Projector Troubleshooting

Mapping is very difficult!

(Even though my projector covers the whole surface needed to map)

Chances are either your projector angle is too aggressive or the lens has a sharp angle built right in due to its lens offset. Traditional Ultra Short Throw projectors (eg “hammerhead” models) have an intense offset which makes them really hard to map with. Try using lens optics that don’t have a massive offset. Traditional optics: short throw, medium throw, long throw and snorkel lenses may solve your problem. See the sections about Lens Types and offsets.

Projector Black is Aggressive

(The lights are off and your content fades to black and suddenly you see the edge of the projection, or you see plaid across a blended projection field.)

- If you can, try to throw a little bit of ambient light on the projector surface, that works wonders. This is also called “trash light.” A good gaffer or lighting designer can step in and make the pain go away.
- Some projectors have black match capabilities, which is designed to help you match black between projectors, especially helpful in blends. However: you can sometimes use this to match black with the room.
- Hard mattes, baby. My short term memory is pretty bad so I’ve probably already covered this, but: using cardboard, wood, or metal, literally make a physical mask in front of the lens. This is a similar concept that ellipsoidal lights embrace. Make sure to never put this directly on a lens - especially tape. Never use plastic for this. Lenses can get very hot. To feather the edges and turn it into a soft matte, you can play with matte material.
- You can use a dowser when media fades to black which is a triggerable hard matte.

Projector Menus Look Good, But Content is Dark. WTF?

Look for a setting on the projector called something like “dynamic black.” Probably developed by the same psychopath that designed “sports mode” or “dynamic contrast” for televisions to make your content look like 1980s 25FPS BBC programming. Point being: turn this off. Impress your clients when they’re disappointed by the brightness by “fixing” this.

Projector black is bigger than content - am I not using the entire sensor?

- In most cases this means you’re sending a resolution that is slightly lower than the projector’s native resolution. Commonly - it is seen when you’re sending 1080 and the projector’s native is WUXGA (1920x1200).
- You should have your content use the whole chip if you can (not for movies tho, those should always be the film’s native)!
- If you can only send content at 1080 because the plumbing limits you (HDBase is sometimes limited to 1080), you can do a squeeze and de-squeeze method. How that works? Using the WUX example:
  - Make your content 1920x1200 where circles look like circles and squares look like squares.
  - There’s some discussion about where the squeeze happens but, I like doing it after rendering. So: render your content at WUX.
  - Force your display output to 1080.
  - The projector will now show your WUX content “squeezed” - circles are ovals, and squares are rectangles.
  - To “desqueeze,” set the projector’s aspect setting to “full” or 16:10.
  - Yay you’ve got a bit more height to play with.

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