

# Scanning- Moiré Pattern

**Definition:** Moiré is an unsightly interference pattern that appears on images that have been scanned from a previously printed source such as a newspaper, magazine, or book. Moiré appears as a chequered or herringbone type of pattern. The pattern is a result of the halftone screen process used in modern printing where patterns of small dots are overlaid to produce colour and shading. Typically Moiré patterns from newspaper scans are the worst, compared to magazines, cards, brochures, and books. Scanning photos printed on textured paper can also produce a Moiré-like pattern, and though it is usually not as severe, the same removal methods can be used for both types of patterns.

Most scanning software offers a built-in descreen option to correct this problem before passing the image to your editing software. However, if your scanner does not have a descreen option, or if you don't like the results, there are several methods you can use to remove Moiré patterns in image editing software. One simple solution that often works well is to place the image on the scanner bed at a slight angle, then rotate to the proper position in your graphics software.

When removing Moiré patterns always work at 100% magnification in your editing software. Displaying an image at other magnification levels can sometimes result in visual distortion that could be mistaken as Moiré, but it actually has to do with the way the pixels are interpolated for screen display and will not appear in the printed image or at 100% zoom.

It's also worth noting that when you scan images from printed sources, they are very likely to be copyrighted. Be sure you have secured proper permissions before scanning from such sources.



The image on the left shows a Moiré pattern scanned from a newspaper. The image on the right shows Moiré pattern scanned from a high-quality textbook. Notice how the newspaper Moiré pattern is much more severe due to the lower line screen used in newspaper printing.

**Pronunciation:** more-ay

**Also Known As:** dots, chequered pattern, herringbone pattern, halftone screen, interference

**Alternate Spellings:** moiré

# How to Remove a Moiré Pattern in Photoshop

## Here's How:

1. Scan the image at a resolution approximately 150-200% higher than what you need for final output.
2. Go to Filter > Noise > Median.
3. Use a radius between 1-3. Typically the higher the quality of the source, the lower the radius can be. Use your own judgement, but you will probably find that 3 works well for newspapers, 2 for magazines, and 1 for books.
4. Go to Image > Image Size (Image > Resize > Image Size in Elements) and resample to the desired image size and resolution using the bicubic resampling option.
5. Make sure you are zoomed to 100% magnification.
6. Go to Filter > Sharpen > Unsharp Mask.
7. Exact settings will depend on the image resolution, but these settings are a good starting point: Amount 50-100%, Radius 1-3 pixels, Threshold 1-5. Use your eye as the final judge.

## Tips:

1. If you still see a pattern after applying the Median filter, try a slight gaussian blur before resampling. Apply just enough blur to reduce the pattern.
2. If you notice halos or glows in the image after using Unsharp Mask, go to Edit > Fade. Use settings: 50% Opacity, Mode Luminosity.