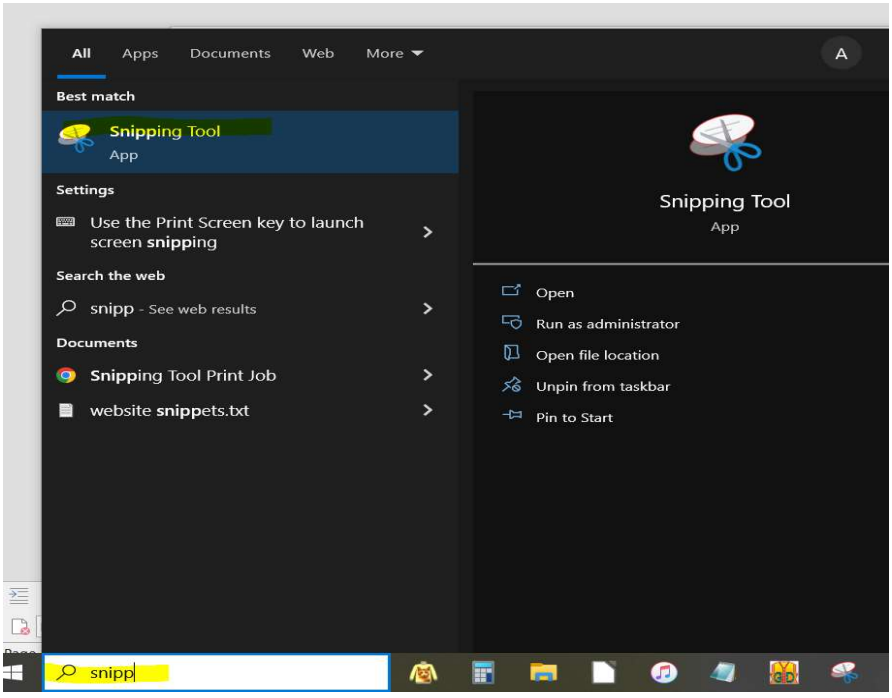
Converting an image/graphic to a Designaknit Stitch File

- Each pixel of a photo becomes a stitch in Designaknit (DAK). Keep this in mind when choosing the image you wish to convert as less detail will result in a better conversion.

- Designaknit version 9 was used for for conversions in this document.

- Before starting any image manipulation, think about the following:
  - How will you use the final dak stitch file? On a blanket with 200 needles and 500 plus rows? Centered on front of a child's sweater where you will have many fewer needles available?
  - Orientation of image on the knitted piece (vertical/horizontal).
  - Will you knit as two colors (fair isle or DBJ) or up to 6 colors(DBJ)?
  - In order to get a better conversion, you will need to have an approximate stitch gauge before starting the conversion. Changing the spi/rpi by very much later on might result in a distorted image.

- Clipart graphics are easier to convert than photographs as they are generally simpler and have fewer colors. Starting with a thumbnail of an image can also be easier to convert than the full size image. Consider using a screen capture tool to "borrow" a thumbnail of the clipart file or image. I use the Windows Snipping tool:



- Save images as .png files during the file manipulation rather than jpgs or bitmaps. Definition and benefits of this format can be found here: https://www.techtarget.com/whatis/definition/PNG-Portable-Network-Graphics

- I find it best to do some of the image manipulation work outside of DAK. Such as:

    - Removing any unwanted backgrounds
        - Iphone/Mac - https://zapier.com/blog/remove-background-from-image-iphone-mac/ free and easy to use. Works great!

        - https://www.erase.bg/upload – free web based software; Drawback is they now have access to your photo.

    - Use Gimp to resize (reduce pixels) and reduce the number of colors in the image
        - Free and powerful software that works on GNU/Linux, macOS, Windows and more operating systems

        - Can be download here: https://www.gimp.org/downloads/ Choose option "download directly" and follow the instruction prompts. This may take a long time depending on traffic on the site and your internet speed.

Example of the process:

1. I am going to use an image of King Charles' Coronation from this website: https://www.vogue.com/article/king-charles-iii-coronation-everything-we-know-so-far

2. Decide on final use of image: In this example I will be knitting a blanket in two color jacquard over needles 98 – 0 -98. The orientation will be vertical. Previous blankets have yielded a tension of about 6 spi and 7 rpi when knit as 2 color jacquard with a striped backing.

3. Using the Windows Snagit Tool:

- Cut out the part of the photo I want to use.
- Save it as a .png file.
- You may want to create a new folder for this project to make things easier to find. There will be a number of files created during the process.

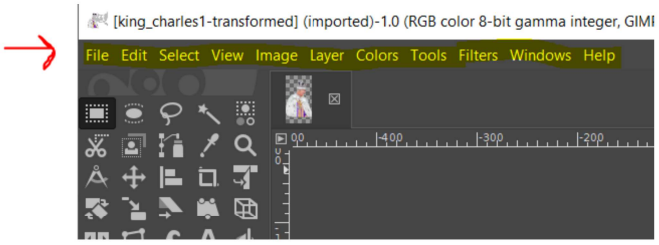
4. Remove Background:

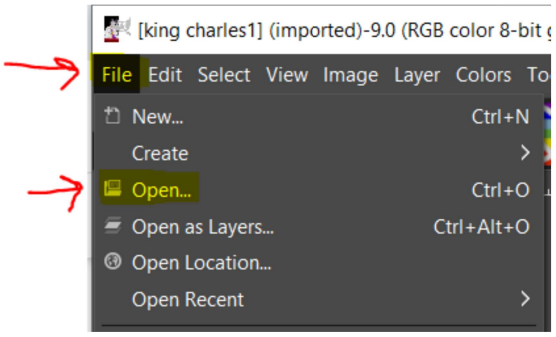
- Use the erase.bp web page listed above to remove the background.
- Save the new image to the project folder created above. Give it a different name that reflects that the background has been removed.

5. Now it's time to manipulate the file in GIMP.

- Open GIMP software
- From the top menu choose: File/Open and then navigate to the project folder and choose the desired image.
- If you are not seeing the entire image on the screen in Gimp, from the top menu choose: View/Zoom/Fit Image to Window
- If the image displayed is too small to work well with, from the top menu choose: View/Zoom/Zoom In

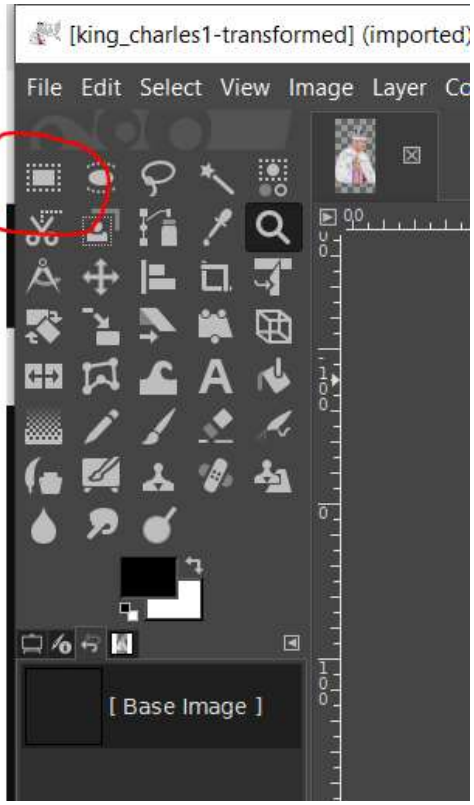
Top Menu:





Crop image:

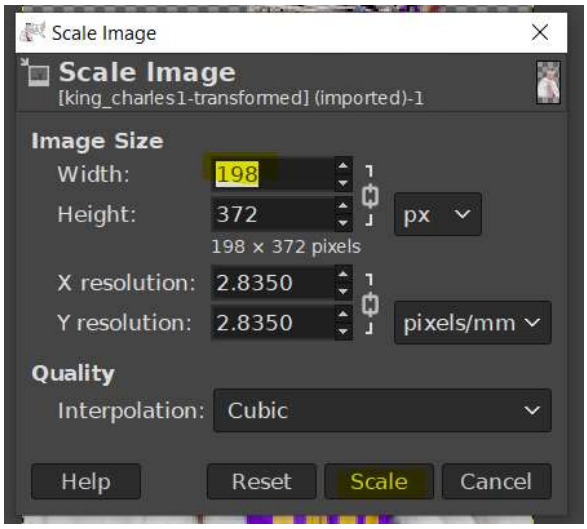
- Click on the rectangular selection box circled in red here →
- Draw a box around the portion of the image you want to knit. A selection box is drawn by holding the left mouse button down and dragging the mouse over the area to select (same as in DAK)
- Once you have the selection box drawn correctly, from the top menu choose: Image/Crop to Selection



Scale image (reduce pixels/stitches):

- From the top menu choose: Image/Scale image
- Under Image Size, I chose 198 for width. The height will be adjusted automatically so long as you don't change the setting circled in red.

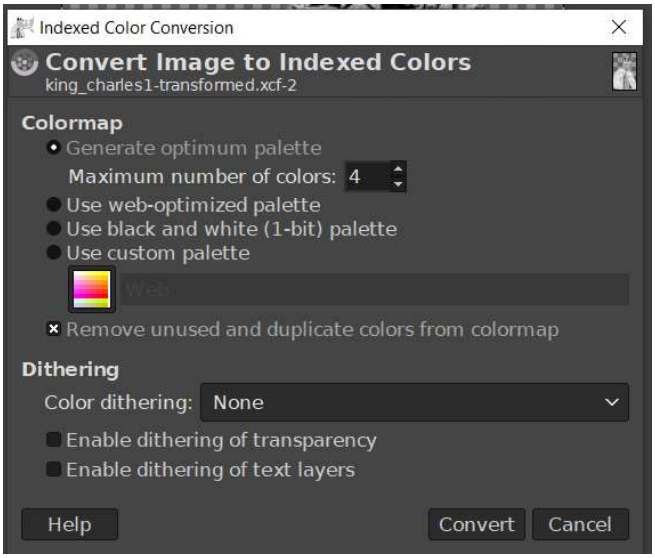
  * Remember, 1 pixel equals 1 stitch when we get over to DAK.
- Sometimes it is better to crop a slightly larger area of the image than you think you will need. Rows and columns can always be removed in the DAK Stitch Designer module.
- Click on the Scale button



** If then final knit is going to be more than 2 colors; skip this section and proceed to # Reduce Colors (more than two colors).

Reduce Colors (Two color knit):

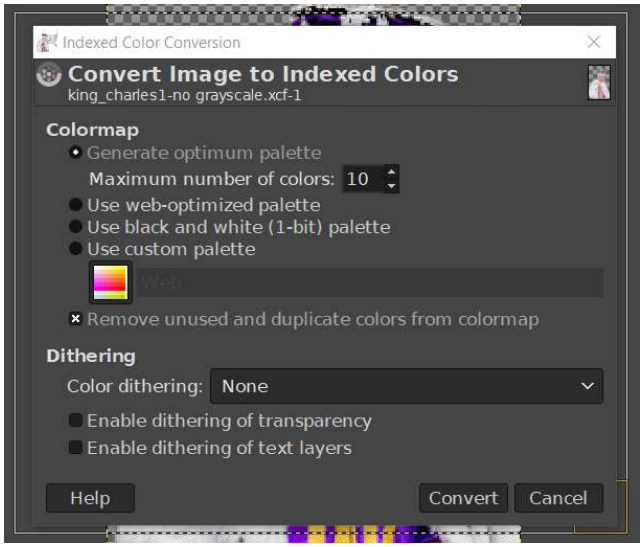
- From the top menu choose: Image/ mode/ gray scale
- Then choose: Image / mode / indexed – set to 4 colors (even though this is going to end up a two color knit, more colors are selected here so that DAK will have more detail to work with during it's conversion process)
- Select Convert



** If then final knit is going to be just two colors; skip this section and proceed to saving your work.

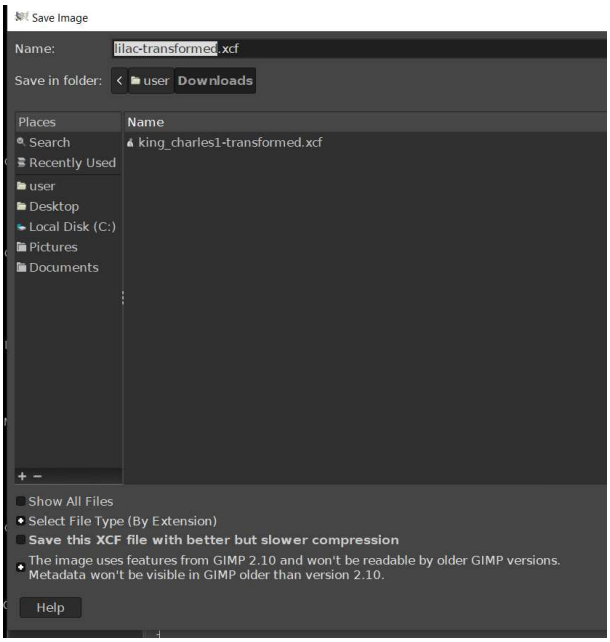
Reduce Colors (more than two colors):

- From the top menu choose: Image/ mode/ indexed. Choose a number that is up to twice as many colors as will be knit. This will allow DAK to have more information to work with during it's image conversion process.
- In this example I will be creating a 5 color jacquard stitch file so I chose 10 colors here.
- Select Convert

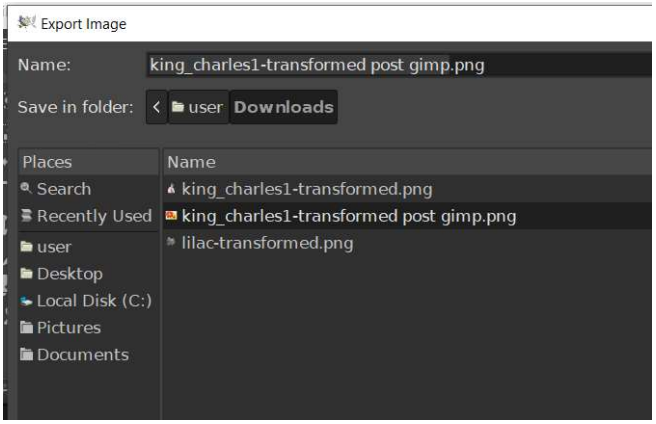


Save your work in GIMP:

- From the top menu choose: File / Save. Change the directory to the project folder. Do not change the file extension.
- This is saving the Gimp working file so that you can return to the place you left off in later on.

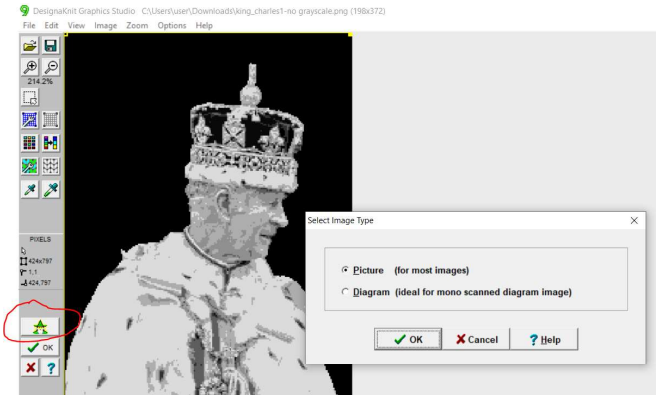


- From the top menu choose: File / Export As
- Change the directory to the project folder.
- Give the image file a name representative of the stage in the process you are.
- This is the file we will be using in DAK.

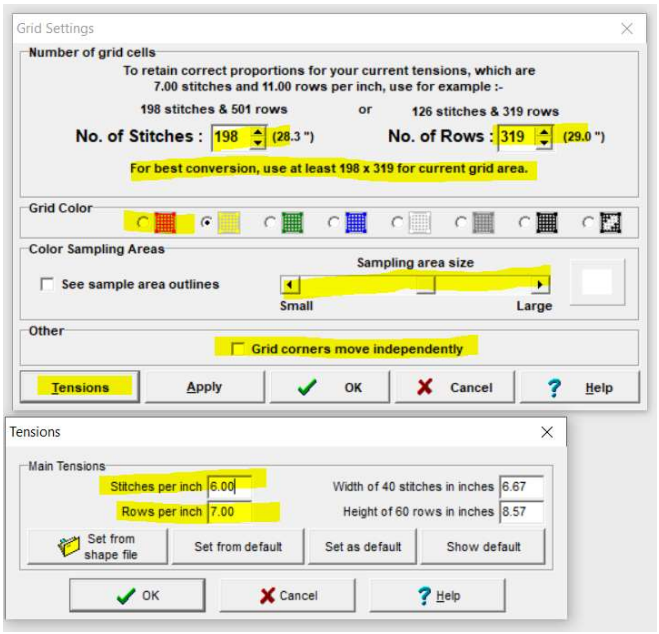


Designaknit Process:

- Open Dak and then the Graphic Studio module.
- Choose File / Open and find the file you exported from Gimp.
- Click on the green Wizard (the process can be done without using the Wizard but I find it easier to use it).
- Choose Picture and press OK.



- On the Grid Settings Screen do the following:
  - Click on the Tensions button and change the tensions to the tensions of your final project and click on the OK button.
  - Set the number of stitches and number of rows to the Gimp Scaled numbers (this will show on DAK – see highlighted areas ---→)
  - Choose your grid color
  - Move Sampling Area Size bar to roughly the middle
  - Hit the Apply Button and then the OK button



** If then final knit is going to be more than 2 colors; there are tips at the end of this document. The basic process is the same though.

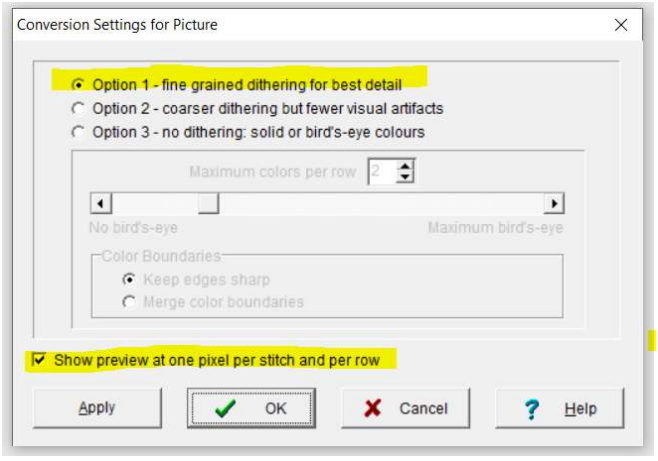
Conversion Settings for Picture:

- "Option 1 – fine grain dithering for best detail" generally works best for me when doing a two color conversion.

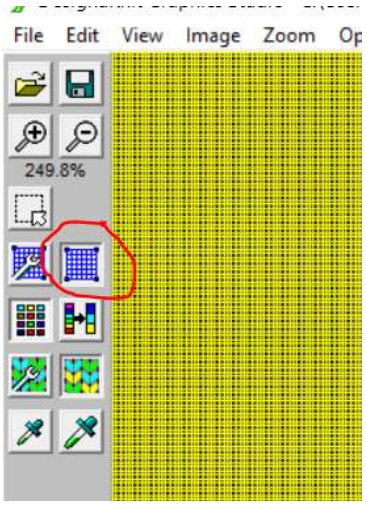
- Check the "Show preview" box to display what your knit will look like.

- Click on the Apply button.

- If you are not happy with the result, try one of the other options. When you are happy, click the OK button.



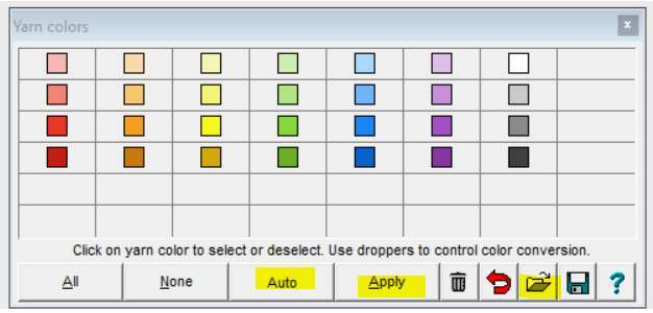
I often turn off the grid at this stage:

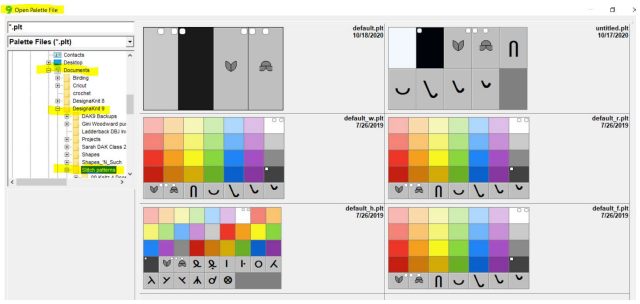


Yarn colors settings:

- If your yarn colors screen does not display a palette with a wide variety of colors such as this one, do the following:
  - Click on the file folder button in the lower right side of the screen.
  - Navigate in file explorer to your DAK9 stitches folder to find the default palettes that came with DAK. Click on one with lots of colors.

  Your install and file structure may be different than mine. The Stitch Designer module manual has all the information you need to create a palette if you are missing these default palette files.





- Now choose the colors you want to use for your final project. (They don't have to match the yarn colors exactly just find something close.)
  - Either click on the color box you want and it will change to a larger box
  - Or click on the Auto button and let DAK do the work.
  - Or use the droppers from the left menu to choose specific colors from the photo.

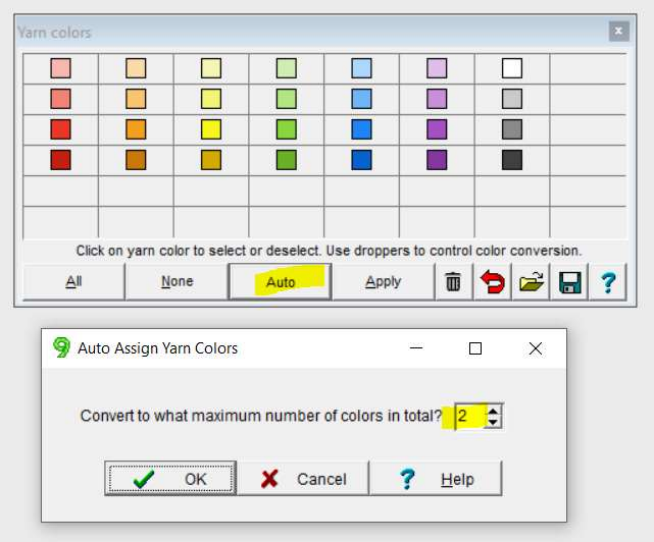
- I generally choose Auto and allow DAK to pick the colors.

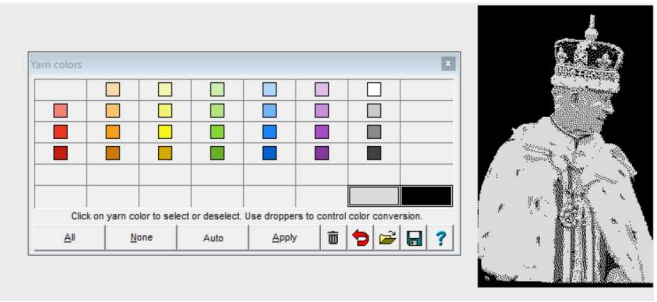
- Enter the number of yarns/colors you will use when you knit the project. In this example 2.

- In this example, DAK added two new gray/black colors to my palette. The preview screen looks good!

- You can change the colors that DAK chose by Clicking or unclicking color boxes (and hit the Apply button) until you get a version you like.

- If I wanted to knit this in red and yellow, I would select my colors as shown →





- Once you are happy with the conversion, click on the OK button in the left menu, under the green Wizard.

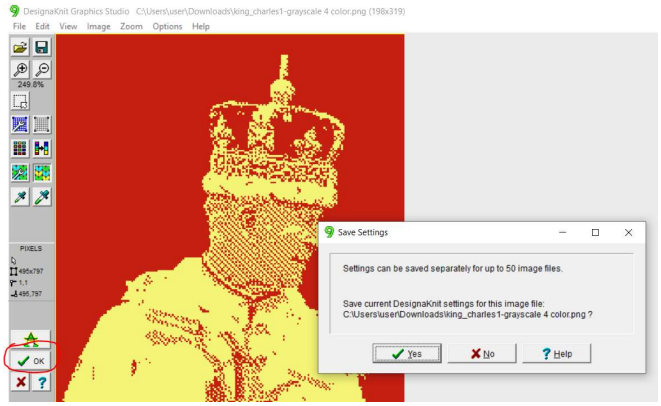
- You are given the choice to save the Conversion Settings used for this image. Saving these setting in your image file will allow you to continue making changes where you left off. Give the the file a new name so you don't lo0se your original

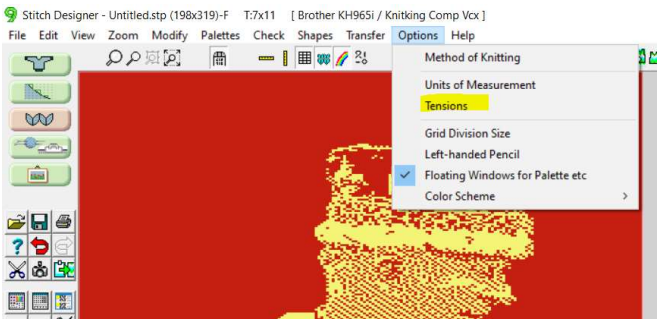
- DAK will now open your converted image as a Stitch file in the Stich Designer module. It will ask you to choose the method of knitting. For 2 colors choose either fair isle or 2 color jacquard.

- Name and Save your stitch file before going any further.

- The proper tensions where not saved (DAK does not save tensions in stitch files, only shape files.) So to see the image with the proper proportions, change the tensions under the Options / Tensions setting.

- If there are portions of the stitch file that you do not like, use the Stitch Designer tools to make tweaks.

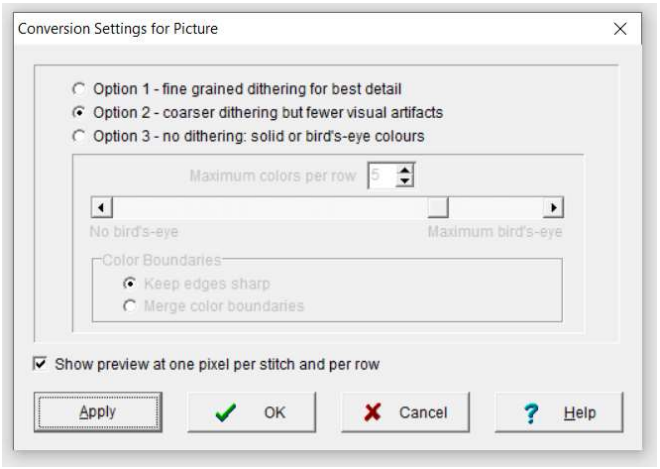




Tips for Converting images to more than 2 colors.

Follow the directions for 2 color except for the following:

- Opening a Palette with lots of colors is even more important.
- On the Conversions Setting for Picture screen, I have better success using option 2 or option 3
- Option 3 will often produce a better conversion and you can set your maximum colors per row to the number of colors you will be knitting with. In this example I used 5.
- Option 3 will often result in more cleanup work needed in the Stitch Designer module.
- Each image converted will be different so plan to spend considerable time on this screen to get the best results for your image!|
- Once in Stitch Designer, check for jacquard errors. I generally let DAK fix these automatically.



Here is an example of a 5 color jacquard sweater I knit. The image was taken from a clipart file of a Boxer dogs face. I used the process outlined here to convert it to a DAK stitch file and integrate it with my basic sweater shape. I wore the sweater while visiting a friend with a boxer puppy and my Husband took this photo. :) I learned a ton making this sweater and the most important was planning ahead! I ended up doing the conversions many times over and still didn't get exactly what I wanted. But there is always the next sweater!!!