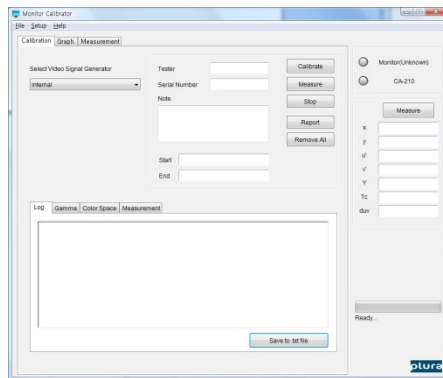


Monitor Calibrator Quick Guide

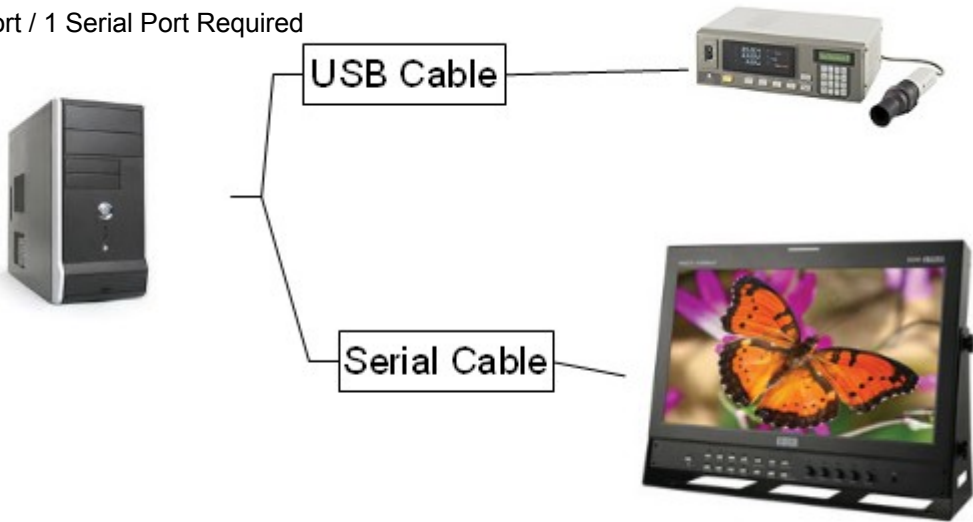


Requirements

- Colorimeter such as Klein K-10 or Minolta CA-210
- RJ-11 Cable and RS-232 to RS-485/422 Converter
- Monitor Calibrator Software
- 1 or more Serial/USB Ports, or Serial-USB Converter

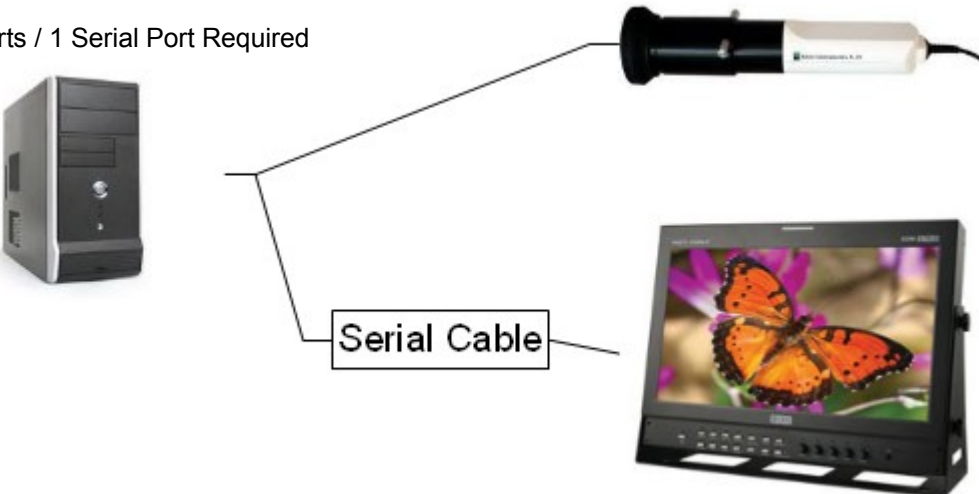
Connection Diagram - CA210

1 USB Port / 1 Serial Port Required



Connection Diagram – Klein K10

2 USB Ports / 1 Serial Port Required



CA-210 Colorimeter

- If you have CA-210, you should do **0-Calibration** before using it.
- Make sure you placed the slide switch in your probe on 0-Cal.
- Press 0-Cal button on your CA-210.
- Confirm that random numbers appear on LCD screen on your CA-210.
- Turn the slide switch from 0-Cal to Measure.



Communication Setup

Confirm your monitor's Brightness / Contrast / Chroma / Phase / Sharpness values are all 50.

In the menu, Select GPI/Serial Remote and Turn it 'On'.

Run Monitor Calibrator on your PC.

In the menu, open Setup/Connection Setup.

Select the port for your monitor.

Select your colorimeter and its port.

* No port selection required for such colorimeter as Minolta CA-210.

Close the Connection Setup Dialog.

Click on 'Monitor' button at the right top of the main window.

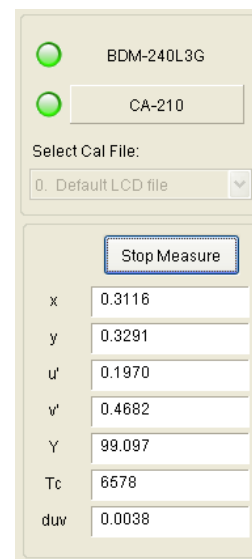
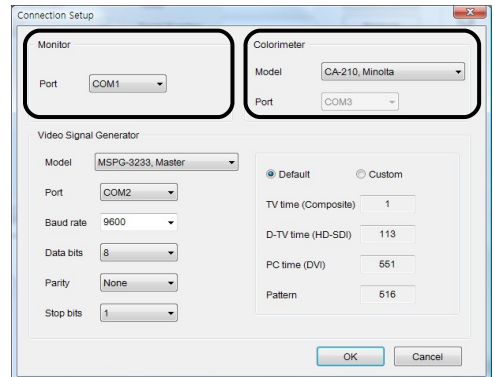
After a moment you will see a green light and the model name of the monitor.

Click on 'CA-210'(the colorimeter name you've connected to) button at the right top of the main window.

You will see a green light when it's connected.

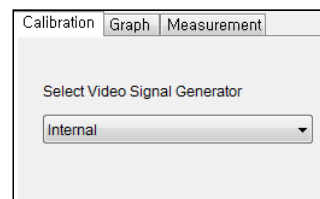
Use 'Measure' button to test the colorimeter.

* You need to **warm up** your monitor for about 30 minutes unless its backlight is LED. See Backlight Adjustment on the next page.

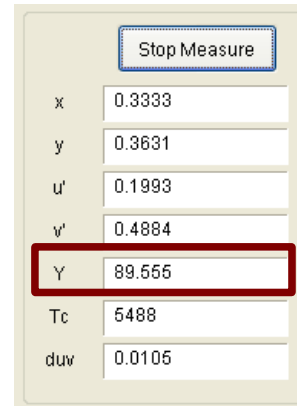
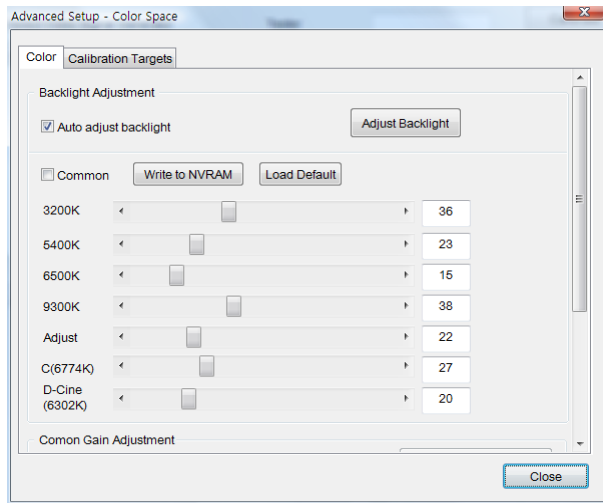


Just check if the 'Video Signal Generator' is 'Internal'.

Mostly you don't have to change it.



Backlight Adjustment



Backlight value should be adjusted in order to calibrate color correctly.

* If your monitor supports automatic backlight adjustment, you just need to check on the 'Auto adjust backlight' and close the dialog, and leave this section.

In your monitor menu, select 100% white Test Pattern or Internal Pattern. You will see the screen filled with full white.

Check the luminance value Y with your colorimeter. If it's around 100(or the target value you've typed), your backlight is adjusted correctly.

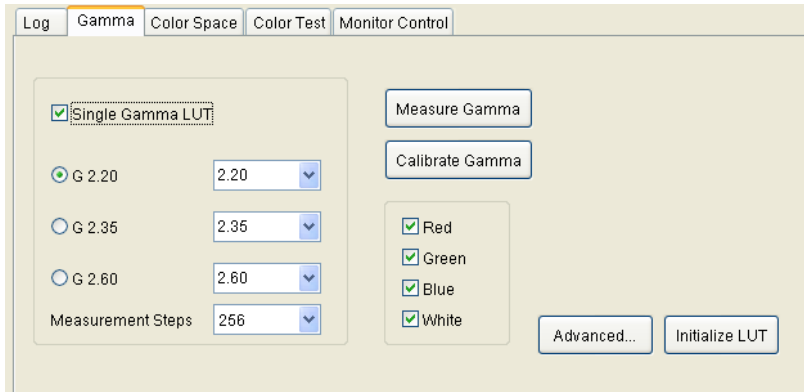
Otherwise, adjust backlight in Advanced Setup dialog and check Y value again after 15~20 minutes.

* Repeat this adjustment until you get an appropriate Y value.

If it's around 100(or the target value you've typed), Your backlight is adjusted correctly. Click on 'Write NVRAM' button and close the dialog.

* In each change of backlight value, to take effect, florescent (CCFL) backlight takes 15~20 minutes. For LED, it takes a minute.

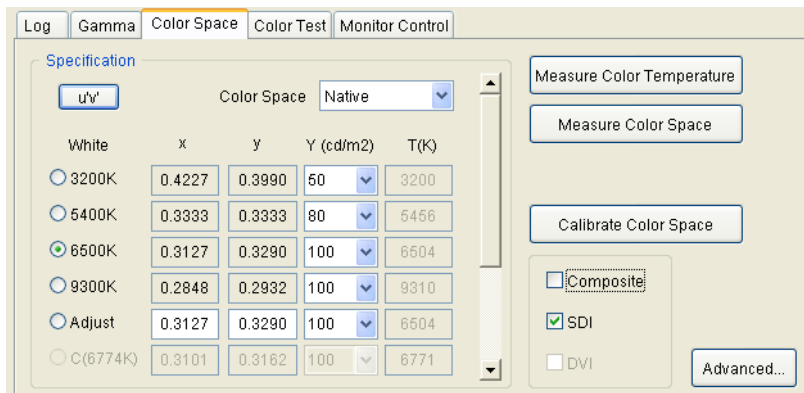
Gamma Correction



To adjust Gamma only, Select Gamma Tab at the bottom of the main window and follow the steps below.

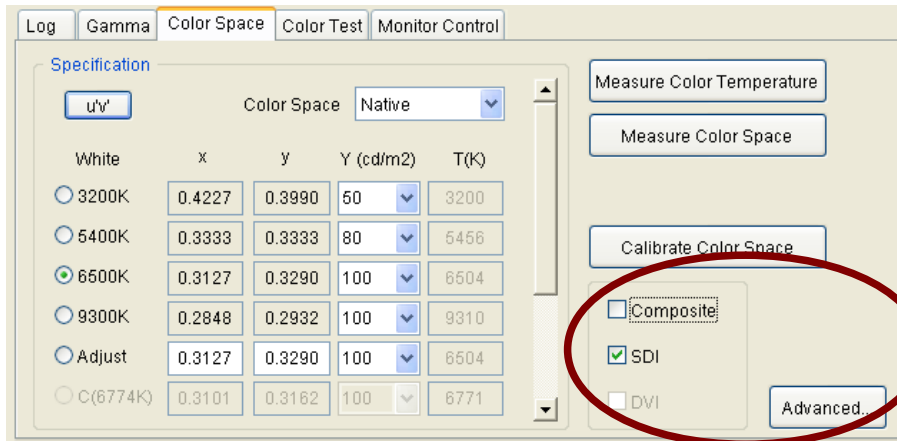
1. Check on Single Gamma LUT. (most common)
2. Select G 2.20 among the Radio Buttons. (G 2.20, G 2.35 are common)
3. Select Measurement Steps '256'. (256, 512 are common)
4. Click on Calibrate button in the middle of the tab.

Color Temperature/Color Space Calibration

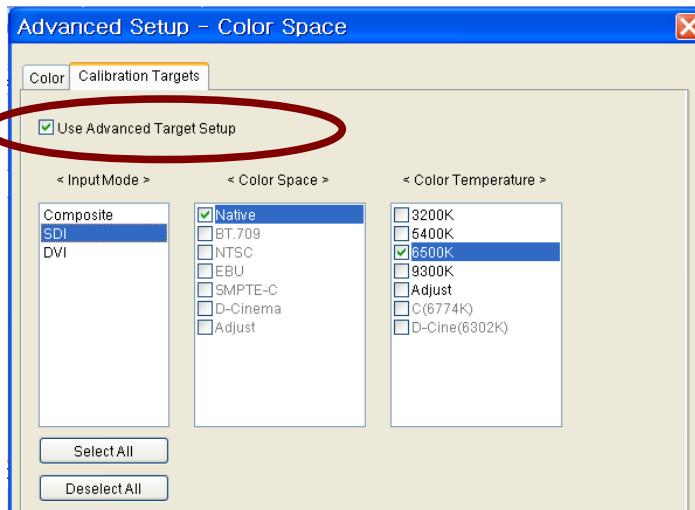


Select Color Space tab at the bottom of the main window and follow the steps below.

1. Set the target luminance Y(cd/m²) for the color spaces to be calibrated.
2. Select Composite and/or SDI.
3. Click on Calibrate button.



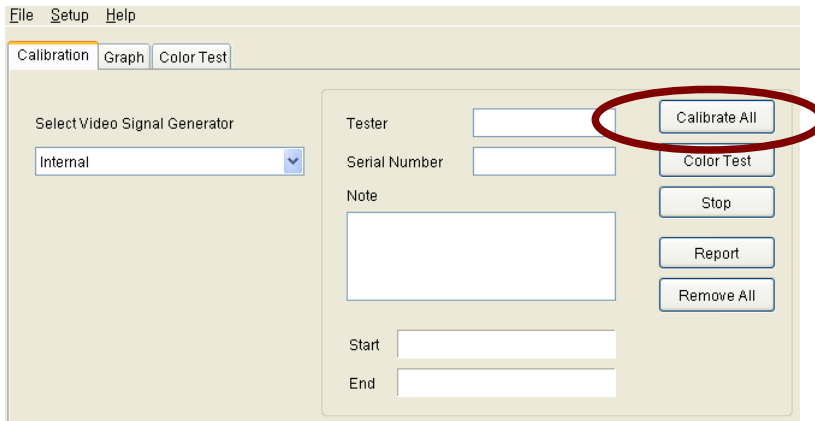
Use *Advanced...* dialog to select some Color Temperatures/Spaces only in your interest.



Check on 'Use Advanced Target Setup' to enable this functionality.

* You can save the calibration time by selecting fewer Color Temperatures and/or Color Spaces.

Full Calibration (Gamma/Color Space)



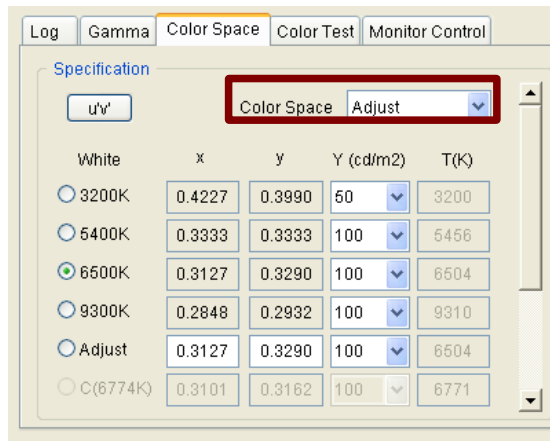
When you want to adjust all of Gamma, Color Space, and Color Temperature, use the *Calibrate All* button at the top of the main window.

* Once Gamma Correction finished, you don't have to do it again when you re-do Color Space Calibration.

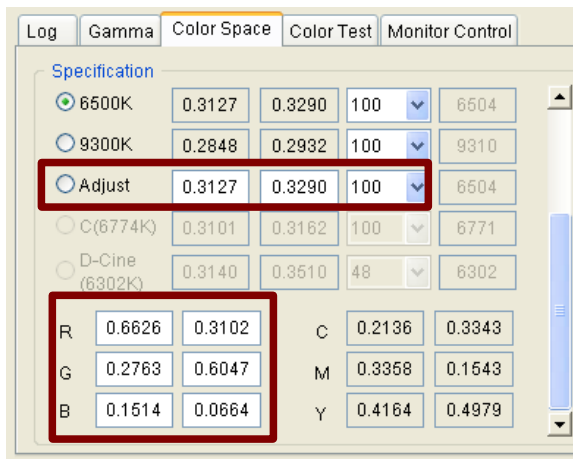
* Full Calibration is needed when you change **Brightness value**, but not needed when you change Backlight value.

Custom Color Space (for advanced users only)

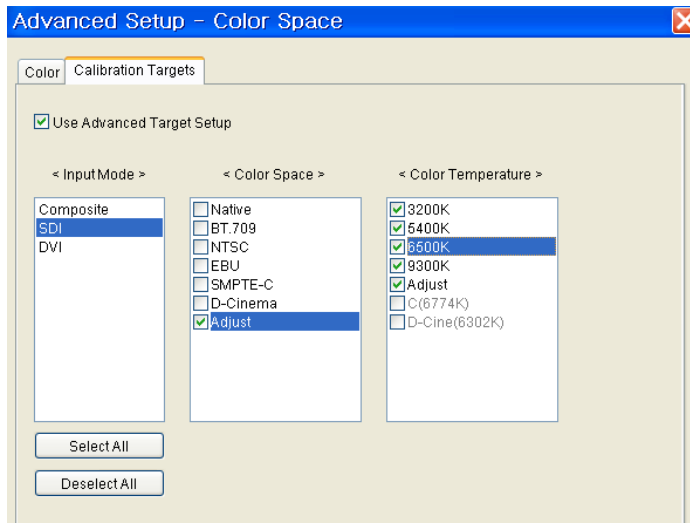
Some monitor models support more than one color space. Also, they support user-defined color space. Follow the steps below to set a customized color space.



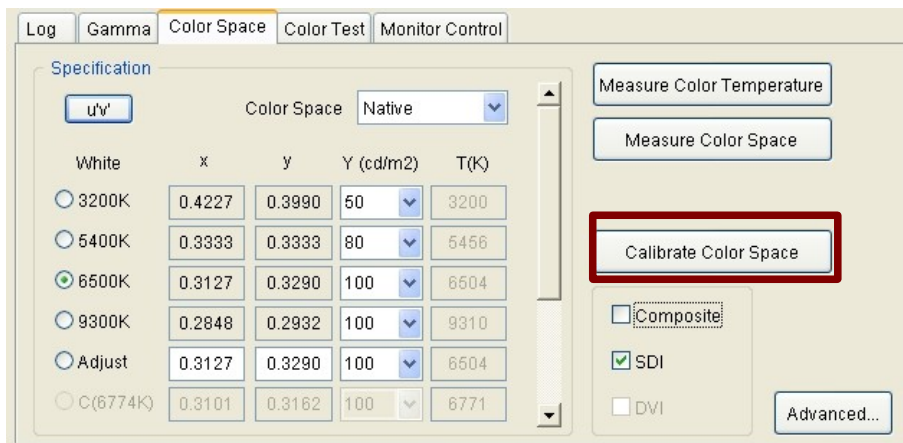
Select 'Color Space' tab. Select 'Adjust' in Color Space ComboBox.
* If you can't select it, your monitor doesn't support custom color space.



Type x,y values for R,G,B and White(beside the *Adjust* radio button).



In the Advanced Setup, make sure you've selected 'Adjust' Color Space.



Click on 'Calibrate Color Space' button. The customized Color Space will be stored in your monitor.

The Color Space will be selectable in the monitor's menu, **COLOR / Color Space Select**.

Error Messages

E0040 Luminance is not proper. Check backlight value and change. Check if the Brightness is 50.

E0046 Check if the monitor screen is too dark.