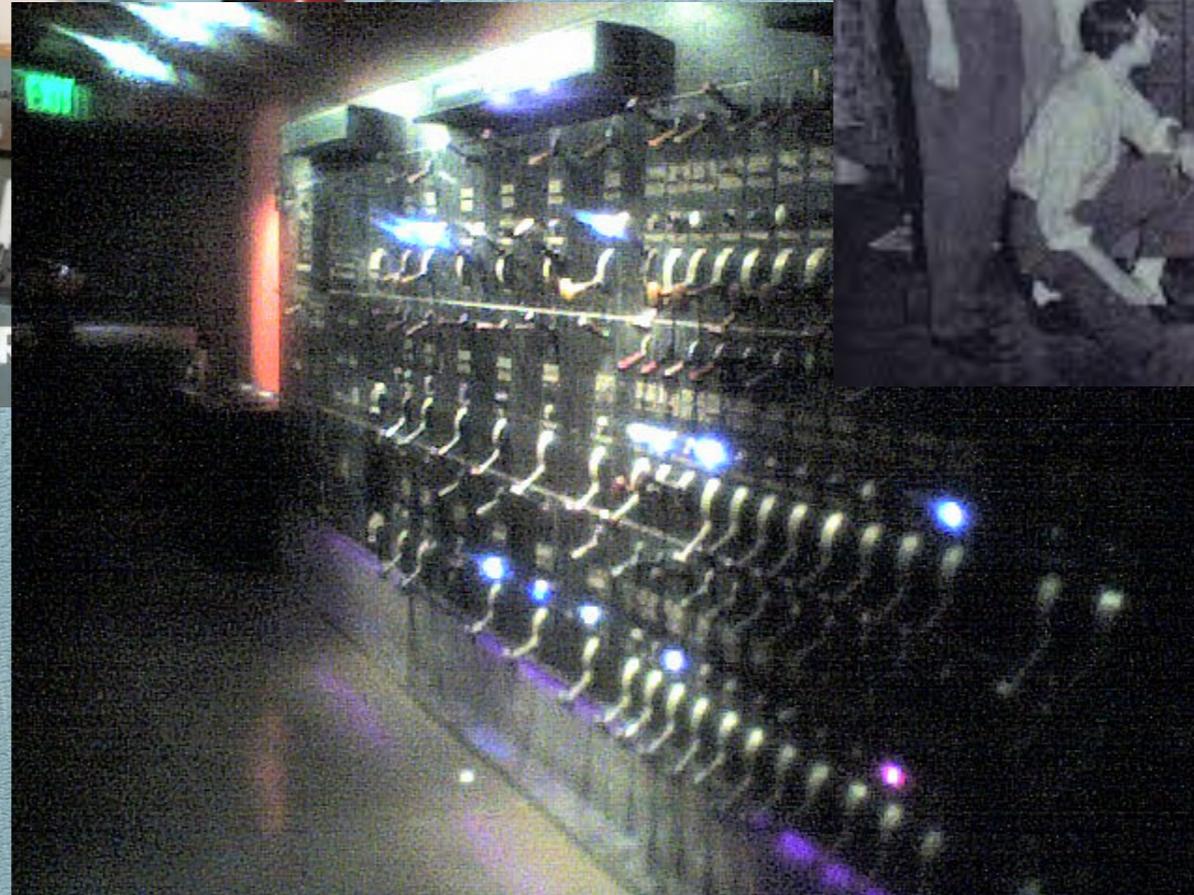


Lighting Design and Technology (abridged)

- *Patches, circuits, dimmers*
- *Boards*
- *DMX*
- *Software*
- *Color Theory*
- *Design processes*



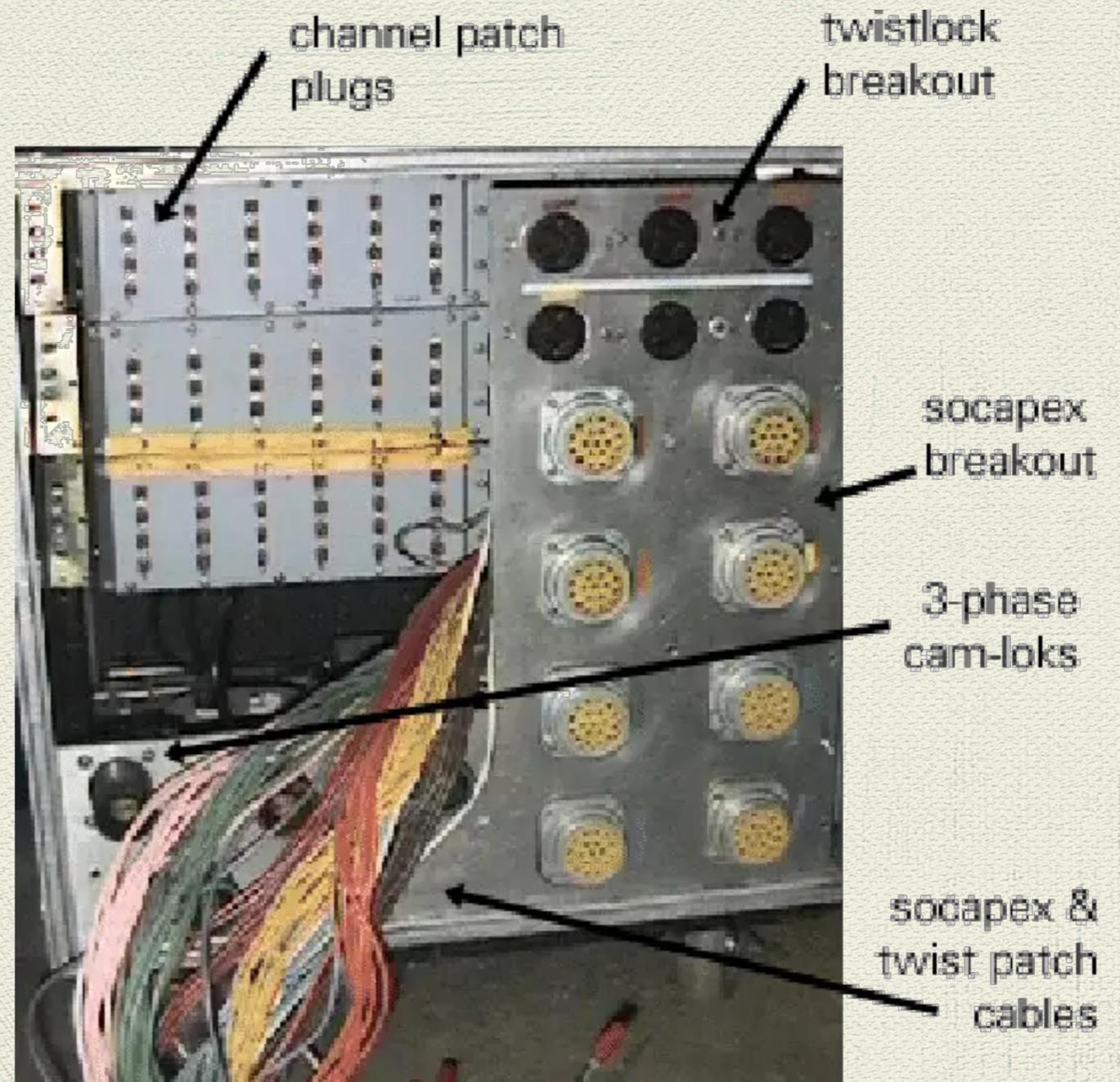
Ye Olde Days

Hard patch panels, lighting bays



Today

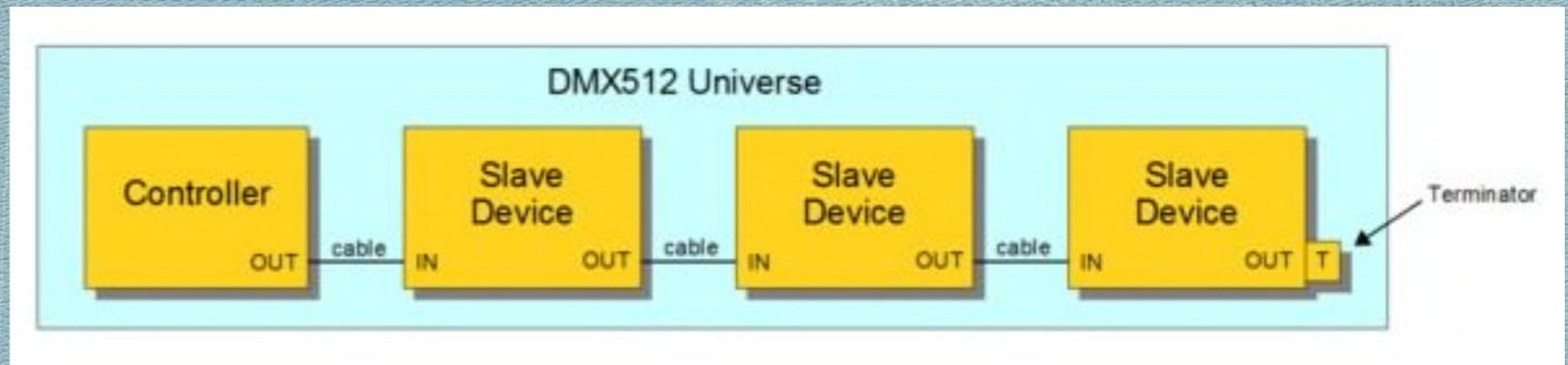
- *Hard patch*
- *Circuits*
- *Dimmers*
- *Soft patch*



Hard / Soft patching, Circuits

- ◆ Dimmers are usually arranged together in racks, where they can be accessed easily, and then power is run to the instruments being controlled.
- ◆ Patch bays used to be the way
- ◆ Now it is more likely to see it as being run straight from the dimmers to the lights via permanent wiring (this is called a circuit). They are hard run and cannot be changed.
- ◆ The assigned connections between the circuits (either at the patch bay or in the form of individual cables) and the dimmers is known as the mains or hard patch. Seen in old theatre's and tours that bring racks
- ◆ Most modern fixed installations do not have patch bays, instead they have a dimmer-per-circuit and patch dimmers into channels using a computerized control consoles Soft Patch.

Dimmers



- ◆ Dimmers range in size from small units the size of a light switch used for domestic lighting to high power units used in large theatre or architectural lighting installations.
- ◆ In the professional lighting industry, changes in intensity are called “fades” and can be “fade up” or “fade down”. Dimmers with direct manual control had a limit on the speed they could be varied at but this issue has been largely eliminated with modern digital units (although very fast changes in brightness may still be avoided for other reasons like lamp life).
- ◆ Modern professional dimmers are generally controlled by a digital control system like DMX
- ◆ DMX512 (Digital Multiplex) is a standard for digital communication networks that are commonly used to control stage lighting and effects.
- ◆ A DMX512 network is called a universe. Meaning each universe holds 512 addresses. Universe 1 ends at 512 and Universe 2 starts at 513=1 and ends at 1,024=512 and so on

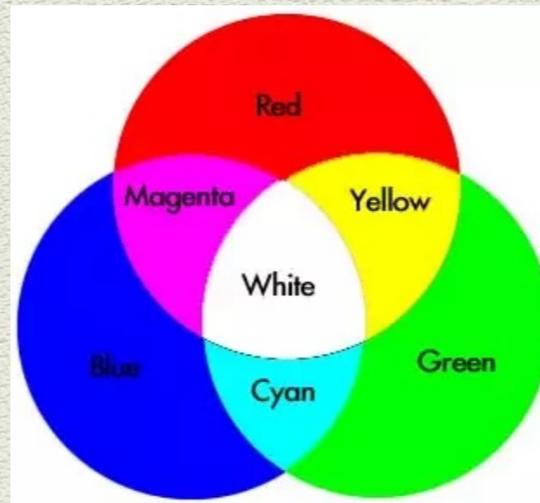
Boards

- ◆ Varying companies such as ETC, Strand, High End Systems, MA Lighting
- ◆ EOS family, Whole Hog, Grand MA, etc..

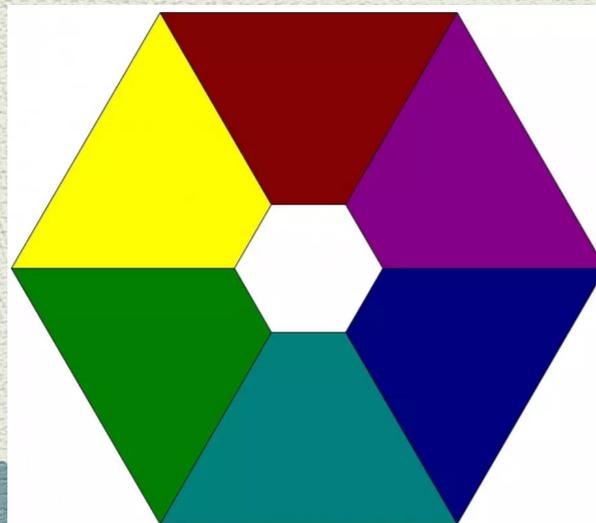


Color Theory

- ◆ <https://www.rosco.com/technotes/filters/technote5.html>
- ◆ <http://www.stagelightingprimer.com/index.html?slfs-color.html&2>



- ◆ Additive - RGB
- ◆ Subtractive - CYM
- ◆ Complementary colors are ones that are across each other in the color wheel



Design process

- ◆ Where to start. READ THE SCRIPT
- ◆ Ideas, brainstorm, picture, RESEARCH
- ◆ Start to hone in on concept
- ◆ Create picture collage pertaining to concept

- ◆ Priority list of systems / needs for show
- ◆ Beam angles / work sheeting / photometrics
- ◆ Start to place instruments on the plot
- ◆ Go back to list to figure where specials will go - sometimes re read the script
- ◆ Pick colors based off of research
- ◆ Search for specific references in script
- ◆ Plot is done it's time to hang and focus
- ◆ Focus is usually when I find that I have a working plot
- ◆ Tech is when all the magic happens for lighting designers. It is our moment to shine
- ◆ Don't forget your magic sheet is your best friend

corbis

Jolly Roger/Pirates

- Jolly Roger and the pirates are ominous, and angular
- Not friendly
- Pirates will have their own special light-to be used as a precursor to them entering



corbis

- When Peter comes back to Neverland, it suddenly shifts to spring
- Springtime represents youth, joy, and rebirth

Springtime



corbis

- Neverbird is the savior
- The escape from the pirates and the rock sinking
- Flying off into the distance like when the hero rides off into the sunset
- Beautiful moment

Neverbird Rescue

