

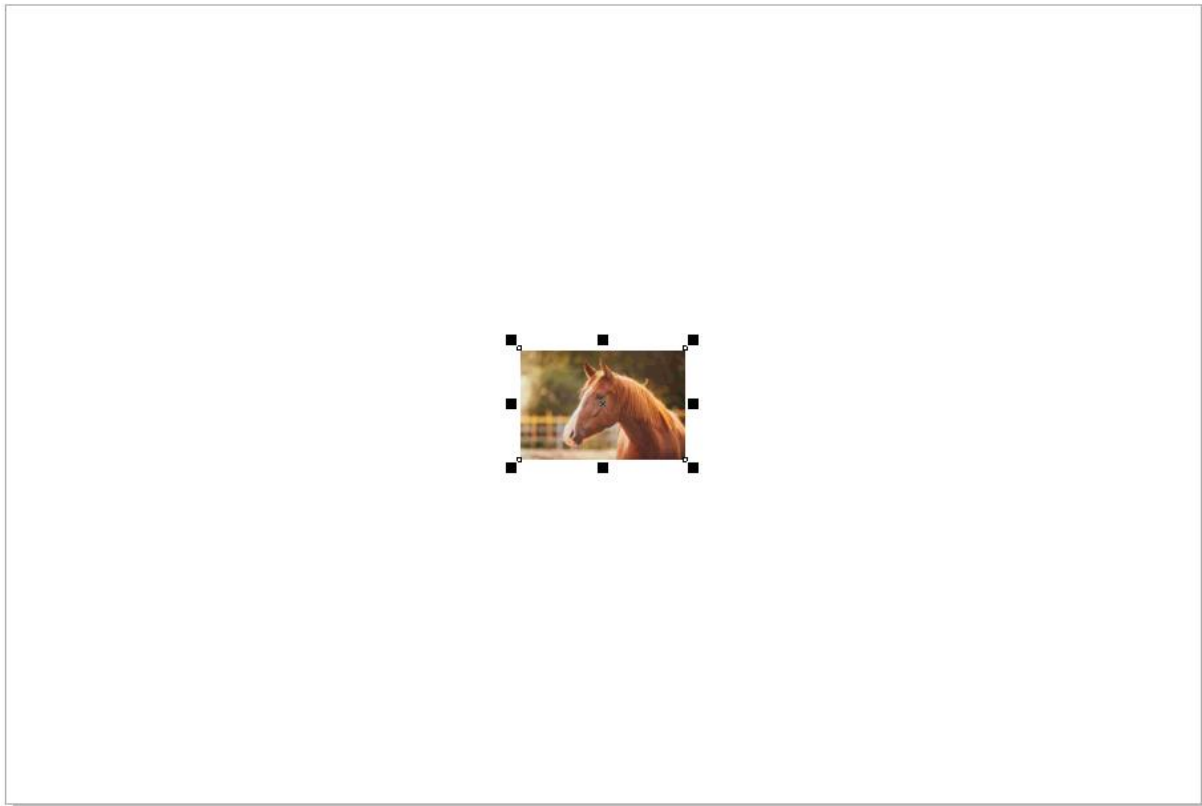
Improving Image Resolution

JPEG artifact removal and upsampling, introduced in CorelDRAW Graphics Suite 2020, allow you to increase image size while still maintain image quality and fine details. This tutorial will review how to remove JPEG artifacts and how to use the Illustration and Photorealistic upsampling modes.

JPEG Artifact Removal

To demonstrate JPEG artifact removal, we'll start with a photo of a horse that we want to enlarge and used for a large wall print. Start a new CorelDRAW document sized to match your print output.

Use **File > Import** to bring in the bitmap image to use for the print, and press **Enter** to center it at its original size. In this example, the original image is much too small to fill the page.



Zooming in a bit, we can see that the resolution is pretty low, and the image is full of JPEG artifacts. These are unwanted pixel blocks or halos caused by image compression, and there are lots of them along edges around the horse, as well as throughout the background.

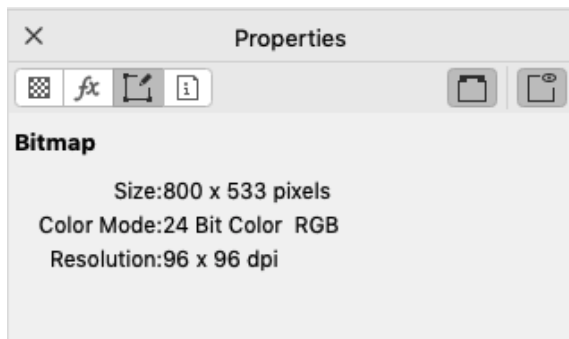


With the image selected, choose **Bitmaps > Remove JPEG Artifacts**. Within a couple of seconds, the entire image is now artifact-free, and edges are much sharper.



Upsampling a Photo

Now we want to increase the size of the photo to fit the page. If we look in the **Properties** inspector, the current image resolution is 96 dpi.



You can enlarge the image by simply dragging one corner outward or using the **Scale** factors on the property bar. But this brings the resolution way down to 13 dpi.



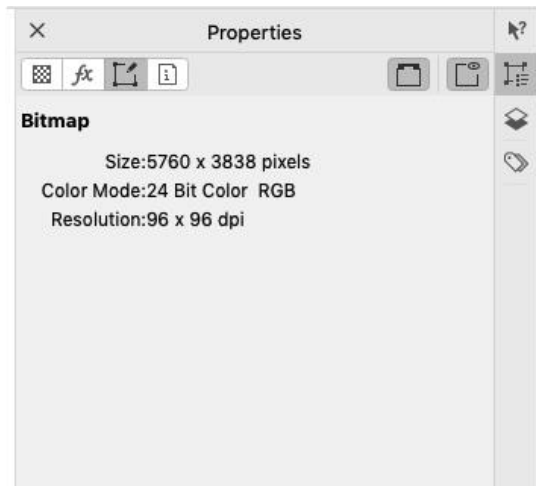
For a better resizing method, choose **Bitmaps > Resample**. Under **Mode**, there are two options: **Bicubic** and **Nearest Neighbor**. These modes are good options to use when making an image smaller.

We want our printed photo to be 60" x 40", so we set the **Width** to 60. Because **Maintain Aspect Ratio** is checked, the **Height** updates accordingly.

Since we have increased the image size, there are now two additional modes available: **Illustration** and **Photorealistic**. Our image is a photo so we will use **Photorealistic** and set the **Noise reduction** slider to an average amount. The estimated time for resampling appears at the bottom of the window - this is useful to know if you're resizing at a very large scale, because the upsampling may take a bit longer.

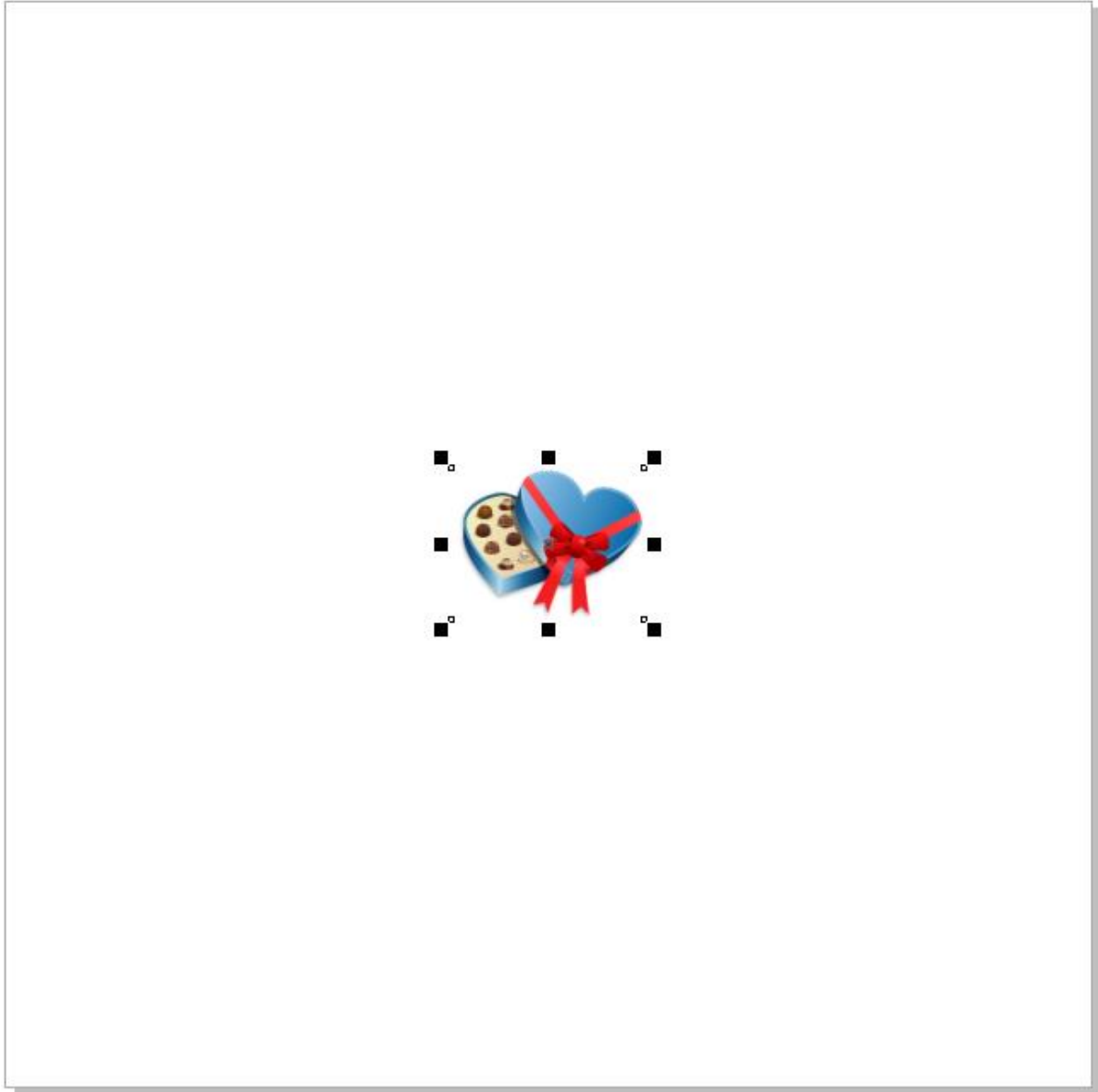


Click **OK** and the upsampling will process. Once complete, the image is enlarged. It looks just as crisp as the smaller version, and the resolution is still 96 dpi.



Upsampling an Illustration

Computer-generated illustrations can be upscaled just as well. In this example, we have an illustration that's to be used for an advertising poster, but it is much too small.



If you drag an image corner increase its size, there will be noticeable pixelation in some spots.



So we will use **Bitmaps > Resample** again, set the size we want, and this time choose the **Illustration** mode. Once the resampling is complete, the result is much crisper.

