



## Designing your own correction curve

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255 0	249 2	244 4	239 6	234 8	229 10
224 12	219 14	214 16	209 18	204 20	198 22
193 24	188 26	183 28	178 30	173 32	168 34
163 36	158 38	153 40	147 42	142 44	137 46
132 48	127 50	122 52			
117 54	112 56	107 58	102 60	96 62	91 64
86 66	81 68	76 70	71 72	66 74	61 76
56 78	51 80	45 82	40 84	35 86	30 88
25 90	20 92	15 94	10 96	5 98	0 100

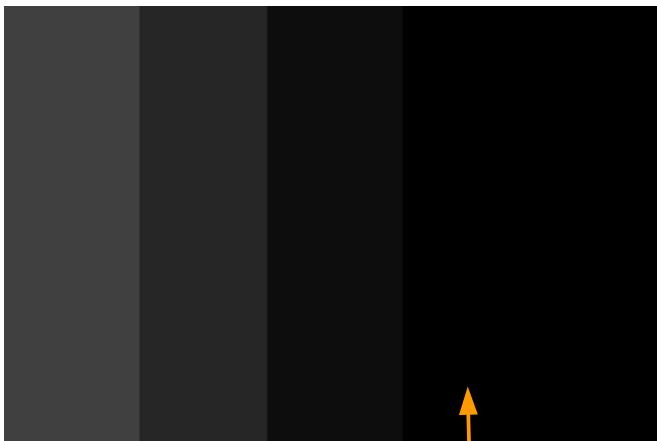
Figure 1 shows our starting point: a 51-level step wedge, ranging from level 255 (white) to 0 (black).

This wedge is printed on the transparency material that will be used in the following steps of the process.

First we need to determine the exposure time for the darkest parts.

This is done by exposing in successive steps a sheet of paper, prepared for the process to be used – Van Dyke Brown for example (Fig. 2).

**Fig.1:** 051\_Step\_Gamma2,2\_Positive.jpg



**Fig. 2:** Getting the correct exposure time

The correct exposure time is the one corresponding to the step where there is no longer a difference in tone with the next longer exposure.

This time is used to print the step wedge (Fig. 1) on a new sheet of paper prepared for the technique to be used, e.g. with Van Dyke Brown emulsion.

It is this print run that will be evaluated to decide to what extent a correction is necessary.

Let's take the following example.  
 If the print results in the following image (Fig. 3), a correction is necessary.  
 This will be done with the help of an image editing software:

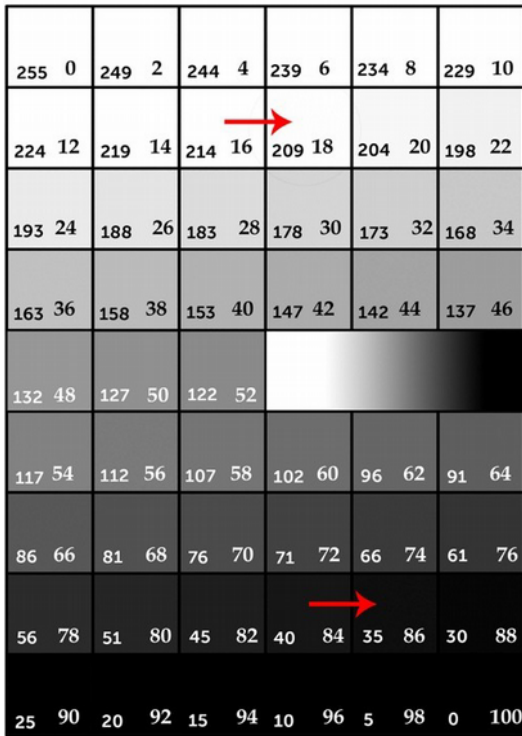


Fig. 3: result from the first printing

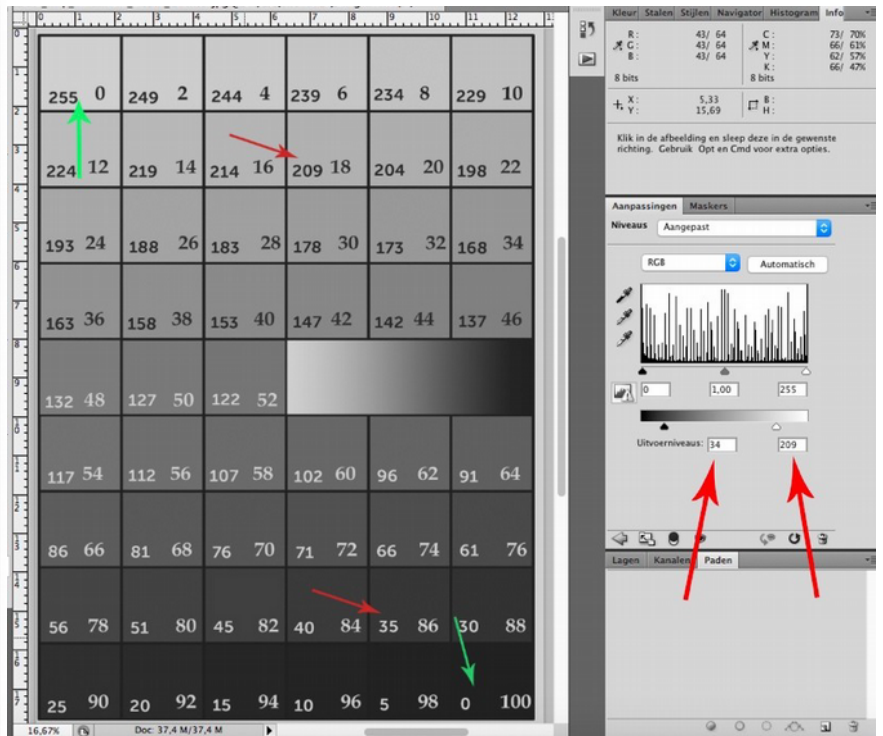


Fig. 4: correction of the step wedge

In our test, pure whites appear at step 209, the first grey value at step 204 (Fig. 3).

The pure blacks in our test appear at step 35, between 35 and 40 there is no difference (Fig. 3).

The correction is made with the help of an image editing software: with the "levels" tool, we bring all channels (whites and blacks) back to their correct position (Fig. 4).

To do this, we set the black output level to 35 and the white to 209 (Fig. 4).

Once we have adjusted accordingly the step wedge values with our software, in this case 35 for black and 209 for white, we print this new step wedge on a transparency. Next, we expose this transparency on a sheet of paper prepared with Van Dyke Brown emulsion, using the exposure time we determined at the beginning.

If all went well, step 255 should now be white and 249 should show a first level of grey. Step 100 there should show a full black and step 98 a first lighter shade.

**If this is not the case, a new appropriate correction must be applied.**

If these values are correct, they can be applied to the transparency with the negative. For verification purposes, a grey scale can be included next to the image, which can be examined after printing.

**Note :** if any one item changes – paper, transparency, emulsion, ink cartridge, printer – the test must be repeated from the beginning.