

Creative lighting design

Working with limited resources

Lecture Series

- Creative Lighting
- Safety & Security
- Pre-show preparations
- Running a show
- (Sound Design)



Contents

1. The Directors
2. Planning the Show
3. Types of Performance
4. Some basic terminology
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6. Positioning
7. Ambience and Colour
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1. The Directors

- It is important to meet with the directors as early as possible
- Directors are very busy usually – lighting will be an afterthought
- Important to attend rehearsals
- Establish 'themes' in performance
- Try to imagine as scenes in your head

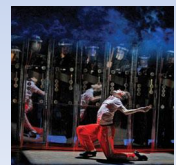
1. The Directors

- Make suggestions but do not pester
- Get opinions on ideas
- Remember limitations of equipment*
- Work hard to compromise if demands too great

*See later

2. The Show

- Think about what is trying to be achieved by the show
- Are there multiple scenes with differing themes?
- Will there be multiple levels (consult with set design)
- Will there be discrete areas?

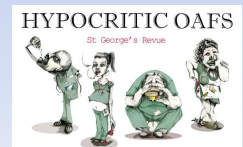


2. The Show

- Will you need follow spots?
- Give follow spotter freedom to help in design and make suggestions
- Work as a team
- Always put past director

3. Types of Performance

- Many scenes, many themes (e.g. Musical, Play)
- Discrete areas, levels, etc (e.g. Musical)
- Lights up, lights down (Some Revue)
- Colourful and constantly changing (Fashion Show)
- Mixtures (Revue, Play, etc)



3. Types of Performance

- Revue (Edinburgh, November Show, Fundraiser, UH)
- Fashion Show (Christmas)
- Play
- Musical
- Tooting Show
- Skip – George's has got Talent
- CU Show
- Awards Show
- Orchestra etc



4. Some basic terminology - Lights

- **Luminaire** – a light and the apparatus to plug the light in and attach it to a bar
- **Fresnel** – spotlight employing a single fresnel lens that produces a soft edged beam, and usually provided with a spherical reflector and a means to adjust the focus from spot to flood. Used as floods in Monckton
- **Profile spot** – ellipsoidal reflector spotlight. A flexible spot that can be adjusted to zoom/focus and can be used to isolate specific areas (shapable). Used in Monckton to highlight faces from front (sidebar mounted)
- **PAR** – cheap, non-adjustable lights. Effectively a light in a can. Birdies are an example (PAR16s)
- **Follow spot** – A manually operated narrow beam spot light usually tripod mounted and used to follow individual faces.
- **Gel** – coloured filter: colour chosen blocks other wavelengths and transmits its own



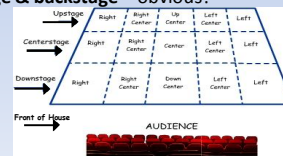
4. Some basic terminology - Control

- **Bar** – horizontal metal tube that hangs from the ceiling to which luminaires are suspended and plugged into
- **Control console** – the part that the operator uses to activate and control the lights
- **Dimmers** – the electronic device which controls the amount of electricity passed to a lantern, and therefore the intensity of the lamp. Sit between the control console and the bar in a dimmer rack.
- **Channel** – a complete control path for signals in lighting or sound equipment channels are 'patched' to a dimmer



4. Some basic terminology - Stage

- **Front of House (FOH)** – area open to the audience (i.e. all but backstage and stage areas)
- **Stage Right** – right hand side of the stage from the performers' perspective (i.e. left from the audience's)
- **Stage Left** – left side as the performer sees it looking out to the audience
- **Upstage** – away from the audience (or back half of stage)
- **Downstage** – towards the audience (or front half of stage).
- **Centre stage & backstage** – obvious!



5. Limitations in the Monckton

- Lighting bars – only over front of house
- Few lights – only own 16
- Colour thus difficult
- Darkness an issue
- Angles important – difficulties due to height of theatre /lack of winches
- Only FOH bars, no over stage bars
- Sound proof booth! ☹
- No comm system

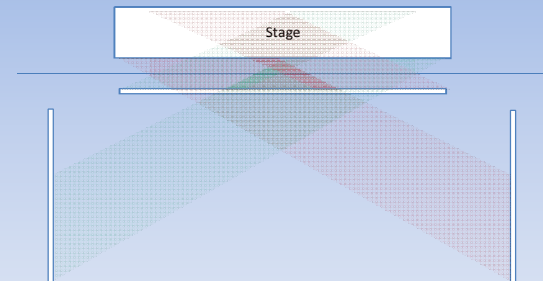
6. Positioning

- 2 main types of light we use
 - Fresnels (RAMAs)
 - Profile spots (Source4)
- Fresnels: Front horizontal bar – central (20-29)
- Profile spots: Side bars (8-11, 14-17)
- Fresnels light the stage overall (from above)
- Profiles highlight faces and specific areas

6. Positioning

- Barndoors
 - allow areas to be sectioned off ('crop')
 - can highlight particular areas of stage
 - lights must be on to see effect
 - for small areas use profile spots **closest** to stage
- Cross lighting
 - Principle of wider area of coverage if lighting is crossed
 - Left lights light stage left (so right as viewed from audience)

6. Positioning



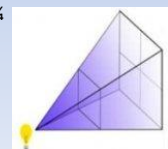
6. Positioning

- Intensity vs area
- Nearer and centre lights
 - Center
 - Foreground
 - Smaller coverage
- Farther and lateral lights
 - Light periphery
 - Background
- Not hard and fast rules
 - Centre/nearer lights will light larger area if used for periphery
 - But will reduce intensity

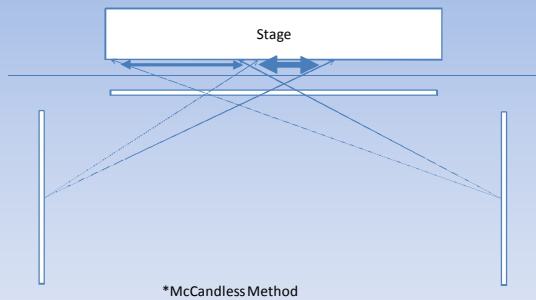
6. Positioning

- **INVERSE SQUARE LAW:**

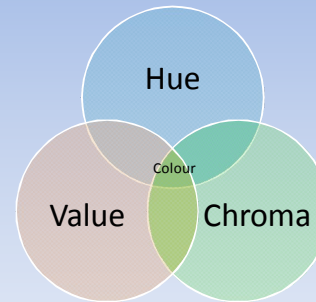
When a beam of light leaves a spotlight, the area illuminated by the beam increases as it goes further away from the spotlight. The same quantity of light must illuminate larger areas. If the distance from the light source to the surface (otherwise known as 'the throw distance') is doubled, the intensity drops to $\frac{1}{4}$ of the original. This happens because the illuminated surface is now four times bigger.



6. Positioning



7. Ambience & Colour



7. Ambience & Colour

- Remember limited by number of fittings/luminaires
- Use of colour should be minimal
- Atmosphere established by using light shades (warms and colds)
- Use in appropriate scenes (hence plan important)
- RGB – blocks 2/3rd of light wavelengths thus less visibility (primary colours)
- CMY – blocks 1/3rd of light – increased visible light transmitted (secondary colours)

8. Pitfalls of design

- Colour overused – remember visibility primary goal of lights! Use a warm and cold and mix to create neutral – most scenes
- Dark colours with normal lighting elsewhere – washed out
- Not planning the show/creating a lighting plan with director
- Inexperience of op
- Trying to do too much with what we have (high expectations of performers etc)

Links

- http://www.theatre crafts.com/glossary/result_scat.php
- <http://www.theatre crafts.com/glossary.shtml>
- <http://www.onstagelighting.co.uk/>
- <http://www.mts.net/~william5/sld.htm>