

Digital Projector Calibration, Profiling and Use for Competitions

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Digital projectors that are used for FSLPS inter-club competitions should be calibrated and profiled. Suggested guidelines for doing this are given here.

A colorimeter, such as the Spyder 3 Elite, can be used to calibrate and profile the projector, and it will also calibrate and profile displays. They currently cost just over £100. A number of SLF clubs have one, so ask around if your club doesn't.

Calibration is the process of getting your projector into a known state and usually as close to a standard as possible. Profiling generates a file that allows images to be adjusted so that their colour is as accurate as possible. Calibration and profiling are usually done at the same time. Once complete, it is vital that the projector settings (contrast, brightness, etc) are not changed (until the next time calibration and profiling are done – perhaps 6-12 months later).

Projector Setup

- If you are using a VGA connection between your projector and computer, do not use a VGA extension cable, i.e. the computer needs to be within about 2-3 feet of the projector.
- Do not use the keystone correction feature that is available on your projector. This invariably degrades the image quality, especially around fine detail. Adjust the height of the projector stand and screen, and if necessary tilt the screen to eliminate keystone problems.
- Do not use beaded screens for digital projectors. They cause Moiré patterns particularly for viewers who are at an angle to the screen. A plain white screen is best and a white smooth wall can also be very good.
- Switch on the projector lamp as soon as you can before it is needed for the competition or profiling. Being in standby doesn't count! Measurements show that colour is still changing (slightly) after the lamp has been on for 30 minutes, but try to allow at least 15 minutes.
- It is possible that you may need to adjust the refresh rate of your PC's adaptor card to avoid "tearing" of fine detail in the image. In Windows XP:
 - Right-click on a plain area of the desktop and click on *Properties*.
 - Select the *Settings* tab and click on *Advanced*.
 - Select the *Monitor* tab and adjust the *Screen Refresh Rate*. A setting can usually be found where tearing is minimised.
- Always try to operate the projector in the darkest conditions you can. You will never achieve the contrast ratios promised on the projector sales blurb, but it will lack detail in the shadows and give poorer colour saturation with poor blackouts. Indeed, you may not be able to get good calibration and profiling if there is too much ambient light.
- Use *DiCentra* to check for focus and display a selection of images you know well beforehand to check that everything seems ok. It's worth including images with saturated colours, natural scenes, portraits, high-key, low-key and monochrome images.

Projector Calibration

- On DLP projectors there are usually a range of modes such as: *PC*, *Photo*, *Movie*, *sRGB*, and *User*. These vary greatly in power output and colour rendering. *Photo* or *sRGB* are usually a good start. Note that these reduce the projector's output considerably – which is what is needed for competition projection in good blackout.
- Most projectors are intended for office conditions so have much more light output than needed in blacked out conditions. Using *Economy* mode where it is available beneficially reduces light output, and also reduces fan noise.
- If possible, use the premises, computer, screen and projector that you will use for competitions when you calibrate and profile the system. If you can't get access to the hall, at least use the same screen and computer.
- If you are given a choice in the calibration software, set the gamma to 2.2, and the colour temperature to 6500K.
- If the software allows, use it to adjust contrast and brightness to the optimum – the software should help.
- Once the projector has been calibrated and profiled ensure that the projector controls do not get changed. Tape over the projector controls or something!
- Select the newly created profile in *DiCentra* just before the competition starts. You may notice a slight change in colour at this stage, but that's the profile doing its job.

DiCentra & SLF Inter-club Competitions

- When you create rules in *DiCentra* you will need to select:
 - *Inter-Club* competition
 - 8 images per club
 - *Extra Image* as the tie break mechanism (on the *Scoring* tab)
- A sample set of rules is on the SLF web-site
- This means each club must provide 9 images. If they do not, they will be flagged as *Rejected* so the extra image will need to be provided if they are to be included.
- Once the competition has been made a paper scoresheet can be produced for circulation to each club's representative (*File > Reports > Printable Reports > Blank Scoresheet*). The tie break images appear at the end of this sheet.
- Select the correct projector profile in *DiCentra* just before the competition starts. You may notice a slight change in colour at this stage, but that's the profile doing its job.
- The competition itself is run and marked in the usual way. If any clubs tie an indication will show on the title page once all images have been marked.
- To access these, right-click and click on *Tie Breaks*. This will list the ties and the number of clubs involved in brackets. The tie nearest the top of the ranking, e.g. between say 2nd and 3rd place) is at the bottom of this list.
- Click on the relevant entry and then use the arrow keys to step through the tying images. Type in 1 for the top image, 2 for the second and so on as needed.
- Repeat with any other ties if you need to.