**Inverting masked colour negative films:**

In Flexcolor:

- Use RGB Standard mode - AKA scan the negative in un-inverted form
- Scan in 16-bit, the normal Adobe RGB profile is usually OK - change if you prefer.
- Set USM to -120 as usual
- Set master Histogram black point to 0 and white point to 255
- Use cursor to check RGB values inside neg area. If R goes sailing over 200 or B goes way under 50, use the curves to open the darker values (which will become highlights after inversion). This is usually only needed on fairly overexposed negatives or ones with extremes of scale.
- Select image area to be scanned - you must make sure there is some negative rebate included. For 4x5, you will need to shift the negative slightly & make a scan specifically covering the rebate - it only needs to be a small section of the negative.
- Make the scan. Once you have these settings they should remain fairly consistent for other images on the same roll & indeed for other rolls of the same film shot & processed under similar conditions.

In Photoshop:

- Open image (and rebate piece if using 4x5)
- Take sample of rebate colour using the eyedropper
- Make a new layer, fill with the sampled colour, set blending mode to Divide (which removes the mask properly)
- Add Inversion layer
- Add Curve layer & put the clipping warnings on.
- On the curve layer, go into the individual R,G,B curves & clip the R,G,B black points individually until the rebate clips reasonably cleanly, or, if at this point there is no clipping in the image area, continue until the clipping warnings show the first hint of black in the image area. The black points must be set before the white points
- Next, clip the R,G,B white points individually until just before the first hint of clipping in the image area - watch out for dust and specular highlights. You may also find with some films (Ektar) if overexposed, the blue channel clips earlier than it should. You'll usually need to colour correct later & make a judgement call about how much you clip/ don't clip. This really is best done by eye if it becomes an issue.
- There are other routes to the above two bullet points, I'll summarise these alternatives later on.
- Next, make a curve layer set to Colour blend mode.
- Then make another curve layer
- Use the individual R,G,B curves in the colour blended curve layer to do the colour corrections needed to make the image look 'right' - for example Portra 400 needs a little

warmth added in the blue/ yellow direction as it's designed with a slight warm bias & the previous corrections had attempted to neutralise this, so we need to correct it back until it looks 'right'. This isn't difficult if you know your colour corrections - and if you got your BP & WP set correctly. If you can't correct the colour at this stage, it's usually because the BP & WP aren't set correctly, so you'll need to go back & sort them.

- Use the final curve layer to set any major tonal adjustments you wish to make, then proceed to the usual masked curves etc to dodge & burn & local colour alterations.

Alternatives:

- If the film is reasonably well exposed, processed etc & unlikely to have severely crossed curves, you can try the following which is based on the colour neg films being designed to have matching gamma across the emulsions:
- On the first curve layer, with the clipping warnings on & on the main RGB curve, bring in the black point in until the rebate clips, then do the same with the white point, looking for just before the first clipping point in the image.
- You then do the fine colour correction & tonal adjustment layers as outlined above.

**Black and White:**

- Much the same set of techniques as for colour apply both in Flexcolor & Photoshop, except that I scan in 16-bit Grayscale & make one alteration of procedure in Photoshop.
- The photoshop operation is much as for colour, but after adding the Inversion layer, I flatten the file & convert the profile from Grayscale to sRGB, before carrying on with the curves etc - I find it makes the curves less of a headache if they don't operate back to front. Obviously no need to deal with the individual R,G,B curves for B&W, just the master RGB.