Panel 1 (top left):
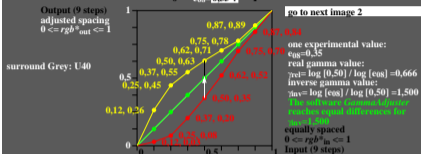
9 step series, sample and surround mean grey U40 is too dark, evaluate scaling of U40 e08<0,50.

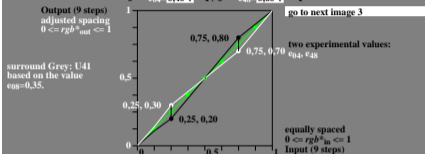evaluate the scaling for the presented Grey U40 between White W and Black N

The gamma value γ_{DV}=1,500 of the software GammaAdjuster reaches equal differences and corresponds to e08=0,35.

Output (9 steps) adjusted spacing $0 <= rgb^*_{out} <= 1$

go to next image 2

0,87, 0,89
0,62, 0,71
0,50, 0,63
0,37, 0,55
0,25, 0,45
0,12, 0,26

0,77, 0,80

0,62, 0,71

0,50, 0,50

one experimental value: e08=0,35
real gamma value:
γ_{rel}= log |0,50| / log |e08| =0,666
inverse gamma value:
γ_{av}= log |e08| / log |0,50| =1,500
The software GammaAdjuster reaches equal differences for γ_{av}=1,500

surround Grey: U40

0,37, 0,20

0,25, 0,10

0,12, 0,05

equally spaced $0 <= rgb^*_{in} <= 1$
Input (9 steps)

e08=0,35 ?

ieb20−5a, image 1, evaluate (e) visual scaling between Black N – White W, γ_{rel}=0,67

Panel 2 (top right):

9 step series, sample and surround mean Grey is U41, all samples are lighter based on e08=0,35.

evaluate the scaling for two of 5 steps

Output (9 steps) adjusted spacing $0 <= rgb^*_{out} <= 1$

e04=0,40 ? 1 / 0 e48=0,60 ?

go to next image 3

0,75, 0,80
0,75, 0,70

two experimental values: e04, e48

surround Grey: U41 based on the value e08=0,35.

0,25, 0,30
0,25, 0,20

equally spaced $0 <= rgb^*_{in} <= 1$
Input (9 steps)

ieb20−6a, image 2, evaluate (e) visual scaling between two of five steps, γ_{rel}=0,67

Panel 3 (bottom left):

9 step series, sample and surround mean Grey is U41, all samples are lighter based on e08=0,35.
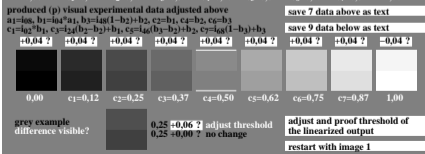
evaluate the scaling for four of 9 steps

0,02=0,55 ? 1 / 0 e24=0,50 ? 1 / 0 e46=0,50 ? 1 / 0 e68=0,50 ?

Output (9 steps) adjusted spacing $0 <= rgb^*_{out} <= 1$

go to next image 4

0,87, 0,90
0,75, 0,80
0,87, 0,85
0,75, 0,70
0,62, 0,65
0,62, 0,60

four experimental values: e02, e24, e46, e68

surround Grey: U41 based on the value e08=0,35.

save 7 data above as text

0,37, 0,40
0,37, 0,35
0,25, 0,30
0,25, 0,20
0,12, 0,34
0,12, 0,11

equally spaced $0 <= rgb^*_{in} <= 1$
Input (9 steps)
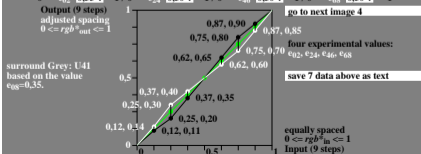
ieb20−7a, image 3, evaluate (e) visual scaling between four of nine steps, γ_{rel}=0,67

Panel 4 (bottom right):

9 step series, sample and surround mean Grey is U41, all samples are lighter based on e08=0,35.

9 step series based on all visual adjustments used for output linearization

produced (p) visual experimental data adjusted above
$a_1=e_{08}$, $b_1=a_0*a_1$, $b_1=i_{08}(1-b_2)-b_2$, $c_2=b_1$, $c_2=b_3$, $c_4=b_3$
$c_1=a_0*b_1$, $c_3=i_{24}(b_2-b_3)+b_3$, $c_5=i_{46}(b_3-b_2)+b_2$, $c_7=i_{68}(1-b_1)+b_3$

0,00 c1=0,12 c2=0,25 c3=0,37 c4=0,50 c5=0,62 c6=0,75 c7=0,87 1,00

save 7 data above as text

save 9 data below as text

+0,04 ? +0,04 ? +0,04 ? +0,04 ? +0,04 ? +0,04 ? +0,04 ? +0,04 ? −0,04 ?

0,00 c1=0,12 c2=0,25 c3=0,37 c4=0,50 c5=0,62 c6=0,75 c7=0,87 1,00

grey example difference visible?

0,25 +0,06 ? adjust threshold
0,25 +0,00 ? no change

adjust and proof threshold of the linearized output

restart with image 1

ieb20−8a, image 4, evaluate (e) visual threshold (+0,04?) of 9 steps; all equal?, γ_{rel}=0,67

ieb20−7n