

## Preparing Images for the MiScreen System

The MiScreen system creates quick mesh screens from a digital image for screen printing. The software converts image files into a black and white format for the hardware to expose on prepared screen material (RISO Thermal Mesh).

The source image can be colour, grayscale or black and white photographs, artwork or text, and can be somewhat processed in the MiScreen software.

My experience suggests best quality results come from optimizing the images using conventional image preparation tools. This presentation explores what works and what doesn't, working from image preparation principles, rather than 'how to do it' with particular image software.

### Reductive Screen Printing

Somewhat tongue-in-cheek I visualize the optimal way of preparing MiScreen images as 'reductive' screen printing following the similar planning and image isolation process required to create reduction block prints.

*A reduction print is made when an artist creates a multi-colored, layered print using a single print block.* [The Art of Education]

For me, the optimal MiScreen preparation process takes an image and separates layers/colours into their own screens for a result similar to reductive block printing.

### MiScreen Help FAQs

The MiScreen Application Software is best used to open a file and send to machine.

Work in A4 page size to ensure correct image position within the screen.

Work at actual size. Not recommended to scale designs in MiScreen Software.

Use 300dpi images and artwork. [When possible]

Avoid low quality 72dpi internet images.

Convert artwork to black/white. Colour will be image in a shade/tone.

Export your artwork as 'Press Quality PDF', or Maximum Quality JPEG, to ensures the design is correctly coloured rendered and importantly to scale and correctly positioned on your A4 page.

MiScreen software will also use GIF, BMP and PNG formats.

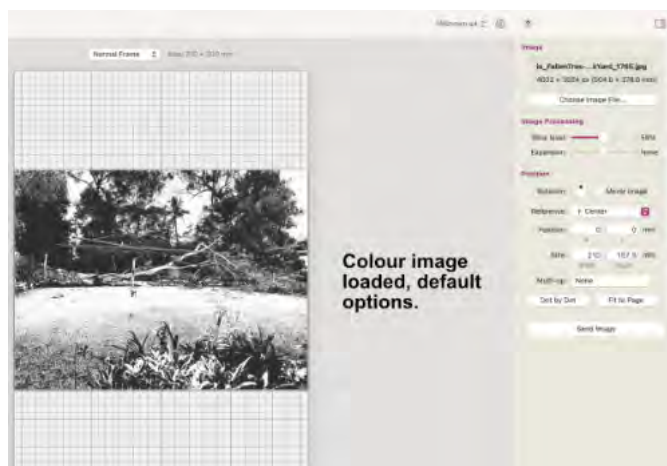
Can MiScreen print grayscale/shading/photographs?

Yes, if your artwork is black, you will receive a solid image, where the image is grey/colour/shading, the MiScreen will image and create a shading.

### Basic App Operations



Original colour image (Ian Ewings photographer). Images should be scaled as close as possible to full size for an A4 or A5 page (large/small screen frame) at 300dpi in your imaging software (Adobe Photoshop Elements, Corel Paintshop Pro, Affinity Photo, Procreate, etc.).



The app converts the colour image to b&w as it loads into the workspace. The default 'Slice Level' slider, think density, is 50%.

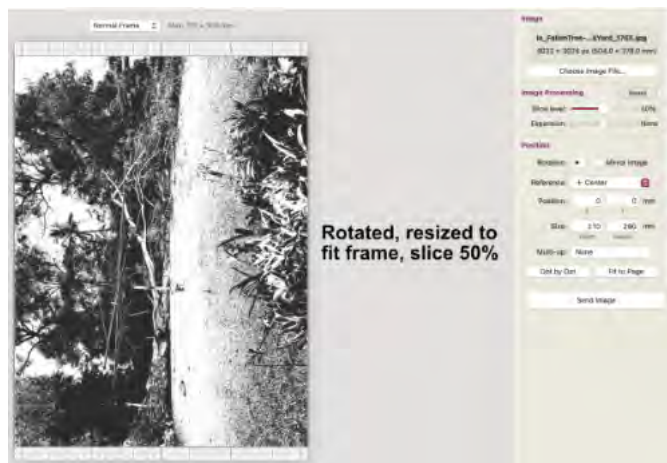
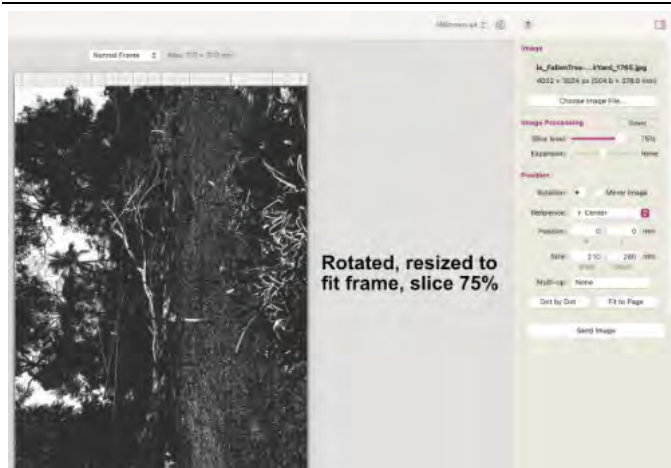
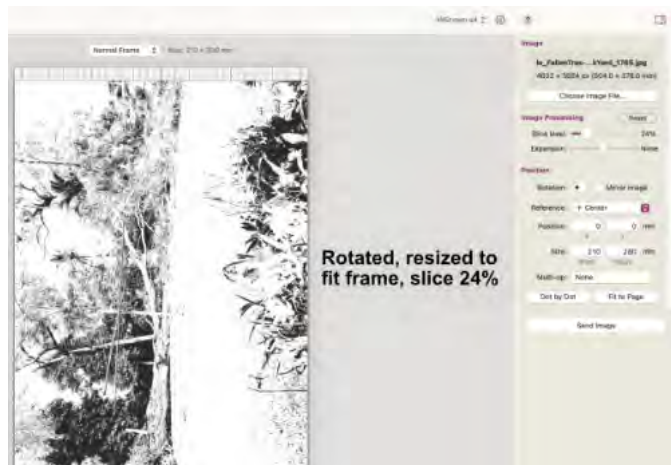


Image rotated to maximum A4 (large frame), still default 50% slice level. Many gray areas would print black on resulting screen, thus losing detail.

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Same image, 75% slice setting. Everything that isn't full white will print black. This might be acceptable as a background (first layer printed) with a very light colour, but there will be little or no detail.



Slice level reduced to 24%: full black areas will print black, as will some of the grayer areas, with the resulting screen; some of the lighter gray areas will become white (non-printing).

This might be acceptable as a detail print but is it the right detail? Where is the Hill's hoist, for example? And the downed tree?

The settings above illustrate the range of the MiScreen app's adjustments from a colour image: gross overall changes but no ability to isolate or highlight selected parts of the image.

### My 'Backyard' Learning Exercise

Exploring MiScreen's potential was my primary printmaking activity in 2024. Ian Ewing's photo of a storm downed tree in his backyard provided the learning challenge for our 2024 Double Exposure collaboration.

I had already worked out techniques for printing (registration, etc.) on paper at home so decided to print on low-cost tote bags as an additional challenge.

### Reductive Planning



I've started manipulating portions of Ian's image, this image is actually two layers in my image software – I've tried deleting all of the background in the top layer and reducing the opacity of the lower layer but both the downed tree and the hoist require a better solution.



I cloned out all of the hoist from the base image. The hoist was isolated, gray areas were drawn over with a black brush/pencil and wires drawn in where they had been lost in erasing the background.



Work on this element included erasing the background and cloning tree elements to fill in where the hoist had been removed.

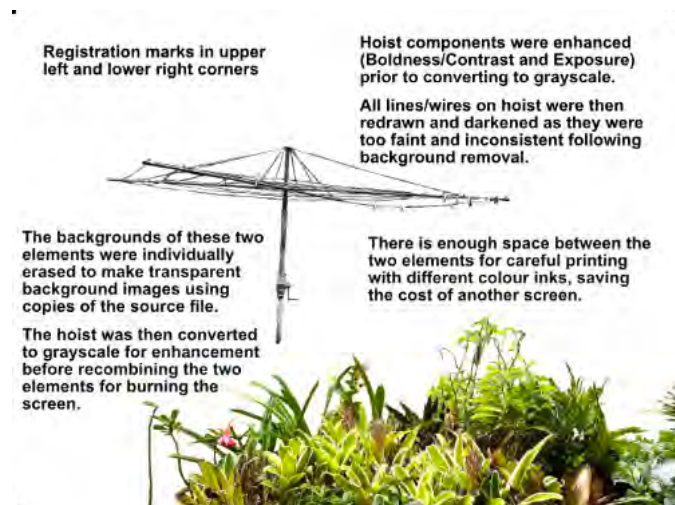
In retrospect it should have been converted to grayscale in my image software and further adjusted there, rather than in the MiScreen application.

The downed tree was similarly isolated but should also have been converted to grayscale and lightened to highlight detail.



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Ignoring the added text, both the image above and the one below represent print screen images and have small registration marks in the corners to ensure that all images scale exactly the same in the MiScreen software.



I ended up with three printing screens: the background with trees, grass, etc., the downed tree and one with the hoist and front flowerbed (above).



Printing the hoist/flowerbed screen in two different colours was possible due to the space separating the two elements.

The blue tape and the front edge of the printing base (kitchen counter) provide registration. The screen frame is held in place while printing with quick release clamps.

The most interesting point about the A4 Banana print (right) is that it was signed and hung upside down. The inset shows the original photo with some of the background distraction removed, much of the background was erased from the bottom (orange)



The printed tote bag – the background layer was printed first in light green, then the downed tree, followed by the hoist (black) and flower bed (dark green). The coloured flowers were added with a toothpick dipped in printing ink.

It was successful as a learning experiment with the most obvious deficiency being the lack of detail in the downed tree. This is where time spent in the image editing software will be most effective.

### POP Goes the Artist



image, more was erased for the plant detail layer (yellow) and even more for the banana highlight (dark green).



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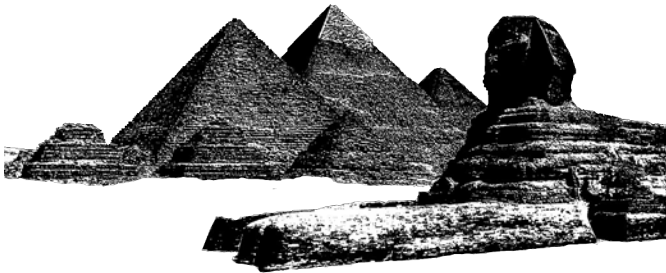
### Royal Ibis Exercise



Source image (Giza Tourism, unionrayo.com)  
resized 25x17cm @300dpi.



Sacred Ibis group at sunset (Dreamtime.com  
Royalty Free Stock Photo). Background to be  
removed.



Sky and people erased, sharpened for optimum  
shading when converting to grayscale.

Foreground sandscape removed, registration marks  
added, converted to Grayscale 80%. Will be printed  
for the background in a light sand colour.



This image will be printed in darkest gray. [A  
partial watermark remains. The didactic and artist  
certification must include image sources.]

If the printing images are the same size, and have  
marked corners, they will load into the MiScreen  
software and burn for identical registration.



Same image as above only Grayscale 40%, with an  
Ibis profile added (allaboutbirds.org, Grayscale  
100%). This image will be printed with a medium  
sand colour for highlights.



Digital proof using representative colours. Some  
additional editing may be required before creating  
the printing screen.