Types of Cuing

Cue: A given **look** on stage, composed primarily by adjusting the intensity of a number of lighting instruments. More modern lighting equipment allows color, position, sharpness, gobo, and other attributes to be adjusted and stored within a cue.

Snapshot Cues: A snapshot cue contains all of the information for a given look. That is to say, if the cue were moved to a different place in the cue sequence (or **stack**) it would still look exactly the same.

Tracking Cues: A tracking cue contains only the information describing the *changes* that occur from one cue to the next.

An example of tracking vs. non-tracking consoles:

Snapshot cues:

Channel	Cue 1	Cue 2	Cue 3	Result
1	50%	20%		0%
2	100%		50%	50%

Tracking Cues

Channel	Cue 1	Cue 2	Cue 3	Result
1	50%	20%		20%
2	100%		50%	50%

Channel	Cue 1	Cue 2	Cue 3	Result
1	50%	20%	0%	0%
2	100%		50%	50%

Notice that, in a tracking system, intensities which are not explicitly changed carry over from the previous cue

?** What would the stage look like after cue 2 in the three examples above? **?

Most modern light boards, or **consoles** allow you to use either a tracking or non-tracking method of cuing. Problems often occur when designers or electricians who are used to one method of cuing sit down at a desk set to use the other. Keep in mind the fundamental difference between the two methods, and the details involved in each will be clearer.

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Light Boards

The Resistance Board

One of the first methods of scene setting involved the adjustment of a room full of valves which fed gas lamps. Reducing the flow of gas reduced the intensity on stage.

The resistance board is only a step above this system. This type of board consists of numerous handles directly attached to resistance dimmers. When it came time to change the scene, one or more operators would physically move the dimmer using arms, legs, shoulders, and sometimes long sticks.

Later, a system was developed which allowed the control arms to be interlocked, so that it only took a single movement in order to adjust a number of lights. The effort required to move a large number of dimmers was still significant.

The Two-Scene Preset Console

The two-scene preset board was initially developed as a sort of remote-control for motorized dimmers. Adjusting a row of easy-to-move sliders sent a signal to motors which moved the tap on autotransformer dimmers. This greatly increased the ease with which a scene could be set, as well as the precision with which a light could be adjusted.

A second row of these control sliders was added, and a **crossfader** was added which allowed the operator to fade between one active row of slides and another.

For example, the “A” row of sliders would be active, meaning the dimmers were under the command of that group of controls. Meanwhile, the operator could preset the “B” row of sliders without affecting the look on stage. When the time came to change the look, a simple movement of the crossfader faded the lights from the “A” scene to the “B” scene.

The Memory Console

From the two scene preset, it was a short but important step to the memory console. Instead of presetting A and B scenes by hand during performance, the look was built during rehearsals and stored in memory or on disk. The simple press of a “go” button faded from one cue to the next.

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Cue Execution

The change in intensities of light is the most fundamental property of a cue. However, the timing of that change can also be very important. There are several timing concepts that are common to most all memory boards. Most light boards have default settings for the following parameters. However, they can be modified either when the cue is written, or later during the rehearsal process.

Fade Time: The amount of time the board takes to fade between one cue and the next. (On an old 2-scene preset board, this corresponds to the rate at which you would move the crossfader.)

Split Time: When programming with split time, the fade time is split into its two components: Upfade of the new cue, and downfade of the old cue. Split times are almost always specified by using a slash: UP/DOWN -- Uptime is nearly always the first number. (On some 2-scene preset boards, the crossfader was split into an A and a B master fader, one ranging from 0%-100% and the other ranging from 100%-0% Moving both masters at the same rate resulted in a plain crossfade. Moving them at different rates allowed skilled operators to fade in split time.)

Autofollow: A cue can be set to follow automatically after the previous cue. A time can be specified which determines how long the board should wait before firing the next cue. Note that different boards specify this time differently: some begin timing when the previous cue BEGINS fading in; some don't begin timing until the previous cue is FINISHED fading.

Linking: A cue can be linked to a different point in the cue stack. This is useful for creating loops or for inserting large blocks of cues without having to renumber.

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Controls on a Memory Console

Grandmaster: The grandmaster is used for proportionally adjusting the overall output from the lightboard. Dropping the grandmaster to 0% will cut off all lights. Placing the grandmaster at 100% will put each channel at its pre-recorded value.

? If channel 1 is recorded at 50% and channel 2 at 80%, and the grandmaster is set at 50%, what will the output of each channel be? ?

Blackout Button: This button does just what you think it does. The output of all channels is instantly reduced to 0%.

Submasters: A submaster acts as a grandmaster for a specific group of channels. Submasters are used to store looks that the designer might want instant access to, as in a live unscripted show. Channels in a submaster are usually logically related in some way. For example, a sub might contain a red, green, or blue wash. It also might contain a multicolor centerstage special.

Submasters are often placed on two rows so that the board can be placed in 2 Scene Preset mode and operated fully manually. In this mode, subs can contain either one or multiple channels, depending on the sophistication of the light board.

Timing Controls: Timing controls allow the board op to take manual control of crossfade and wait times. This is usefull when trying to match a chase sequence to music or to slow the speed of a special effect.

Numeric Keypad: Used to type in numbers such as channels, dimmers, intensities, and timing.

Function Keys: Keys such as **Record, Time, Channel, Dimmer, Display, @,** and others allow you to specify commands to the light board.

Syntax

From board to board, syntax can vary greatly. Below are some examples of operations on a light board. On most boards, there will be a **command line** on which the commands you are typing are visible. Also, the command line will display error messages should you mistype or use the wrong syntax.

Channel 15 @ *Full Enter*
Channel 42 @ 20 *Enter*
Record Cue 3 *Enter*

Cue 3 *Record Enter*

Cue 3 *Time* 5/8 *Record*

Cue 3 *Time* 5/8 *Enter*

Record Cue 3 *Time* 5/8 *Enter*

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Lab Exercise

In groups of two, follow the steps below. Once you have completed them, show me your sequence. Experiment with the board to determine the correct syntax to use.

Patch the board as follows:

Instrument	Chan
1	1
2	2

Cue 0 (Cue zero is a reserved cue in most boards: All channels are at 0)

Cue 1:
1 @ full
2 @ 50
time: 5

Cue 2:
1 @ 0
2 @ full
time: 3/0

Cue 3:
1 @ full
2 @ 0
Time: 3
Cue 3 follows cue 2 5 seconds after cue 2 is finished.

Cue 4:
1 @ 0
2 @ 0
Time: 10
Cue 4 links to cue 1 (IE, when you push GO after cue 4, cue 1 will execute)

Homework

Read Chapter 13 in TD&P

Extra Credit: What is dipless crossfading? Why is it an important consideration? Cite your source.

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