



# Colour Calibration

A very simplified guide by Paul Cooper

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# Introduction

- Why Calibrate
- What to Calibrate
- How to Calibrate
- Our projection kit
- Thursday Night Projection

# Why Calibrate

- To get the best possible images the Camera, Computer Kit, Printer and Projector all need to show the **SAME** Colours.
- By default they will most probably not do this
- Calibration is the process to make sure that the colours are the same.
- I am not going to go it colour spaces or sensor technology, there is huge amounts on line.
  - Good starting point :
    - <http://www.cambridgeincolour.com/tutorials/monitor-calibration.htm>

# What do you need to calibrate

- Screen
  - Laptop Panel
  - External Monitor ( laptop or desktop )
  - Output device attached to Graphics Adaptors video port ( VGA, HDMI, USB..... )
  
- Print calibration is not covered here. Plenty on line.
  - Need to have the colour profile for the printer on you machine
    - Can download .ICC files from reputable printers for their printers ( ProAm, Costco )
    - This will make sure what you see on your calibrated display should match the printed output , but there are variables that will impact this.

# How to Calibrate

- Manual Approach
  - <http://www.cnet.com/how-to/how-to-calibrate-your-monitor/>
  - It works, but may not be good enough to convince some people.
- Calibration Device
  - Approach is more accurate, and ensure that the machine will display colours correctly
  - Colormunki - X-Rite
  - Spyder – Datacolor

# Our Calibrator



- **X-rite Color Munki | Display**
- Same model is used to calibrate our laptop & projector
- Full details at <http://www.xrite.com/colormunki-display>
- You need the software installed on your device
  - <http://www.xrite.com/colormunki-display/support>
  - Good place to start, video tutorials, software, FAQ , errors etc
  - *“Everything you wanted to know, and never dared ask”*
- Will calibrate your apple & android device via an App
- It will normally make a significant impact to the colours of your images

# Preparing to calibrate

- Make sure the monitor you are going to calibrate is switched on for at least 30 minutes before hand
- Monitor is set to native resolution – Highest
- Monitor is in its normal working position
  - Laptop Challenge
  - Out of bright lights and bright reflections
- Remember that you camera and image editor should be using the same colour space by default
- You need the calibration software installed + instructions
- You need a free USB port
- It takes about 10 minutes, once your software installed ( one-off )
- Good idea not to have other programs running on the device, particularly graphical programs.





# How to use our device

- The calibrator is owned by the society
- It is loaned out on a one week basis only – 30+ members
- You need to sign out and sign in the device with **Ken or Alan**
  - Must exchange through them, and not pass it to your friends
    - It is available to Society members only
    - You are responsible for getting it back to the next meeting
- If you don't bring it back, then others members can't use it
- It cost £110, don't loose it and please try not to break it
  - Treat is carefully like any other electronic device.
  - We have already previously lost a Spyder.
  - Keep the device in its packaging when not in use to protect it

# Support

- I may be delivering the talk on this, it does not make me the expert or a free technical support service.
- Use the support page / FAQ etc at <http://www.xrite.com/colormunki-display/support>
- Speak with your peers who have experience of calibration
- There are others in the room who are knowledgeable in technology, and are familiar with the issues you may be facing.

# Our Projection Kit

- We calibrate our laptop and projector at least every couple of months
- We do this in the hall with the lights off and curtains drawn to ensure we have the ambient light correct
- Once you have the experience with the calibrator it will give you the member the ability to correct the projector rather than become frustrated.
  - Remember you need to come and set-up the kit earlier if you want to recalibrate it. You need at least 45 minutes plus time to set up the screen, get the chairs down before you set-up the screen .....
  - Let one of the committee know you are planning to do this beforehand to assess potential impact, get the hall early, and bring a set of cupboard keys.
  - Consider what you are going to do, if things go wrong.
  - Not on competition nights
  - Don't change the projector settings & remember you are calibrating the projector not the display
  - Be prepared to be accountable to other members for what you have done

# Thursday Night Projection

- When third parties use our projector with their laptop we can do nothing with the image size or colour rendition. WYSIWYG.
- When speakers use their own kit , and it does not match your exacting colour requirements, I suggest you discuss it directly with them.
- We are going to introduce some target pictures for control purposes.
- We need to ensure that the panel display is not used in parallel when used in anger
- The leader of the meeting, will try to tell you what kit is being used.
- Make sure you arrive early to set-up the projection kit for the night, as a members society, its everyone's responsibility

# Conclusion

- Why Calibrate
  - What to Calibrate
  - How to Calibrate
  - Our projection kit
  - Thursday Night Projection
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- Coming Later
    - Our Flickr Site