

see similar files of the whole series: <http://farbe.li.tu-berlin.de/ges.htm>  
 technical information: <http://farbe.li.tu-berlin.de/> or <http://color.li.tu-berlin.de/>

TUB registration: 20240701-ges9/ges9l0n1.txt / ps  
 application for evaluation and measurement of display or print output  
 TUB material: code=thadta

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*****
%%BEG Frame File Linearization Method FF_LM, real (re) hex (h) and decimal (d)
% 0 moveto
% 0 setgray
% -6000 0 rlineto 0 4000 rlineto %relative square
% -6000 0 rlineto closepath stroke %60mm x 40 mm
% http://color.li.tu-berlin.de/ges/ges8l-3n.txt
% http://color.li.tu-berlin.de/ges/ges8l-3n.pdf
/xd 050 def /yjd 138 def %x-position and line difference
/TL 0 setgray %font, size and black color
/add 3820 moveto %top position and table text
(Table xyreh_256 in hex (h:0:255) between xrehj and yrehj, j=0 to 255) show % Main Table text

/xrehj 257 array def /yrehj 257 array def %real data hex (h)
/xredj 257 array def /yredj 257 array def %real data decimal (d)
/xinhj 257 array def /yinhj 257 array def %inverses data hex (h)
/xindj 257 array def /yindj 257 array def %inverses data decimal (d)

/gamma 2,000 def %possible gamma changes: 1.0 -> 2.0, 0.5, 1.5, 0.667
%calculation of the table xyreh256 (h=h*x) of 256 values with gamma
0 1 255 { /j each def /j=0,255
  xrehj } put %BEG h:0:255
  xredj } put %decimal (d:0:1,000)
  yrehj } yredj } get %255 mul cvi put %END h:0:255
  /j=0,255

TW /yvl ywv 3650 def %add ywv moveto
%font, size, position
%Table xyreh_256, basis real data in hex (h, 0:255) between x and y, 1 show
% 0 0 setrgbcolor (gamma-) show gamma cvtswahowj 0 setgray %gamma value in red
Subtable text

TW /yvl ywv 1.1 ydd mul sub def %font, size, position
% 0 1 255 { /j each def /j=0,255
  /j 10 /i idiv def
  /jd j 10 mul sub def
  /xjd j 600 mul add /yvl j ydd mul sub moveto
  xrehj } get cvtswahowj } show /yrehj } get cvtswahowj } output
  /j=0,255
}

%%END Frame File Linearization Method FF_LM, real (re) hex (h) and decimal (d)
*****
ges9l-3a
    
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*****
Table xyreh_256 in hex (h:0:255) between xrehj and yrehj, j=0 to 255
Table xyreh_256, basic real data in hex (h, 0:255) between x and y, gamma=2,000
0 0 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 0
10 0 11 0 12 0 13 0 14 0 15 0 16 1 17 1 18 1 19 1
20 1 21 1 22 1 23 2 24 2 25 2 26 2 27 2 28 3 29 3
30 3 31 3 32 4 33 4 34 4 35 4 36 5 37 5 38 5 39 5
40 6 41 6 42 6 43 7 44 7 45 7 46 8 47 8 48 9 49 9
50 9 51 10 52 10 53 11 54 11 55 11 56 12 57 12 58 13 59 13
60 14 61 14 62 15 63 15 64 16 65 16 66 17 67 17 68 18 69 18
70 19 71 19 72 20 73 20 74 21 75 22 76 22 77 23 78 23 79 24
80 25 81 25 82 26 83 27 84 27 85 28 86 29 87 29 88 30 89 31
90 31 91 32 92 33 93 33 94 34 95 35 96 36 97 36 98 37 99 38
100 39 101 40 102 40 103 41 104 42 105 43 106 44 105 44 106 45 107 44 108 45 109 46
110 47 111 48 112 49 113 50 114 50 115 51 116 52 117 53 118 54 119 55
120 56 121 57 122 58 123 59 124 60 125 61 126 62 127 63 128 64 129 65
130 66 131 67 132 68 133 69 134 70 135 71 136 72 137 73 138 74 139 75
140 76 141 77 142 79 143 80 144 81 145 82 146 83 147 84 148 85 149 87
150 88 151 89 152 90 153 91 154 93 155 94 156 95 157 96 158 97 159 99
160 100 161 101 162 102 163 104 164 105 165 106 166 108 167 109 168 110 169 112
170 113 171 114 172 116 173 117 174 118 175 120 176 121 177 122 178 124 179 125
180 127 181 128 182 129 183 131 184 132 185 134 186 135 187 137 188 139 180 140
190 141 191 143 192 144 193 146 194 147 195 149 196 150 197 152 198 153 199 155
200 156 201 158 202 160 203 161 204 163 205 164 206 166 207 168 209 169 209 171
210 172 211 174 212 176 213 177 214 179 215 181 216 182 217 184 218 186 219 188
220 189 221 191 222 193 223 195 224 196 225 198 226 200 222 202 228 203 229 205
230 207 231 209 232 211 233 212 234 214 235 216 236 218 232 220 238 222 239 225
240 225 241 227 242 229 243 231 244 233 245 235 246 237 243 249 241 249 243
250 245 251 247 252 249 253 251 254 253 255 255
For gamma=2 and j=0 to 255: xrehj->yinhj-j, yrehj->xinhj, xrehj->xredj/255
ges9l-3b
    
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*****
%%BEG Frame File Linearization Method FF_LM, real (re) inverse (in), hex (h), decimal (d)
/xd 050 def /yjd 133 def %x-position and line difference
/TL 0 setgray %font, size and black color
/add 3820 moveto %top position and table text
(Table xyinh_256 produced by FF_LM_xchart_gamma from xyreh_256) show % Main Table text

/xrehj 257 array def /yrehj 257 array def %real data hex (h)
/xredj 257 array def /yredj 257 array def %real data decimal (d)
/xinhj 257 array def /yinhj 257 array def %inverses (in) data hex (h)
/xindj 257 array def /yindj 257 array def %inverses (in) data decimal (d)
TW /yvl ywv 3650 def %add ywv moveto
%font, size, position
Sub Table text

%Table xyinh_256, inverses data in hex (h, 0:255) for xyreh_256 (h, 0:255), ) show,
% 0 0 setrgbcolor (gamma-) show gamma cvtswahowj 0 setgray

%procedure for transfer xrehj, yrehj -> xinhj, yinhj
%use of the table data xyreh256 (h=h*x) of real values (reh) with gamma
%%FF_LM_xchart_gamma (BEG/FF_LM_xchart_gamma 240715
  /yreh each def /h= yreh <=255
  xinhj } yrehj yreh get put %inverses data yrehj->xinhj
  /xrehj } xrehj yreh get put %inverses data xrehj->yinhj
  /yinhj } get %output of yinhj
  /d def %END FF_LM_xchart_gamma 240715
)

%Application of FF_LM_xchart_gamma and output
TW /yvl ywv 1.1 ydd mul sub def
% 0 1 255 { /j each def /j=0,255
  xrehj } get %FF_LM_xchart_gamma
  available now xinhj, yinhj
  xinhj } xinhj } get %255 div put
  /j 10 /i idiv def /jd j 10 mul sub def
  /xjd j 600 mul add /yvl j ydd mul sub moveto
  xinhj } get cvtswahowj } show /yrehj } get cvtswahowj } show
}

For add 050 moveto
[For gamma=2 and j=0,255: xinhj->yrehj, yinhj->xrehj=1-), 1 show
[similar for decimal values xindj->yredj, yindj->xredj/255) show
%%END Frame File Linearization Method FF_LM, real (re) hex (h) and decimal (d)
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ges9l-3c
    
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*****
Table xyinh_256 produced by FF_LM_xchart_gamma and xyreh_256
Table xyinh_256, inverses data in hex (h, 0:255) for xyreh_256 (h, 0:255), gamma=2,000
0 0 0 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 0
1 0 0 11 0 12 0 13 0 14 0 15 0 16 1 17 1 18 1 19 1
2 10 121 1 22 1 23 2 24 2 25 2 26 2 27 2 28 3 29 3
3 30 3 31 3 32 4 33 4 34 4 35 4 36 5 37 5 38 5 39 5
6 40 6 41 6 42 7 43 7 44 7 45 8 46 8 47 9 48 9 49 9
9 50 10 51 10 52 11 53 11 54 11 55 12 56 12 57 13 58 13 59
14 60 14 61 15 62 15 63 16 64 16 65 17 66 17 67 18 68 18 69
19 70 19 71 20 72 20 73 21 74 22 75 22 76 23 77 23 78 24 79
20 80 25 81 26 82 27 83 28 84 29 85 29 86 30 87 30 88 31 89
31 90 32 91 33 92 33 93 34 94 35 95 36 96 37 97 37 98 38 99
39 100 40 101 40 102 41 103 42 104 43 105 44 106 44 107 45 108 46 109
47 110 48 111 49 112 50 113 50 114 51 115 52 116 53 117 54 118 55 119
56 120 57 121 58 122 59 123 60 124 61 125 62 126 63 127 64 128 65 129
66 130 67 131 68 132 69 133 70 134 71 135 72 136 73 137 74 138 75 139
76 140 77 141 79 142 80 143 81 144 83 145 84 146 84 147 85 148 87 149
88 150 89 151 90 152 91 153 93 154 94 155 95 156 96 157 97 158 99 159
100 160 101 161 102 162 104 163 105 164 106 165 106 166 109 167 110 168 112 169
113 170 114 171 116 172 117 173 118 174 120 175 121 176 122 177 124 178 125 179
120 128 128 129 132 131 183 132 184 135 185 135 186 137 187 138 188 140 189
141 190 143 191 144 192 146 193 147 194 149 195 196 196 197 153 198 155 199
156 200 158 201 160 202 161 203 163 204 164 205 166 206 168 207 171 209
172 210 174 211 176 212 177 213 178 214 180 211 182 212 184 218 188 219
189 220 191 221 193 222 195 223 196 224 198 225 200 226 202 203 228 205 229
207 230 231 231 232 232 233 234 234 235 236 238 239 237 238 238 239
225 240 227 241 229 242 231 243 234 244 235 245 237 246 239 247 241 248 243 249
245 247 245 249 252 251 253 253 254 255 255 255
For gamma=2 and j=0 to 255: xinhj->yrehj, yinhj->xrehj=1, similar for decimal values xindj->yredj, yindj->xredj-xrehj/255
ges9l-3d
    
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