

Mac OS color reductions for large scale, non-repetitive 2 color image designs

This document does not take into account the fact that stitches are not square; proportions of image to be used in knitting will require adjustments in order to retain aspect ratio after opting out of constraints in any programs used. Knitting is low resolution, so the goal is to process and convert color or grayscale images to 1bit true black and white using filters, whether for a potential download or gridded graph

**Using built in Mac OS and free software:**



image to be converted can be imported into **iPhoto /edit / effects** to change color image to **BW** (actually it will appear grayscale), save image  
open B/W image now created in **preview**, use **tools** menu's **adjust size** to desired dimensions in **pixels** (I used 150 taking into account the max number of needles I prefer to work on), save image

**img2trak** will reduce image to a **Floyd Steinberg** dither <http://daviworks.com/knitting/>  
I was not able to resize the resulting image to small size for clearer viewing here



**HyperDither to Atkinson** [http://download.cnet.com/HyperDither/3000-2192\\_4-98636.html](http://download.cnet.com/HyperDither/3000-2192_4-98636.html)



I worked with pngs for my tests. Beware that many of the thumbnails that appear on the desktop or in your folder through the process may make it appear as though nothing has happened to your image.

**XnConvert** will convert image to BMPs or other formats that may be usable in your download program ie wincrea at either the beginning the end of this process  
<http://xnconvert.en.softonic.com/mac>

There is also a **one bit camera (99 cents)** app for **iPhone** that will take dithered photographs using either the Atkinson or Bayer algorithms <http://lindecrantz.com/onebitcamera/>

a photo of part of the repeat in my sofa fabric



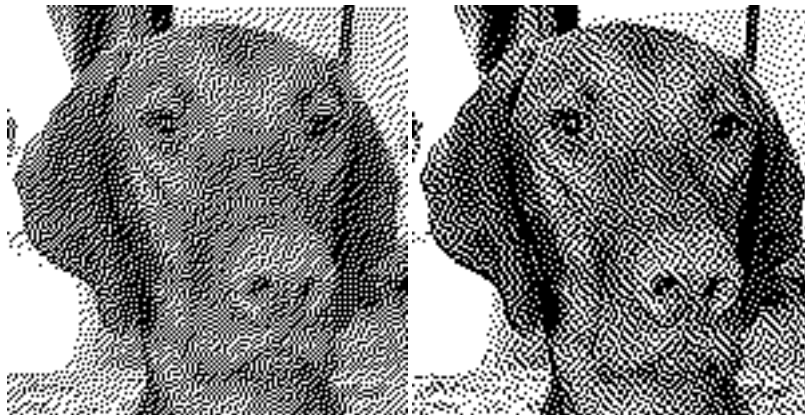
the further dithered version



the Atkinson version, cropped, no further changes

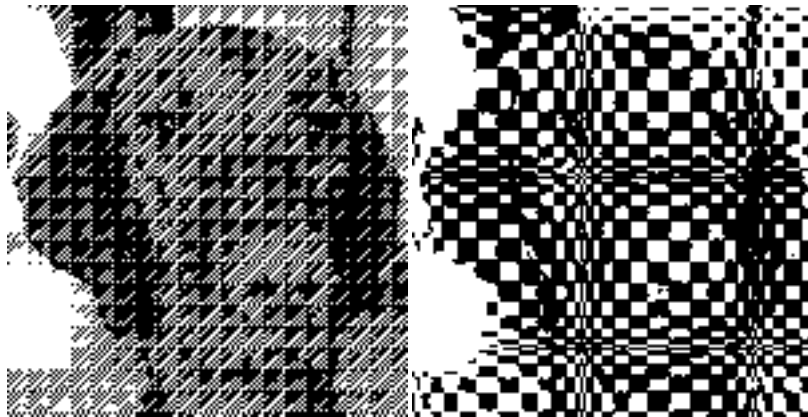


**Graphic converter:** [http://download.cnet.com/GraphicConverter/3000-2192\\_4-10057380.html](http://download.cnet.com/GraphicConverter/3000-2192_4-10057380.html) free to try, \$39.95 to buy, developer [http://www.lemkesoft.de/en/start/Effect/BW/Steinberg or Atkinson](http://www.lemkesoft.de/en/start/Effect/BW/Steinberg%20or%20Atkinson)



**Photoshop** offers a myriad of additional options for converting images between color modes  
**see:** [http://help.adobe.com/en\\_US/photoshop/cs/using/WSfd1234e1c4b69f30ea53e41001031ab64-73d6a.html#](http://help.adobe.com/en_US/photoshop/cs/using/WSfd1234e1c4b69f30ea53e41001031ab64-73d6a.html#)

**diffusion, halftone, pattern, custom**



cropped, gridded, partial image : 1 stitch/row per pixel

