Good evening

Analogue looking B/W digital prints

Aspects to be discussed

Paper

Printer set-up

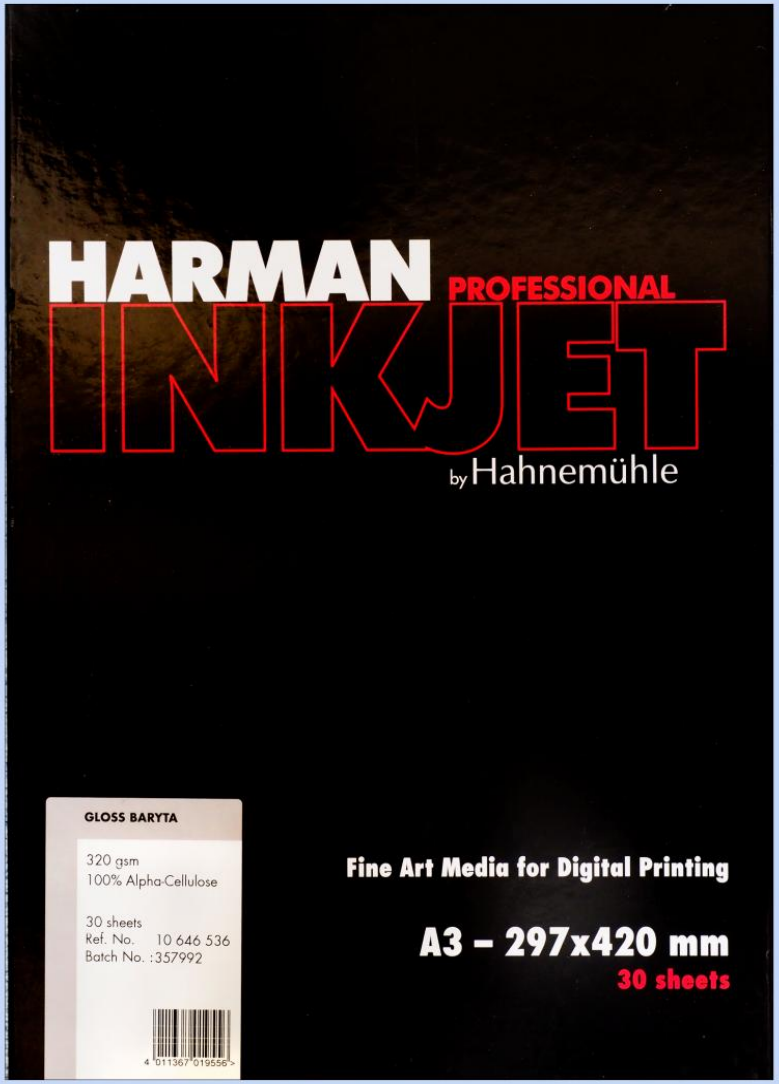
Sharpening is it necessary ?

Post capture processing for B/W

Camera work

Language and Sins in B/W

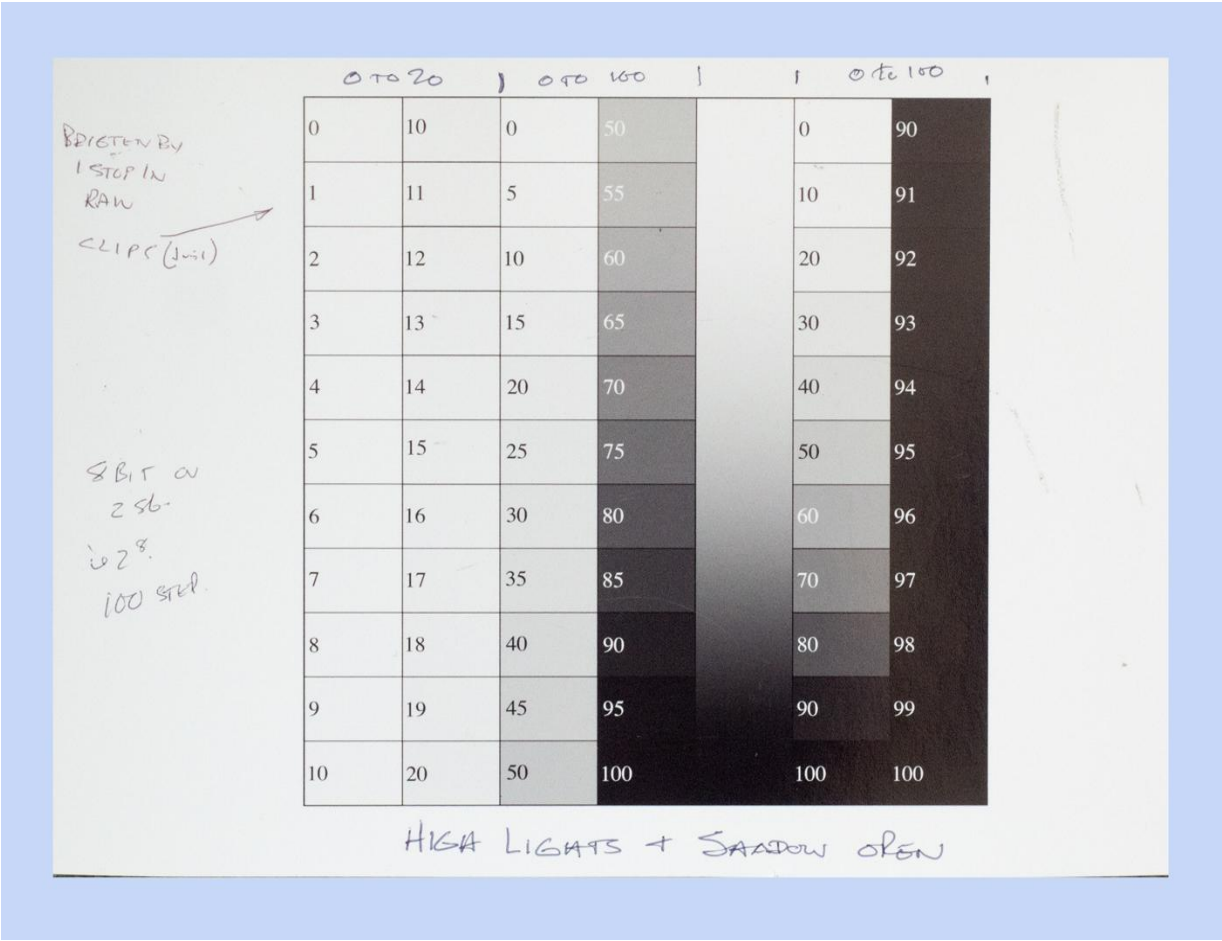
Selected paper for B/W trials



Selected Baryta paper grey scale

PROBLEM

No paper base high light showed. In Fact a grey platform of 0.8 stop was printed. Shadows were OK



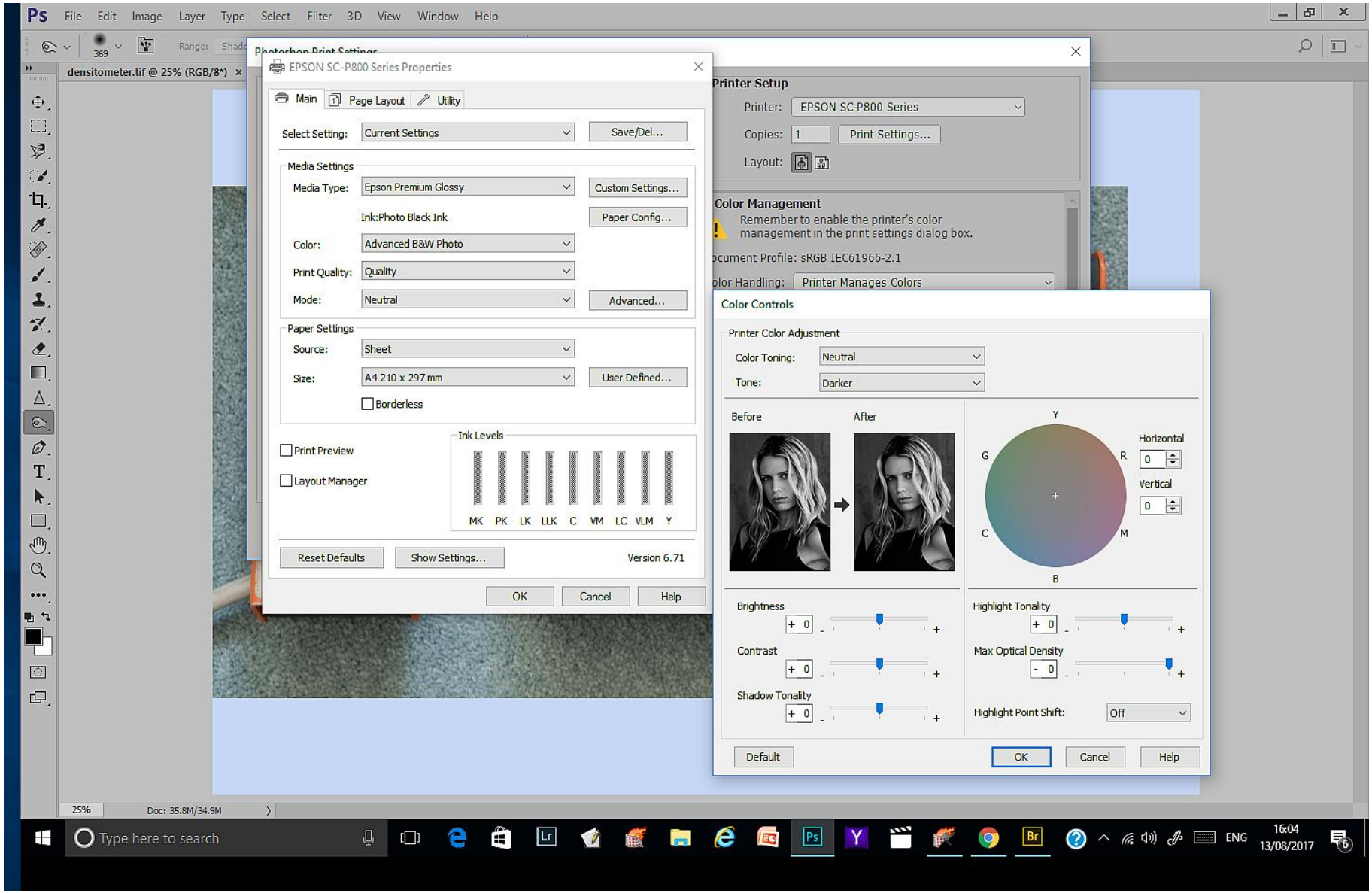
0	10	0	50	0	90
1	11	5	55	10	91
2	12	10	60	20	92
3	13	15	65	30	93
4	14	20	70	40	94
5	15	25	75	50	95
6	16	30	80	60	96
7	17	35	85	70	97
8	18	40	90	80	98
9	19	45	95	90	99
10	20	50	100	100	100

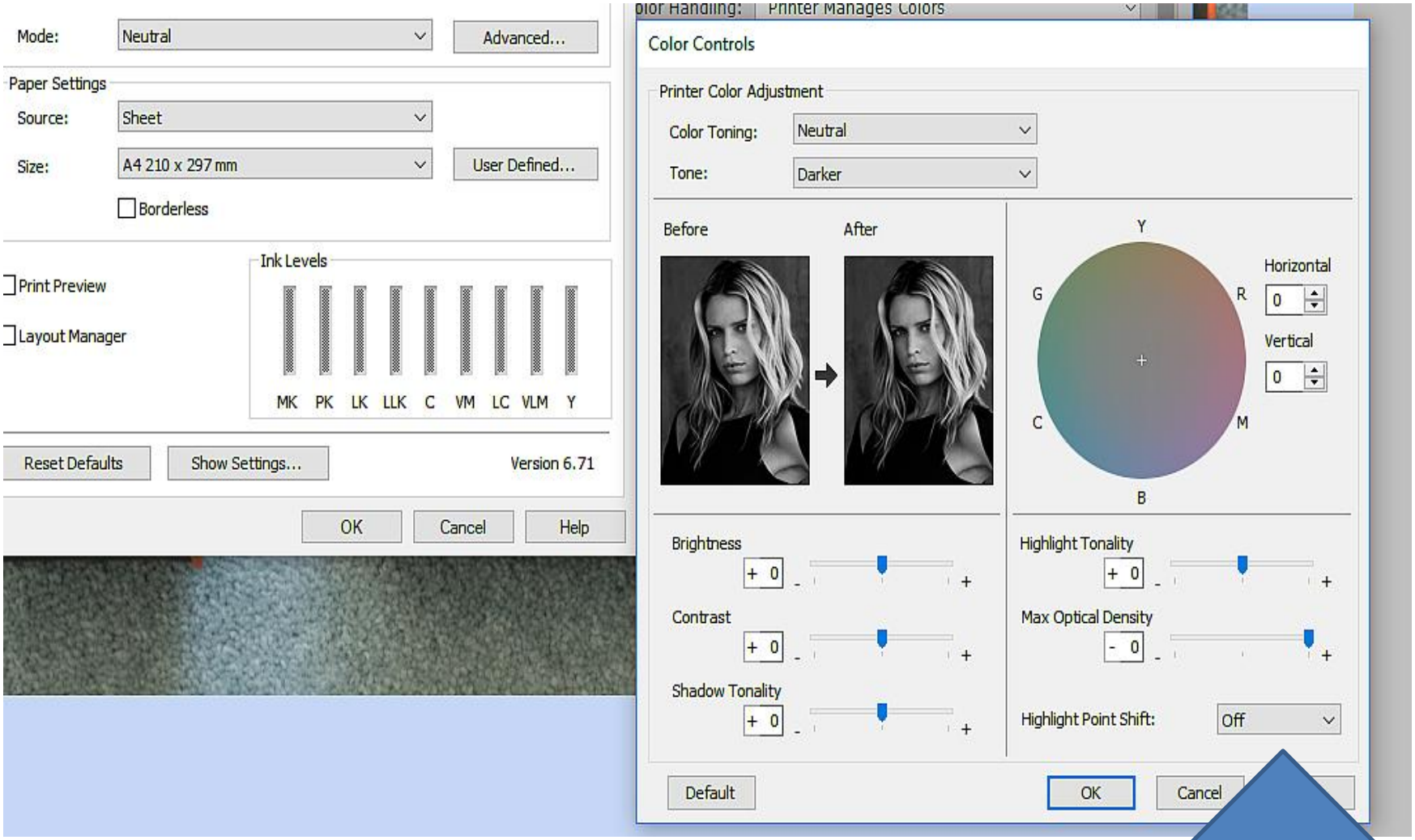
This was printed several times in colour and Advanced B/W. A high light problem occurred

EPSON

- Were consulted and advised that the platform 6% grey was by default and could not be switched off in the colour Mode.
- In the Advanced B/W is on by default but could be switched off. This is shown in the next slide.
- Epson were asked what the printer “native” resolution was. IT is 360 pixels/inch

Photoshop set up for B/W





Do Not Adjust any other settings In Color Controls

OFF

Printer native resolution

- My Epson printer's native is 360 pixels/inch.
- Subdivisions of 120,240 can be used also 480
- I use the 360 pixels/inch, as the size of each pixel is 2.7 thousands of an inch. Less than the diameter of a human hair. The limit of human vision is 4 thousands of an inch. Pixels on a print at normal viewing cannot be seen.
- This leads to the question, what are we sharpening ? And why sharpen?. This will be dealt with later as a full subject.

INKJET NOZZLES

- THE printer can be programmed for several levels of quality. I use level 5, 2880 by 1440 dots/inch. Dividing dots/inch by resolution pixels/inch, we get dots/pixel.
- On the horizontal pixels; this gives 8 dots
- On the vertical pixels 4 dots
- 32 dots in each pixel.
- These are very tiny and easily damaged by dirt Print head cleaning is necessary for quality

Marrutt; clean print head

Sites for further vidios

- Marrutt web site has further cleaning vidios
- Utube; type in MAJIC BULLET and search for your printer type
- MAJIC BULLET is available from several paper suppliers. I use AMAZON.

Picture Sharpening Why and How

- Many cameras had a low pass filter fitted to reduce the Moiré banding problem. This was essential in the past with low Mb sensors and was corrected during post processing with unsharp masking.
- A better solution post capture ,is to use a High pass filter this sharpens only the high contrast edges effected by the low pass filter avoiding low contrast areas ie skies and " grain”. Halos and artefacts are rare
- With many modern cameras with large Mb sensors overall image sharpening is best avoided for quality, saving it for special effects

Today's cameras

- Medium format cameras and many 4/3 cameras do not have a low pass filter. Moiré is not a problem with higher count pixel sensors.
- Most unsharp images are caused by the wriggling mass of vibration caused by camera automation. These are not a problem with small reproduction low quality sizes but are with exhibition quality and need be avoided.

Camera functions cause vibration

- Apertures close automatically Almost nil
- Autofocus operates Minor
- Image stabilisation starts (Jitter) Major on Tripod
- Mirror goes up (mirror slap) Major
- Shutter first curtain (shutter bounce) Significant
- Shutter second curtain goes up. Nil

Cameras things to try

- To make best possible image.
- Make an open flash; off camera image in the dark with “all functions “ switched off. On a solid tripod and a remote shutter release
- Try 20/30 second shutter opening wait for 15 seconds for all to settle down, fire flash.
- This will be the bench mark to aim at for all future photography,

Practical quality camera work

- This will depend entirely on the restriction imposed on to you by where are working.
- Use mirror lockup.
- If the mirror has to be used To minimise mirror slap, avoid shutter speeds between 1/10 to 1/100 second. IS does not work above 10hz and mirror slap is a much higher frequency.
- Avoid using IS on a tripod as the IS is still trying to physically move the optics. (ghosting)

Camera quality work

- When working camera hand held. Turn IS on to the appropriate setting, modern systems work superbly with hand movement.
- Try increasing the weight of the camera, attach a tripod.

THIS THE END OF EQUPMENT TOOLS

NOW

IMAGE PROCESSING

Language and Sins in B/W

- B/W works by replacing colour with contrast and tone. It is abstract and strong to tell the story
- In landscapes use Aerial perspective.
- In most cases Black advances forward white recedes
- Avoid weak corners, edges and highlights on edges
- Foregrounds are enhanced by soft clouds and backgrounds.
- Use strong elements, golden mean, thirds, leading lines to tell the story
- Ensure that lighting is strong and directional