Special Topics in Graphic Design : Advanced Photography : Color Calibration

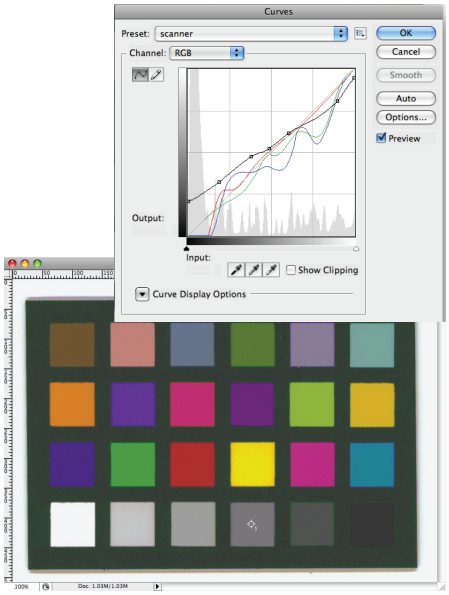
Color calibration is an important element in the production of printed materials. Proper calibration consists of multiple steps which must all be performed for accurate color output. The initial step is to calibrate your monitor, then adjustments must be made for all input devices (camera, scanner, etc). Finally, printer profiles must be loaded for any output devices.

Monitor Calibration:

1. Copy the Huey software onto your desktop.
2. Double-click and follow the instructions to calibrate the monitor.

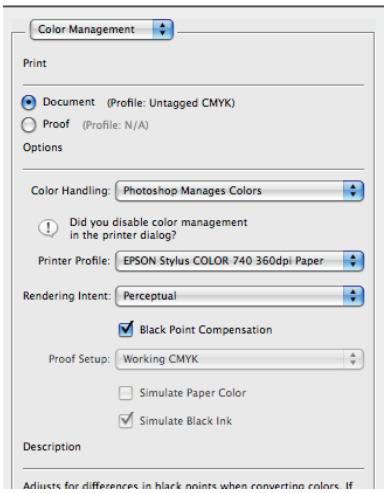
For more information, go to pantone.com and select color control.

Input Devices:



1. Scan and/ or photograph the ColorChecker chart and open in Photoshop.
2. Using the color sampler tool set to 5 by 5 average, click in the center of one of the sample squares, starting with the gray scale.
3. Create a curves adjustment layer and set a point on the curve using the color sample location.
4. Find the RGB values of that square on the ColorChecker guide and adjust the curve until the actual RGB values are the same, selecting each channel separately if necessary.
5. Repeat for all of the squares.
6. Save your changes as a curves preset to use later.

Printer Profiles:



1. Download the printer profile for the printer you will be using.
2. Copy the profiles into Library-ColorSync-Profiles on your computer.
3. In Photoshop, go to Edit-Color Settings and load the appropriate profile into Working CMYK.
4. When printing the file, make sure Photoshop Manages colors is selected, and choose the same profile.

No.	Number	sRGB			CIE L*a*b*			Munsell Notation Hue Value / Chroma	
		R	G	B	L*	a*	b*		
1.	dark skin	115	82	68	37.986	13.555	14.059	3 YR	3.7 / 3.2
2.	light skin	194	150	130	65.711	18.13	17.81	2.2 YR	6.47 / 4.1
3.	blue sky	98	122	157	49.927	-4.88	-21.925	4.3 PB	4.95 / 5.5
4.	foliage	87	108	67	43.139	-13.095	21.905	6.7 GY	4.2 / 4.1
5.	blue flower	133	128	177	55.112	8.844	-25.399	9.7 PB	5.47 / 6.7
6.	bluish green	103	189	170	70.719	-33.397	-0.199	2.5 BG	7 / 6
7.	orange	214	126	44	62.661	36.067	57.096	5 YR	6 / 11
8.	purplish blue	80	91	166	40.02	10.41	-45.964	7.5 PB	4 / 10.7
9.	moderate red	193	90	99	51.124	48.239	16.248	2.5 R	5 / 10
10.	purple	94	60	108	30.325	22.976	-21.587	5 P	3 / 7
11.	yellow green	157	188	64	72.532	-23.709	57.255	5 GY	7.1 / 9.1
12.	orange yellow	224	163	46	71.941	19.363	67.857	10 YR	7 / 10.5
13.	blue	56	61	150	28.778	14.179	-50.297	7.5 PB	2.9 / 12.7
14.	green	70	148	73	55.261	-38.342	31.37	0.25 G	5.4 / 8.65
15.	red	175	54	60	42.101	53.378	28.19	5 R	4 / 12
16.	yellow	231	199	31	81.733	4.039	79.819	5 Y	8 / 11.1
17.	magenta	187	86	149	51.935	49.986	-14.574	2.5 RP	5 / 12
18.	cyan	8	133	161	51.038	-28.631	-28.638	5 B	5 / 8
19.	white (.05*)	243	243	242	96.539	-0.425	1.186	N	9.5 /
20.	neutral 8 (.23*)	200	200	200	81.257	-0.638	-0.335	N	8 /
21.	neutral 6.5 (.44*)	160	160	160	66.766	-0.734	-0.504	N	6.5 /
22.	neutral 5 (.70*)	122	122	121	50.867	-0.153	-0.27	N	5 /
23.	neutral 3.5 (.1.05*)	85	85	85	35.656	-0.421	-1.231	N	3.5 /
24.	black (1.50*)	52	52	52	20.461	-0.079	-0.973	N	2 /

Cie L*a*b* values use Illuminant D50 2 degree observer sRGB values for Illuminate D65.