

# How to use a lighting desk - part three

**John Black** explores the background programming that helps you to work faster and more efficiently with your lighting desk

**IN THE SECOND ARTICLE IN THIS** series, we took a look at the three different methods for controlling the lighting fixtures that you have patched in to your lighting desk - individual channel control, submaster control, and cue control. Most lighting desks allow you to utilise all three of these control methods, and it may be that you use all three methods during a single service or event for different purposes. You should now be comfortable with getting your lighting desk to talk with your lighting fixtures and these ways to control single or large quantities of fixtures to recall lighting looks you have programmed.

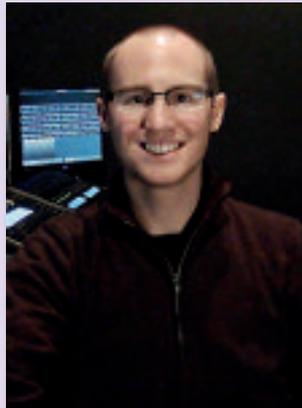
The third article in this series is going to begin to look at some of the background programming that you can do on the lighting desk that will allow quick, easy access to a variety of control parameters and hopefully enable you to work faster and more efficiently. All of the following programming techniques are organisational tools. You can use these to better organise the information in the lighting desk that will hopefully allow you more 'creative time' when programming for your event.

## Fixture Groups

The first organisational tool that I take advantage of is fixture groups. When working with a large quantity of lighting fixtures, the ability to select groups of fixtures (or channels) quickly is very useful. The reason I placed 'channels' in parenthesis is that the terms 'fixture' and 'channel' are now virtually interchangeable and different console manufacturers may use one or the other. When I was growing up, my school's lighting console had 48 control channels (or two scenes of 24 when in two-scene preset mode). I wasn't limited to using 48 lighting fixtures, but I was limited by the number of channels I could use for control. At that time, the term 'fixture' referred to the lantern itself and 'channel' referred to the control channel on the desk. Modern lighting desks are capable of controlling thousands of 'fixtures' all

## MEET THE AUTHOR

John Black serves as the theatre manager for Seoul Foreign School in Seoul, South Korea. Holding a degree in Theatre Design, he provides technical production support and design in three state-of-the-art performance venues on campus for over 40 major concerts and productions a year in the areas of sound, lighting, video and staging. John especially enjoys sharing his passion for entertainment technology with high school students each year through his student production team, *Crusader Live!*, giving students the opportunity to learn and work with professional-level technologies in a demanding production environment.



**John Black, theatre manager for Seoul Foreign School**



**Fixture groups can be created based on hanging location**

patched to individual control 'channels' if need be, so those terms have become synonymous.

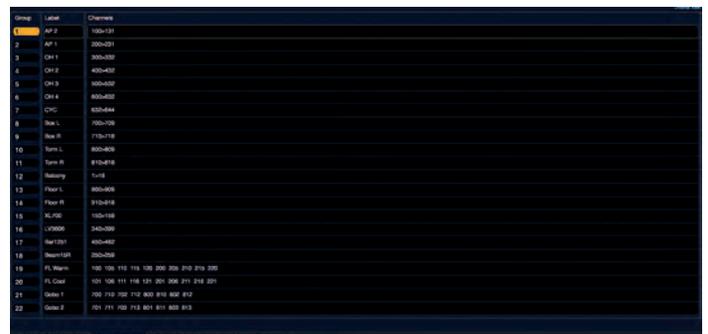
You may be wondering what the difference between a fixture group and a submaster is. A fixture group simply selects a group of fixtures for further programming. Selecting a fixture group does not turn on the fixtures within the group. A submaster is a memory that records, at minimum, an intensity value for all of the fixtures in the submaster. When a submaster is recalled, you will see the fixtures programmed into the

submaster illuminate to the recorded intensity levels (in addition to any other control parameters).

When approaching a lighting project, I like to create fixture groups by breaking down the light plot into logical control groups that I think I will be accessing over and over. This helps me to organise the rig in the console such that there are fewer keystrokes needed to select groups of fixtures during

best for your personal workflow. For me, I always start by creating fixture groups for my conventionals based on hanging location in the plot, followed by fixture groups for each non-conventional lighting fixture type. I create these groups because it gives me fast, easy access when doing lamp checks prior to performances. Image 1 shows fixture groups 1 to 14, which are my conventional fixtures plugged in to installed positions throughout the facility. Fixture Groups 15 to 18 are my groups of multi-parameter fixtures (LEDs and automated fixtures).

Once I've created those fixture groups, I then create fixture groups according to common purposes for the fixtures, whether that be common focus positions or other shared similarities. You will see that starting from fixture group 19 I have placed into groups all of my warm and cool front lights for the whole stage. I also have fixture groups set up for full stage gobo washes of the same pattern, full stage colour wash fixtures, spotlights that would always be used together, and all fixtures associated with a particular area of the stage, to name a few.



**Image 1 - fixture groups**

programming. Image 1 shows fixture groups that I programmed for a recent show on an ETC Ion lighting desk.

My recommendation is to create fixture groups according to your own organisational style - there is no right or wrong here. As the user of the lighting desk, program what works

To recap, fixture groups are memories of groups of channels. You can use and create fixture groups with any equipment patched and controlled by the lighting desk - conventional lanterns, LEDs, automated lanterns, colour scrollers, atmospheric, etc. The command syntax for recording

## Best Wireless Solutions for Worship

Based in Taiwan, MIPRO, an expert in wireless audio, has developed various products designed to provide both clear audio quality and reliable wireless transmission. Their systems easily accommodate multi-channel applications and boast a well-earned reputation for easy installation. MIPRO's goal is to provide the best possible wireless solutions for lecture, worship and musical instrument playing at an unsurpassed value.



### Wireless Microphone Systems

### Boundary / Gooseneck Microphones



### Instrument Microphones

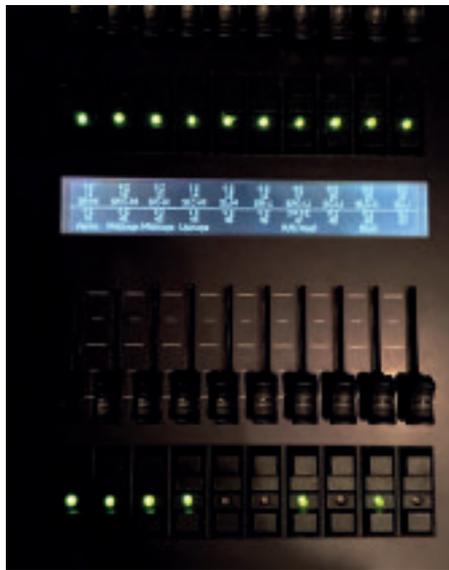


fixture groups is a little bit different depending on the model you are working with, so be sure to refer to your lighting desk's manual.

## Palettes

After creating my fixture groups, I then focus on programming palettes into my desk, which are extremely helpful when working with multi-parameter fixtures. There are four main groups of palettes that can be programmed, which are: intensity, focus, colour and beam. Each palette is a memory for the associated control parameters associated with the palette type: intensity palettes record the intensity values only in each memory; focus palettes record the focus values only in each memory, and so on. Image 2 through Image 5 show some of the palettes recorded in my show file.

I personally do not use intensity palettes very often. I do create a few intensity palettes as shown in Image 2, but I typically will program the intensity values in to submasters or cues manually as opposed to referencing these palettes. The intensity palettes that I do create (Image 2) are divided in to common



**Submasters listed on a lighting desk**

intensities that I use with specific fixture types. For example, the LED wash fixtures in my inventory are at full intensity when the intensity signal is at 50 per cent value. Values from 51 per cent to 99 per cent are a series of built-in strobe features, so I have programmed intensity palettes specific to my common uses for those fixtures.

The palettes that I do use all the time are my focus, colour and beam palettes. I record these palette memories to cover every situation I can think of - it is not likely that you will use all of the available palette memories in a single show!

The focus palette is an extremely useful tool when working with automated fixtures. Focus palettes record the pan and tilt information for the selected fixtures. The rule of thumb that I personally follow is to focus every automated fixture in every position - you never know when or if you'll want a particular fixture focused in a particular location. The positions that you program will of course depend on the setup you have going on stage. Image 3 shows you some of the focus palettes that I have programmed in to my current show.

The colour palette works the same way as the focus palette, but instead records the colour information for the selected fixtures. Again, the rule of thumb that I follow is to record all of the colour choices I am potentially going to use with every fixture. Image 4 shows you some of the colour palettes that I have programmed in to my current show.

Finally, the beam palette records the beam information for the selected fixtures. Just as with the focus and colour palettes, I will record beam palette memories for every possible beam function I think I am going to be using during the event or show for all of the fixtures. Image 5 shows you some of the beam palettes that I have programmed in to my current show.

When creating lighting looks to then record as submaster or cue playbacks, I then make sure that the intensity (if applicable), focus, colour and beam information for the fixtures are recalling the data stored in the palettes. You may ask, how does this save time when programming? First of all, the time that you spend organising your show file and setting up these palettes will enable you to program your actual lighting looks much faster because you can simply recall this data as opposed to manipulating these parameters for each fixture individually. For example, if you are planning to program 20 lighting cues with 30 or more automated fixtures without palettes, you would have to adjust focus, beam, and mix the colour for each fixture before recording every submaster or cue. If you took the time to create the palettes, you simply select the fixture(s), recall the palette(s), record the submaster or cue, and you're off to create the next look having used very few keystrokes or commands to control the fixtures.

Intensity Pal...	Label
1	XL700 @ FL
2	XL700 @ 50
3	Beam @ FL
4	Beam @ 50
5	LED @ 50
6	LED @ 25
7	LED @ 90 (built-in random strobe)

**Image 2 - intensity palettes**

Focus Palette	Label
1	DGL
2	DGC
3	DGR
4	MSL
5	MSG
6	MSR
7	URL
8	UDG
9	USR
10	Drums
11	E Guitar
12	B Guitar
13	Keys
14	Audience Straight
15	Audience Cross
16	Stage Wash Cross
17	Fan Wide
18	Dancers

**Image 3 - focus palettes**

Color Palette	Label
1	Red
2	Green
3	Blue
4	Cyan
5	Magenta
6	Yellow
7	Orange
8	Violet
9	Broadway Pink (R339)
10	Twilight Blue (R75)

**Image 4 - colour palettes**

Beam Palette	Label
1	XL700 - Gobo 1
2	XL700 - Gobo 4
3	Iris @ Open
4	Iris @ 1/2
5	Iris @ Small
6	Frost Filter
7	Prism
8	Zoom @ Wide
9	Zoom @ 1/2
10	Zoom @ Narrow

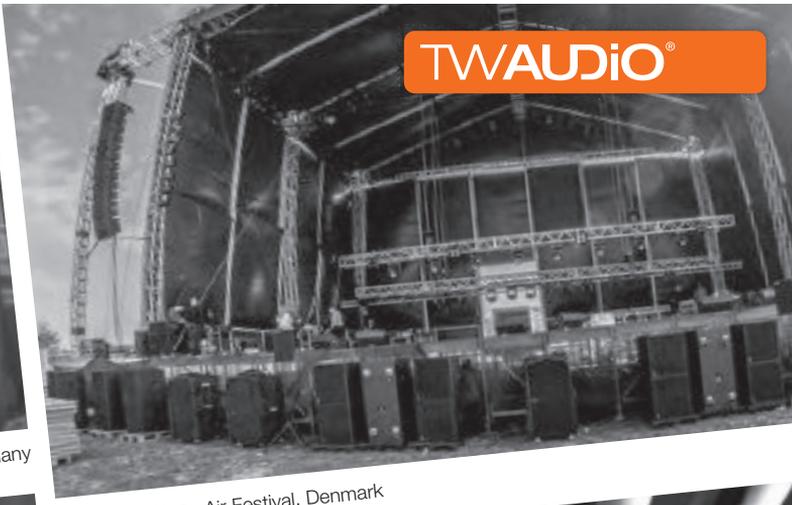
**Image 5 - beam palettes**

Second, and this is perhaps where the biggest advantage is, if you need to make any changes once the playbacks are all recorded, you can simply update the palette memories instead of re-recording the submaster or cue playbacks. For example, if the drummer on stage is set in one place one week, and then sets up 2m to the left the next, simply update the focus palette for the drummer's position. All playbacks that make reference to that focus memory will recall the updated data and the fixtures will be focused in the newly corrected position. By utilising palettes, there is no need to go back and make changes to the playback memories themselves (of course assuming you are running the same 'show' or sequence of cues).

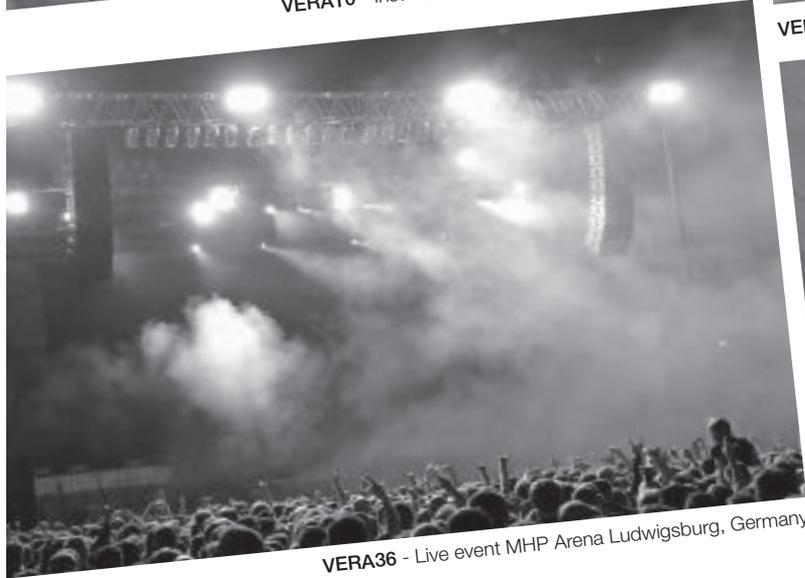
I hope you have gotten a glimpse as to how helpful and time-saving fixture groups and palettes can be when using a lighting desk. The real advantages come when programming larger rigs, or when dealing with multi-parameter fixtures, but these are applicable regardless of the size or makeup of your lighting rig. Setting up these elements will be time consuming, but the payoff comes when sitting to program the show itself or if changes need to be made to your show.



VERA10 - Installation Kulturhaus Wiesbaden, Germany



VERA36 - Open Air Festival, Denmark



VERA36 - Live event MHP Arena Ludwigsburg, Germany



VERA10 - Installation Kochuk Presbyterian Church Seoul, South Korea

# TW AUDIO VERTICAL ARRAY FAMILY...

**...transporting emotions in over 40 countries**

**VERA36**  
"70 cm-class" with 2 x 10" LF, 2 x 8" hornloaded MF, 2 x 1,4" HF

**VERA10**  
Scalable, compact and lightweight, an array with 1 x 10" LF, 2 x 1" HF

VERA36



VERA S33



VERA10



VERA L24



VERA S15



VERA S18



VERA S30

