply change the image size. Go to the Image Menu and choose “Image Size”.

In this example, the width is 3104px. Select this and type 1600. Since the height and width are linked, the height is also reduced to 772px to preserve the proportions of the image.

For projection you can ignore the Resolution field in the menu. This only has meaning when printing.

Finally, hit the OK button and that is all there is to it!

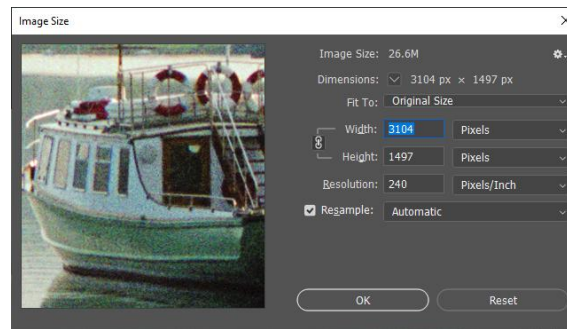


Image before changing the size

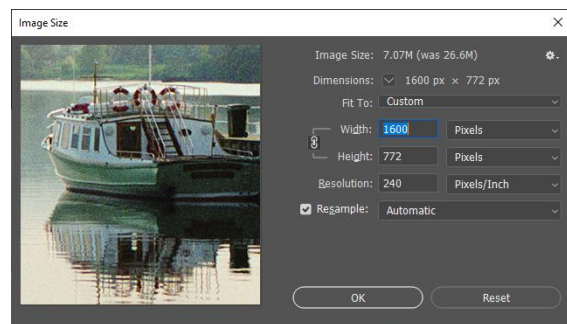
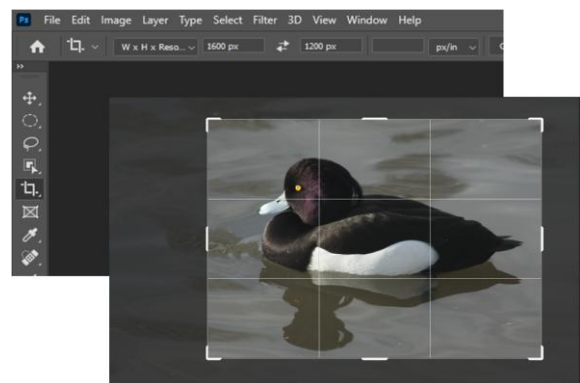


Image after changing the width to 1600px

Alternatively you can use the crop tool.

Set the tool to the size you want. And then crop to the image you want. Photoshop will then interpolate the pixels to produce the correct size.

If you set the tool to give a width of 1600px and a height of 1200px, that is what you will get. If you only set one of the values, Photoshop will set the other based on your crop.



Set the tool to the size you want and let Photoshop do the rest.