

COLORS

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FREQUENTLY ASKED QUESTIONS

My plot comes out gray shaded instead of black and white, how do I fix this? This means that the attached color table is being used in you plot. A black and white plotter with the ability to do gray shading will try to plot the different colors by adjusting the intensity of black. If you are using Microstation to plot with you can fix this by attaching the black and white color table (bw.ctb or bw.tbl) to the design file. If using specific types of plot files you can set the color option to monochrome before plotting. In Roadway Design we use IPlot. IPlot has been configured to use settings files. These settings files will automatically attach the black and white color table to the plot file. You should contact your cadd support team to get them to check your configuration.

What if I do need to plot in color with IPLOT, how do I keep it from using the black and white color table?

Again, if you're sending to a plot to a color plotter the associated configured settings files should allow you to plot in color. If this is not working contact your IPLOT support person. If you are intentionally using a setting file that was designed to work with a black and white plotter you can override this function by changing the settings in the plot options.

How do I attach other color tables to design files? This can be done with a key in, ct=<name>. Where <name> is the color table file. Or you can use the SETTINGS > COLOR TABLE dialog box. Color tables can also be attached in batch mode. [See the following section for information.](#)

I am working is a file that needs to have the black and white color table attached. I have a white background. My element hi-light color is white so I can't tell when I have snapped to an element. Is there a way to adjust this? The hilight color is actually not associated with the attached color table. Microstation has it

own group of hi-light colors which can be changed. Select the option SETTINGS > DESIGN FILE > COLORS and change the Element Highlight Color option. This setting is saved in the design file. So do a "save settings" to keep this change. When a new design file is created the highlight color will be white because it is set in the seed file as default.

INTRODUCTION

Microstation stores the active color and the color attribute of each element as a value in the 0-255 range. To display an element in color, Microstation looks in the ACTIVE COLOR TABLE for the color that corresponds to the element color value.

Color tables are stored as independent files. The active color table can be saved to a file for future attachment to any design file.

If a design file has a color table attached, the table is opened (and its colors are used to display elements) each time the design file is opened. A color table attachment adds only 768 bytes to the size of a design file. Color tables can be customized and saved in color table files for subsequent attachment.

Color Table Attachment Key-Ins

attach colortable create <filename> -or- ct=,create <filename> : creates a color table

ct= <color_table_name> : used to attach a color table

ct= <space> <return> : used to de-attach color table

ct= \$: to see attached color table

Note: When entering a design file and a color table is not attached to the file. Microstation uses the variable 'ms_defctbl' to load a color table.

ROADWAY DESIGN'S COLOR TABLES

Roadway Design currently uses several colors tables.

The first one (RWDCO.TBL), is the standard color table used while doing normal design work in Microstation and can also be used to do color plotting. NOTE: This color table was revised in the year 2003. Older design files created before then will most likely have the old color table attached. If you intend on using any of these files for and current work you should attach the latest color table. This also applies to cell libraries.

The second color table (BW.CTB or BW.TBL), is a standard black and white color table. All colors except the background color are set to black. The background color is set to white. It is used in the most part, as the normal plotting color table. This is because all production plotting is currently done in black and white.

Another color table added in May 2003 (SHADE.TBL), it is a color table that can be used for shading. It contains gray, red, green, and blue shading colors.

RWDCO.TBL

Shown below are the colors set in Roadway Design's color working color table. Originally the table only contained colors 0 (zero) to 33. All other colors were not set, except for the last color the background color was set to black. This was because earlier versions of Microstation could only balance 34 colors. This limitation was only used because additional colors could not be separated from the first 34 in the design file. This limitation is no longer valid with today's hardware abilities; the remaining colors have been set as shown below.



For standardization purposes, Roadway Design has created this color table and it should be used for most design files.

To attach this color table to the design file (if it is not already attached by default), type in:
ct=gr:rawdco.tbl

Batch Attachments of Color Tables:

Color tables can also be attached in a batch method. This is convenient when you attach it to many design files.

1. Open UTILITIES > BATCH PROCESS
2. Locate "Command File:" and tag the magnify glass to open the file "c:\rwd\group\newcolortabl.txt"
3. Tag the "Add files or directories to process" icon button.
4. In the new dialog, highlight either the directory name or files you wish to run and tag the ADD button. If you choose a directory name, you can check the "include subdirectories" if you wish. Then tag the Done button.
5. Back in the original dialog box you will see the items you selected under the process tasks. If you selected just files then you can go to step 7; otherwise continue with step 6.
6. If a directory name was selected you will need to modify the Process Task - File Name. Since this does not specify a file name, Microstation will try to attach to all files, not just dgn's (or .cell files). Tag the file name by slowly double clicking on the directory name. Once you have selected it, do not modify any part of the current directory name, but add (*.dgn) without the parentheses to the end of the string.
7. You can now press the "Process Batch Process Job" icon button. In this dialog, you should see

a complete list of all the files that will be processed. If you do not see the correct files listed you will have to tag the cancel button and re-set up your task by removing that task and starting over. Otherwise, press PROCESS.

8. You now have the new color table attached.

The following chart depicts the color numbers, color name, and the RGB intensities numbers for the current colors used in Roadway Design's color table:

COLOR NUMBER	RED VALUE	GREEN VALUE	BLUE VALUE
0	0	255	255
1	255	65	45
2	255	255	0
3	85	255	0
4	0	134	255
5	238	13	235
6	255	196	41
7	255	205	150
8	255	255	255
9	166	166	166
10	216	0	0
11	210	245	150
12	55	165	155
13	219	100	125
14	225	118	80
15	0	215	85
16	138	23	235
17	220	220	220
18	105	255	164
19	60	160	185
20	170	255	0
21	155	190	0
22	0	255	195
23	200	115	71
24	231	139	150
25	255	205	255
26	130	95	255
27	255	0	205
28	255	226	60
29	115	175	255
30	255	85	81
31	150	0	145
32	255	215	200
33	205	135	50
34	212	152	43
35	219	169	36
36	226	186	29
37	233	203	22
38	240	220	15

39	247	237	8
40	255	255	0
41	233	255	0
42	211	255	0
43	189	255	0
44	167	255	0
45	145	255	0
46	123	255	0
47	100	255	0
48	0	0	0
49	13	13	13
50	26	26	26
51	39	39	39
52	52	52	52
53	65	65	65
54	78	78	78
55	91	91	91
56	104	104	104
57	127	127	127
58	140	140	140
59	153	153	153
60	166	166	166
61	179	179	179
62	190	190	190
63	200	200	200
64	0	255	255
65	0	242	242
66	0	226	230
67	0	210	217
68	0	197	204
69	0	182	191
70	0	167	179
71	0	155	166
72	0	140	153
73	0	126	140
74	0	115	128
75	0	101	115
76	0	88	102
77	0	77	89
78	0	65	77
79	0	50	60
80	255	0	0
81	245	0	0
82	235	0	0
83	224	0	0
84	214	0	0
85	204	0	0
86	194	0	0
87	184	0	0

88	171	0	0
89	161	0	0
90	150	0	0
91	140	0	0
92	130	0	0
93	120	0	0
94	110	0	0
95	97	0	0
96	255	255	0
97	247	247	0
98	237	237	0
99	227	227	0
100	217	217	0
101	207	207	0
102	196	196	0
103	186	186	0
104	176	176	0
105	166	166	0
106	156	156	0
107	145	145	0
108	135	135	0
109	125	125	0
110	115	115	0
111	105	105	0
112	0	255	0
113	0	245	0
114	0	235	0
115	0	224	0
116	0	212	0
117	0	201	0
118	0	191	0
119	0	181	0
120	0	168	0
121	0	158	0
122	0	148	0
123	0	138	0
124	0	125	0
125	0	115	0
126	0	105	0
127	0	92	0
128	0	0	255
129	0	0	247
130	0	0	237
131	0	0	227
132	0	0	219
133	0	0	209
134	0	0	199
135	0	0	189
136	0	0	181

137	0	0	171
138	0	0	161
139	0	0	150
140	0	0	143
141	0	0	133
142	0	0	122
143	0	0	112
144	255	13	135
145	245	12	226
146	235	12	216
147	224	9	206
148	212	8	195
149	201	8	185
150	191	6	176
151	181	5	166
152	168	5	157
153	158	3	148
154	148	3	138
155	138	3	129
156	125	1	117
157	115	1	107
158	105	1	98
159	92	0	87
160	255	196	41
161	245	186	37
162	235	174	33
163	224	166	29
164	214	155	26
165	201	142	22
166	191	134	19
167	181	123	16
168	171	116	14
169	161	106	11
170	148	95	9
171	138	88	7
172	128	79	5
173	117	72	4
174	107	63	2
175	94	53	0
176	255	205	255
177	245	193	245
178	235	183	235
179	224	173	224
180	214	163	214
181	204	153	204
182	194	143	194
183	184	134	184
184	173	123	173

185	163	114	163
186	153	106	153
187	143	97	143
188	133	89	133
189	122	81	122
190	112	73	112
191	102	64	102
192	210	245	150
193	199	235	138
194	189	224	128
195	176	221	114
196	166	201	105
197	155	191	94
198	144	179	84
199	134	168	74
200	124	158	66
201	113	145	57
202	104	135	50
203	95	125	42
204	84	112	36
205	75	102	30
206	67	92	25
207	57	79	19
208	255	215	200
209	247	207	193
210	237	197	183
211	227	189	175
212	219	181	167
213	209	171	157
214	199	162	149
215	189	153	140
216	181	147	134
217	171	137	125
218	161	128	116
219	150	120	108
220	143	112	101
221	133	104	94
222	122	95	86
223	112	87	77
224	192	85	255
225	188	76	252
226	180	67	250
227	172	59	247
228	166	49	245
229	158	41	242
230	150	34	240
231	138	23	235
232	128	20	222
233	115	17	207

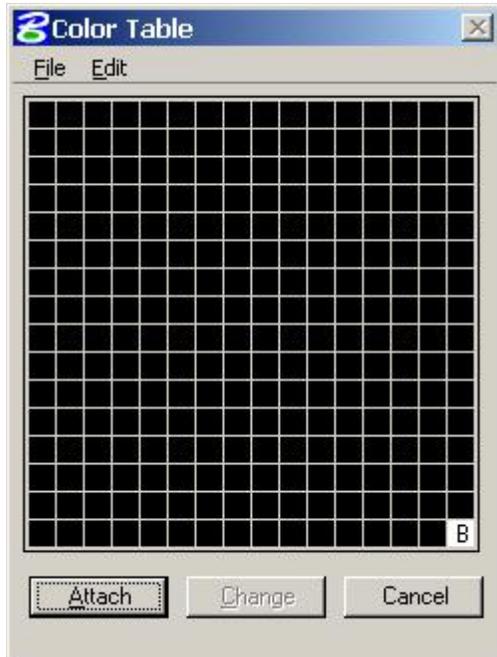
234	101	14	194
235	88	9	179
236	78	7	166
237	65	5	150
238	57	3	138
239	45	0	122
240	0	255	255
241	85	192	185
242	170	129	115
243	255	65	45
244	255	128	30
245	255	191	15
246	255	255	0
247	170	255	0
248	85	255	0
249	0	255	0
250	0	215	85
251	0	175	170
252	0	134	255
253	127	194	255
254	255	255	255
B (255)	0	0	0

BW.CTB (BW.TBL)

This is a black and white color table which can be attached to a design file to make it appear black and white, but is usually only used for plotting purposes.

With the current method of plotting (IPLOT), this color table is attached only at plot time to provide the appropriate black color for all elements and a white background.

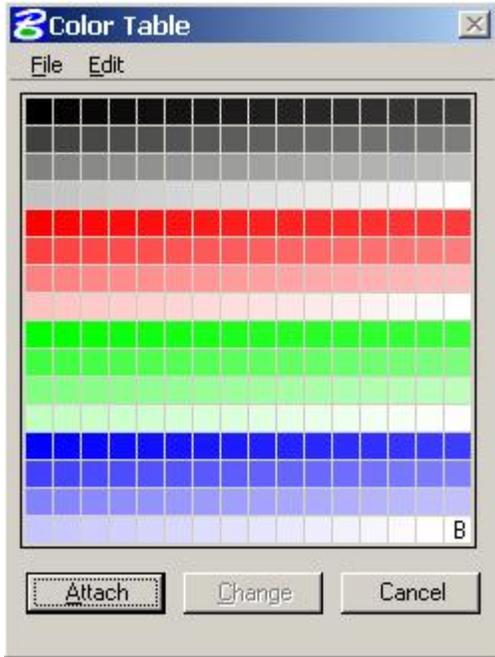
To attach this color table to a design files, type in: *ct=gr:bw.ctb*



NOTE: The file BW.CTB has been copied into RWD group directory with the name BW.TBL. This will make it easier to find and attach in Microstation. BW.TBL is identical to BW.CTB. You can use either one.

SHADE.TBL

This is a shading color table. It has gradual changes in the shades of gray, red, green, and blue. It can be used for special projects or special plotting procedures.



CUSTOMIZING COLOR TABLES

CREATING A COLOR TABLE

1. The first step is to open the Color Table Dialog box, from the SETTINGS menu, choose COLOR TABLE.



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2. The next step, is to set the colors using the tools available on the dialog, the following items indicate items you can use to modify the color:

Interpolate Colors:

Interpolation of colors can be set using RGB or HSV values. Open with the menu item EDIT > INTERPERLATE COLORS...



To interpolate between two colors, first select the Interpolation Style:



Select the Starting and Ending Colors and press the BLEND button. All the colors between the start and end colors will be interpolated and inserted in the range of colors. Press the OK button if you wish to apply the blend to the colors.

When you return to the main menu, you must save the color table to retain any changes you have made.

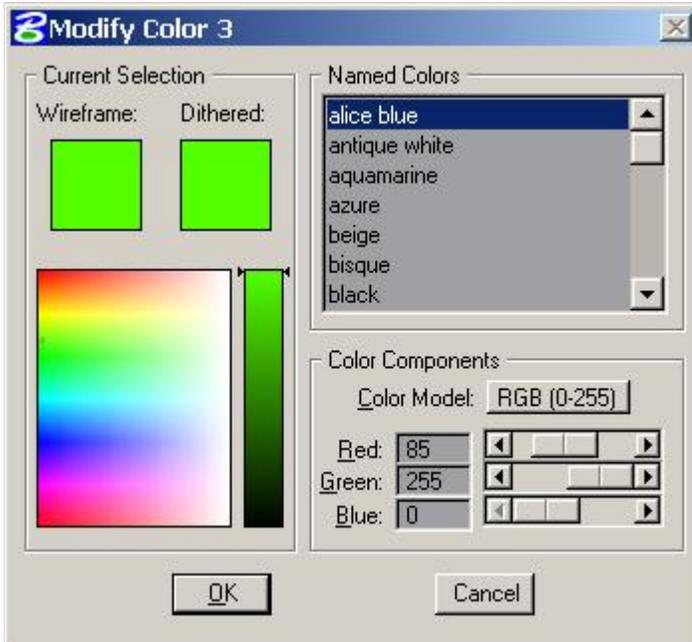
Copy and Pasting Colors:

To select a color to copy, select the color in the dialog, then select EDIT > COPY. Then select the location of color number you wish to copy to and then select EDIT > PASTE.

Modifying Individual Colors:

Select the color and click on the CHANGE button. Or double-click on the color. A dialog box will then open.

Colors can be changed with this dialog using couple of different methods. The method used in Roadway Design is called Color Model: RGB(0-255) as shown on the Modify Color Dialog box below:



RGB (0-255) indicates Red, Green and Blue color values between 0 and 255. The value 0 (zero) indicates no color and 255 indicates the largest value of a particular color. The three values can be mixed to create other colors.

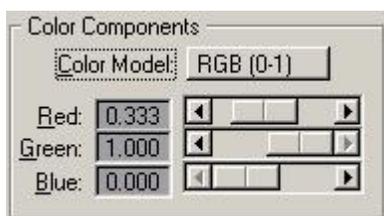
RGB (0-255)

Red: 0(no red)-255(full red)

Green: 0(no green) -255(full green)

Blue: 0(no blue)-255(full blue)

RGB (0.000-1.000) indicates Red, Green and Blue color values between 0.000 and 1.00. The value 0.000 indicates no color and 1.000 indicates the largest value of a particular color. The three values can be mixed to create other colors.



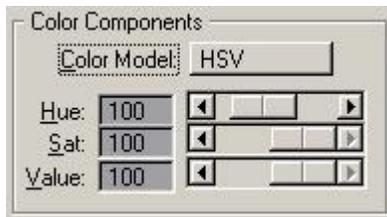
RGB (0.000-1.000)

Red: 0.000(no red)-1.000(full red)

Green: 0.000(no green) -1.000(full green)

Blue: 0.000(no blue)-1.000(full blue)

HSV indicates a value of Hue, Saturation and Value. These values can be change to alter the color in several ways.



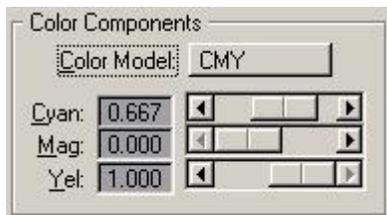
HSV

Hue: Range of (0 - 359) This changes the colors from Reds, Oranges, Yellows, Greens, blues, and purples.

Saturation: Ranges from 0 to 100. This changes the color from 0 (white) to its full saturation of color 100.

Value: Ranges from 0 to 100. This changes the color from 0 (black) to its full value of 100.

CMY indicates cyan, magenta, and yellow values between 0.000 and 1.000. The value 0.000 indicates no color and 1.000 indicates the largest value of a particular color. The three values can be mixed to create other colors.



CMY

Cyan: 0.000(no cyan)-1.000(full cyan)

Magenta: 0.000(no magenta)-1.000(full magenta)

Yellow: 0.000(no yellow)-1.000(full yellow)

3. The final step is to use the FILE > SAVE AS command to save it to a desired name and location.

