

see similar files of the whole serie: http://farbe.li.tu-berlin.de/ges9.htm
technical information: http://farbe.li.tu-berlin.de or http://color.li.tu-berlin.de

TUB registration: 202240701-ges9/ges9I0np.pdf /.ps
application for evaluation and measurement of display or print output

TUB material: code=rh4tra

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%*****
%BEG Frame File Linearization Method FF_LM, real (re) hex (h) and decimal (d)
0 setgray
0 0 moveto 6000 0 rlineto 0 4000 rlineto %relative square
-6000 0 rlineto closepath stroke %60mm x 40 mm
This example EPS code is used in
http://color.li.tu-berlin.de/ges8/ges8I-3n.txt
http://color.li.tu-berlin.de/ges8/ges8I-3n.pdf

/xdd 050 def /ydd 138 def %x-position and line difference
TBL 0 setgray %font, size and black color
xdd 3820 moveto %stop 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 %invers data hex (h)
/xindj 257 array def /yindj 257 array def %invers 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=hex) of 256 values (h 0:255) with gamma
0 1 255 {/j exch def %j=0,255
xrehj j j put %BEG h 0:255
xredj j j 255 div put %decimal (d 0:1,000)
yrehj j j 255 div gamma exp put %decimal (d 0:1,000)
yredj j j yredj j get 255 mul cvi put %END h 0:255
} for %j=0,255

TBV /yw0 3650 def xdd yw0 moveto %font, size, position
(Table xyreh_256, basic real data in hex (h, 0:255) between x and y, ) show
1 0 0 setrgbcolor (gamma=) show gamma cvsshowng 0 setgray %gamma value in red
Subtable text

TW /yw1 yw0 1.1 ydd mul sub def %font, size, position
0 1 255 {/j exch def %j=0,255
/j 0 j 10 idiv def
/jd j j 10 mul sub def
xdd jd 600 mul add yw1 j 0 ydd mul sub moveto
xrehj j get cvshow ( ) show yredj j get cvsshowng %output
} for %j=0,255
Output xrehj, yredj

%END Frame File Linearization Method FF_LM, real (re) hex (h) and decimal (d)
%*****
ges90-3n

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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	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	188 138	189 140
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	208 169	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	227 202	228 203	229 205
230 207	231 209	232 211	233 212	234 214	235 216	236 218	237 220	238 222	239 224
240 225	241 227	242 229	243 231	244 233	245 235	246 237	247 239	248 241	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

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%*****
%BEG Frame File Linearization Method FF_LM, real (re), invers (in), hex (h), decimal (d)
/xdd 050 def /ydd 138 def %x-position and line difference
TBL 0 setgray %font, size and black color
xdd 3820 moveto %stop 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 %inverse (in) data hex (h)
/xindj 257 array def /yindj 257 array def %invers (in) data decimal (d)
TBV /yw0 3650 def %font, size, position
xdd yw0 moveto
(Table xyinh_256, invers data in hex (h, 0:255) for xyreh_256 (h, 0:255), ) show,
1 0 0 setrgbcolor (gamma=) show gamma cvsshowng 0 setgray
Sub Table text

%Procedure for transfer xrehj, yrehj -> xinhj, yinhj
%use of the table data xyreh256 (h=hex) of real values (reh) with gamma
/FF_LM_xchart_gammaF {$BEG /FF_LM_xchart_gammaF 240715
/yreh exch def %0<= yreh <=255
xinhj j yrehj yreh get put %invers data yrehj->xinhj
yinhj j xrehj yreh get put %invers data xrehj->yinhj
yinhj j get %output of yinhj
} def %END /FF_LM_xchart_gammaF 240715
%Application of FF_LM_xchart_gammaF and output
TW /yw1 yw0 1.1 ydd mul sub def
0 1 255 {/j exch def %j=0,255
xrehj j get FF_LM_xchart_gammaF
%available now xinhj, yinhj
xindj j xinhj j get 255 div put
yindj j yinhj j get 255 div put
/j 0 j 10 idiv def /jd j j 10 mul sub def
xdd jd 600 mul add yw1 j 0 ydd mul sub moveto
xinhj j get cvshow ( ) show yinhj j get cvshow
} for
Output xinhj, yinhj

(For gamma=2 and j=0,255: xinhj=yrehj, yinhj=xrehj=j, ) show
(similar for decimal values xindj=yredj, yindj=xredj=xrehj/255) show
%END Frame File Linearization Method FF_LM, real (re) hex (h) and decimal (d)
%*****
ges90-7n

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Table xyinh_256 produced by FF_LM xchart_gamma and xyreh_256
Table xyinh_256, invers 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 10	0 11	0 12	0 13	0 14	0 15	1 16	1 17	1 18	1 19
1 20	1 21	1 22	2 23	2 24	2 25	2 26	2 27	3 28	3 29
3 30	3 31	4 32	4 33	4 34	4 35	5 36	5 37	5 38	5 39
6 40	6 41	6 42	7 43	7 44	7 45	8 46	8 47	9 48	9 49
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
25 80	25 81	26 82	27 83	27 84	28 85	29 86	29 87	30 88	31 89
31 90	32 91	33 92	33 93	34 94	35 95	36 96	36 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	82 145	83 146	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	108 166	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
127 180	128 181	129 182	131 183	132 184	134 185	135 186	137 187	138 188	140 189
141 190	143 191	144 192	146 193	147 194	149 195	150 196	152 197	153 198	155 199
156 200	158 201	160 202	161 203	163 204	164 205	166 206	168 207	169 208	171 209
172 210	174 211	176 212	177 213	179 214	181 215	182 216	184 217	186 218	188 219
189 220	191 221	193 222	195 223	196 224	198 225	200 226	202 227	203 228	205 229
207 230	209 231	211 232	212 233	214 234	216 235	218 236	220 237	222 238	224 239
225 240	227 241	229 242	231 243	233 244	235 245	237 246	239 247	241 248	243 249
245 250	247 251	249 252	251 253	253 254	255 255				

For gamma=2 and j=0 to 255: xinhj=yrehj, yinhj=xrehj=j, similar for decimal values xindj=yredj, yindj=xredj=xrehj/255