

Revolutionize your
Lighting Design through a
greater understanding of Angles,
Color, and Paperwork!

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The
Functions
of light

VS.

The
Qualities
of light

The Functions of Light

- ▶ **Composition**
- ▶ **Visibility**
- ▶ **Modeling**
- ▶ **Focus**
- ▶ **Information**
- ▶ **Mood**

The 6 Functions of Light

- ▶ **Composition** – The stage picture revealed by the lighting

The 6 Functions of Light

- ▶ **Visibility** - The responsibility of the designer to provide enough light to reveal the image on stage to the audience.

The Functions of Light

- ▶ **Modeling** - The use of high light and shadow, and direction *to reveal* the three dimensional form of the performer.

The Functions of Light

- ▶ **Focus** – The responsibility of the designer to tell the audience where to look.

The Functions of Light

- ▶ **Information** - The use of light *to establish* the time of day, the season, and the location of the play's action.

The Functions of Light

- ▶ **Mood** - The reflection of the ever changing *emotional content* of the play.

The 6 Qualities of Light

- ▶ Intensity
- ▶ Color
- ▶ Angle or Direction
- ▶ Coverage / Distribution
- ▶ Texture
- ▶ Movement

Quality or Controllable Properties of Light

- ▶ **Intensity** - The amount of light reflected by the performer and the background.

Quality or Controllable Properties of Light

- ▶ **Color** - The color of the light reflected by the performer and the background.

Quality or Controllable Properties of Light

- ▶ **Angle or Direction** - The direction (or angle) of the light determines how the people and objects on the stage are illuminated and viewed.

Quality or Controllable Properties of Light

- ▶ **Coverage / Distribution** - The distribution of light determines which part (or parts) of the stage will be lit.

Quality or Controllable Properties of Light

- ▶ **Texture** - Texture is the quality of the light-- its diffusion or clarity. Does it have a soft edge or is it hard edged? Is the field of the light smooth, diffuse, or is it heavily textured?

Quality or Controllable Properties of Light

- ▶ **Movement** - Movement is any *change* or appearance of change in the intensity, color, direction, distribution, or texture of the light. Such a change is a light cue.

The relationship between the functions and the properties of light!

- ▶ **Visibility** is determined by the *intensity*, *color*, and *direction* of the light.

The relationship between the functions and the properties of light!

- ▶ **Focus** is determined by the *intensity*, *color* and *distribution* of the light.



The relationship between the functions and the properties of light!

- ▶ **Modeling** is determined by the *direction and color* of the light.

The relationship between the functions and the properties of light!

- ▶ **Information** is presented by the *intensity, color, direction*.

The relationship between the functions and the properties of light!

- ▶ **Mood**, or *tone* or *style*, is determined by the ***intensity, color, direction, and distribution.***

The relationship between the functions and the properties of light!

- ▶ **Composition** is the end product of the lighting design and is derived from all the other functions.

References

- ▶ J. Michael Gillette. ***Theatrical Design and Production***, 4th edition. Mountain View, CA: Mayfield Publishing Company. 1999. Chapter 12: Lighting Design
- ▶ <http://www3.northern.edu/wild/litedes/ld1.htm>

Lighting Angles!

Lighting Angles!

- ▶ Front
 - ▶ Straight front (single front light)
 - ▶ 45 deg Front light (2 front lights)
 - ▶ Steep Front

Lighting Angles!

- ▶ Side
 - ▶ High side (Pipe end or Distributed)
 - ▶ Head High (7' to 8' from stage)
 - ▶ Mids (3' to 4' from stage)
 - ▶ Shins (1' from stage)

Lighting Angles!

- ▶ Box Boom position is a combination of Front and Side light.
 - ▶ It is quite useful to have lights in the BB that are the same color as your High side system, especially if you have a deep apron with no lighting position over it.

Lighting Angles!

- ▶ Down or Top
- ▶ High Back
- ▶ Low Back
- ▶ Up light (using footlights or flashlight)

Paperwork!

MAGIC SHEETS, SOFTPATCH, LIGHT CUE SHEETS, LIGHT CUE CHANNEL LEVELS

AISD PAC**UIL Magic Sheet 2018**

1E	16	17	18	19	20	36	37	38	39	40	161	162	163	164	165
Cat 2	11	12	13	14	15	31	32	33	34	35	SR Apron Front Spec N/C SL				
Cat 2	6	7	8	9	10	26	27	28	29	30	2E	704	705	706	
Cat 3	1	2	3	4	5	21	22	23	24	25	1E	701	702	703	
	SR	SR Front Lav R54	SL			SR	SL Front Cool R360	SL			Cat 1	199			
											SR	Down Speciale N/C	SL		
3E	51	52	53	54	55	71	72	73	74	75	91	92	93	94	95
2E	46	47	48	49	50	66	67	68	69	70	86	87	88	89	90
Cat 1	41	42	43	44	45	61	62	63	64	65	81	82	83	84	85
	SR	Down Warm R39	SL			SR	Down N/C	SL			SR	Down Cool R365	SL		
	181	182	183			191	192	193			R54			R89	
	SR	SR Box Bm Fill R57	SL			SR	SL Box Bm Fill R84	SL			171	172		173	174
											SR	Basic Rail Front Fill	SL		
4E	113	114	115			133	134	135			4E	147	148	149	
3E	110	111	112			130	131	132			3E	144	145	146	
2E	107	108	109			127	128	129			2E	141	142	143	
1E	104	105	106			124	125	126			SR SR HS Gobo Wash N/C SL				
Side work	101	102	103			121	122	123			4E	157	158	159	
	SR	High Side SR R321	SL			SR	High Side SL R55	SL			3E	154	155	156	
											2E	151	152	153	
											SR	SL HS Gobo Wash N/C	SL		
3E	305				306	2E	258	259	260	261	262	263	264		
1E	303				304	2E	261	262	263	264	265	266	267		
SR	LED HS VLX Wash	SL				SR	LED Down Wash	SL			4E	268	267	268 278 279 280
											SR	LED Cye Lights	SL		

US Traveller -----

NS Traveller -----

Bold = group # for row
Bold & Italic = group # for system

Black Box Magic Sheet

	Front Light ↘	R360
27	28	29
24	25	26
21	22	23

↙ Front Light		R54
37	38	39
34	35	36
31	32	33

	Front Light ↗	R54
7	8	9
4	5	6
1	2	3

↖ Front Light		R360
17	18	19
14	15	16
11	12	13

	Specials	N/C
47	48	49
44	45	46
41	42	43

	Top Wash	R68
57	58	59
54	55	56
51	52	53

	Top Wash	R321
67	68	69
64	65	66
61	62	63

ETC ELEMENT Soft Patch

Production

Black Box Repertory Plot

Board Operator

Date

March 1, 2018

Channel Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Address Number	62	54	49	61	63	136	66	184	137		47	43	121	190	126	125	172	157	120	
I. D. & Notes	A1/ DSR	A2/ DSC	A3/ DSL	A4/ MSR	A5/ MSC	A6/ MSL	A7/ USR	A8/ USC	A9/ USL		A1/ DSR	A2/ DSC	A3/ DSL	A4/ MSR	A5/ MSC	A6/ MSL	A7/ USR	A8/ USC	A9/ USL	
	SR Front R54 Lav Tint										SL Front R360 Blue Tint									
Channel Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Address Number	70	145	147	75	88	178	78	90	89		176	162	113	175	98	109	99	97	102	
I. D. & Notes	A1/ DSR	A2/ DSC	A3/ DSL	A4/ MSR	A5/ MSC	A6/ MSL	A7/ USR	A8/ USC	A9/ USL		A1/ DSR	A2/ DSC	A3/ DSL	A4/ MSR	A5/ MSC	A6/ MSL	A7/ USR	A8/ USC	A9/ USL	
	SR Back R09 Amb Tint										SL Back R55 Cold Lav Tint									
Channel Number	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Address Number	133	18	173	146	151	156	86	91	95		186	134	174	150	149	153	87	93	94	
I. D. & Notes	A1/ DSR	A2/ DSC	A3/ DSL	A4/ MSR	A5/ MSC	A6/ MSL	A7/ USR	A8/ USC	A9/ USL		A1/ DSR	A2/ DSC	A3/ DSL	A4/ MSR	A5/ MSC	A6/ MSL	A7/ USR	A8/ USC	A9/ USL	
	Down Special Pools N/C (S4 19deg)										Down Lights N/C (S4 36deg)									
Channel Number	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Address Number											301-308	309-316	317-324	325-332	333-340					
I. D. & Notes											SR	CSR	CS	CSL	SL					
											LED Back Wash									
Channel Number	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Address Number	3	6	9	12	4	7	10	15	5	8	11	16					192	73	114	48,53 122
I. D. & Notes	Bm 1	Bm 2	Bm 3	Bm 4	Bm 1	Bm 2	Bm 3	Bm 4	Bm 1	Bm 2	Bm 3	Bm 4					Booth Vest.	SR	SL	Main
	SR Shin				SR Mid				SR Heads								House			

[illegible]

[illegible]

Cue #	Scene	GO	Location	Transition/ location onstage	Probable Approach	TIME
1	Preset	Before house opens				3s
CALL	house to 1/2					
3	Blackout & house out	House Out				3s
5	Prelude	Prelude	textile mill?	Cod starts talking way Off SR TW - onstage edge of cat	High side cool shaft of light on Tex Wk./uplight fill- Dim top with slight front fill light for Cod who is also on Cat, no spill on set	8s
6	Blackout	end of scene				1s
9	Transition	top of scene		DS pigs, moving	top light and straight front, flat, industrial, some texture?	18s
10	Transition	getting dressed		ensemble working		2s
11	I:1	with buzzer	the work floor	abrupt shift into scene lights	top light and straight front, flat, industrial, some texture?	3s
11.5		with buzzer				6s
12	I:1	Taunting Cod	the work floor	Ensemble exitsDSL on apron	down pool on Cod, back fill dirty lav / Cod is focus, others in shadow	7s
19	Transition	end of scene		desk revealed by walls		0s/2s
21	I:2	desk in place	Baquin's office	DSC just up of PL, 10'x8'	all lights form square, straight down key, one from each side for effect, steep front for fill	2s
29	Transition	end of scene		desk and chairs off / pigline in	Hard, Bright straight down DS & MS	1.5s
31	I:3	top of scene	the work floor - loin pulling	Brandon & Roach DSR in front of opaque wall, 2 pigs, no move	Roach stands in front of Prosc - use SL julietsisolated DSR, side light, slight front fill	2s
32		with buzzer				3s
39	Transition	end of scene		pigline out, broom sweeping	bright SL HS whole staghe	0s

[illegible]

School: _____ Sample _____

Light Cue Channel Level Sheet

Theatre Director: _____

Light Board Op: _____

CUE #	Fade Time In / Out	Lighting Channel Levels
1	3	1-10 @ 50, 22-24 + 27-29@30, 41-50@85, Gp251@100%Blue & 50%Green
2	3	Repeat Cue 1, Add Gp303@ 100%Blue & 80%Green
3	3	1-50 OUT, Leave LED wash on, Add 702@100, 163@65
4	5	Same as Cue 2
5	2 / 6	62-64 +67-69@100, 22-24 +27-29@90, 2-4 + 7-9@50
6	0	Blackout
7	0.5	199@100, 163@50, Gp251@50%Blue
8	1.5	1+2@85, 81+82@100, 121@60, Gp251@80%Blue
9	5 / 10	4+5@85, 24+25@40, 44+45@85, Gp251@50%Red & 30%Green

	A	B	C	D	E
1	CUE #	Light Cue Numbering System (2 Act Play)		CUE #	Light Cue Numbering System (Dance Show)
2	101	Preshow		1	Preshow
3	102	House to half, curtain speech		2	House to half, curtain speech
4	109	Blackout		3	Blackout
5	110	Transition		9	Transition
6	111	Act 1, Scene 1, First cue		11	First Dance piece, first cue
7	112	Act 1, Scene 1, Second cue		12	First Dance piece, second cue
8	119	Act 1, Scene 1, Last cue (Blackout)		13	First Dance piece, third cue
9	120	Transition Cue		19	First Dance piece, last cue (Blackout)
10	121	Act 1, Scene 2 First cue		20	Transition
11	122	Act 1, Scene 2, Second cue		21	Second Dance piece, first cue
12	129	Act 1, Scene 2, Last cue (Blackout)		22	Second Dance piece, second cue
13	201	Intermission		29	Second Dance piece, third cue (Blackout)
14	211	Act 2, Scene 1, First cue		30	Transition
15	212	Act 2, Scene 1, Second cue		31	Third Dance piece, first cue
16	219	Act 2, Scene 1, Last cue (Blackout)		32	Third Dance piece, second cue
17	220	Transition Cue		39	Third Dance piece, third cue (Blackout)
18	221	Act 2, Scene 2 First cue			
19	223	Act 2, Scene 2, Second cue			
20	229	Act 2, Scene 2, Last cue (Blackout)			

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