

LIGHTRONICS

LIGHT.CONTROL.SOLUTIONS



Worship Facility
Lighting Guide

Introduction

Having the right tools to assist you while designing your lighting system is the first step in creating the perfect visual environment. This brochure is intended to help you in the beginning stages of your lighting design. It contains 4 general lighting design packages with equipment lists and a glossary of terms to get you started.

After reviewing this brochure, please feel free to contact the factory via email or phone. Professional lighting consultants and engineers are available to assist you in achieving your goals.

Choosing the right lighting system for your worship facility will depend on the following items:

1. The overall size and unique design of your sanctuary.
2. The interaction between your minister, congregation, choir and musicians.
3. Additional uses of the worship facility, such as weddings, dramatic pageants, and other special events.
4. Architectural lighting design.
5. Control locations for the lighting system

Proper lighting and control can provide an important dimension in your worship experience. Once your needs are determined, you can start designing the right lighting system for your facility.

To begin, we will explain the basics behind a lighting system. There are three main components within a system.

Lighting Fixtures

Lighting fixture types and sizes will be determined by their intended use and placement. From there, you will calculate how many channels of control your system requires and the total wattage for those channels. In other words, how many lighting fixtures are needed and what is their total wattage?

Dimmer System

The next step would be to choose your style of dimmer system. The dimmers provide control over the lighting fixtures. The dimmers are given instructions from the main lighting console, as well as architectural and remote lighting stations. You will select your dimmer capacity and quantities based on the numbers you calculated from the fixture count and wattages. How many lights or channels are needed and what is the wattage for those channels? If you have twenty-four lights you would like to dim individually, that will require twenty-four dimmable channels. You can always choose a larger amount of channels for future growth of your facility.

Control System

The last step in designing a lighting system is selecting a control console and architectural remote stations. The main control console is the product that communicates with the dimmers sending your commands to control the light's intensity. To decide which console is right for your application, you will need to look at the number of dimmed channels or lights. The same concept used when selecting the dimmers applies here. If you have twenty-four lights you would like to individually dim, you will require, at a minimum, a twenty-four channel console. Again, you can always choose a controller with more channels for future growth of your facility.

Now that you have the basic knowledge needed to create the perfect visual environment, please look over these basic system layouts.

If you have any questions, you may contact your local dealer or you can call us directly at 757-486-3588 or toll free at 800-472-8541.

Lightronics offers only the highest quality and value in our lighting control systems. All Lightronics registered products are covered by our five year warranty and if assistance is needed we also offer the best technical support in the business.

Glossary of Terms

ARCHITECTURAL REMOTE STATION - Similar to a light switch in a home, a station is typically a small wall unit which allows the user to easily activate lighting scenes.

CANDELA - The total amount of light emitted by a common candle.

CHASE - Group of lights which are turned on and off in sequence.

CONTROL CHANNEL - An individual control output on a console accessed and regulated by the console slider, switch or button.

CONTROLLER/CONSOLE - Run by a light board operator, the control console stores and executes all of the light cues for a performance.

CUE LIST - A list of events in a production that are signals for specific scenes.

DIMMER - An electrical device used for varying the intensity of lamps in a lighting installation.

DIMMER CHANNEL - A single electrical lighting circuit in a dimmer unit which is remotely or locally controlled independently of other circuits in the unit.

DMX - Digital Multiplex. A high speed lighting control signaling scheme to individually adjust the intensity of multiple dimmer circuits.

DMX-512 – Digital multiplex control signal connecting the lighting console and remote stations to the dimming system.

ELLIPSOIDAL - The most common theatrical lighting fixture named for the shape of its reflector. The Ellipsoidal offers sharp and soft focus with shutters for shaping the light beam.

FRESNEL - A focusable spotlight using a lens that produces a soft edged beam.

LED - Light Emitting Diode.

LED ELLIPSOIDAL - Ellipsoidal Spotlight Utilizing a LED Cluster as the Light Source.

LIGHTING FIXTURE - A complete lighting unit consisting of a fixture housing, lenses, lamp, clamp, safety cable and an electrical connector.

LUMEN - A unit of measurement for Luminous Flux.

LUX - A metric unit of measurement for Illumination, i.e., 1 lumen per square meter.

PAR CAN - The most widely used lighting fixture available in various sizes with the par number indicating the diameter of the lamp. The beam is not adjustable once the lamp is chosen.

PHOTOMETRIC - Documented characteristics of theatrical stage luminaires i.e. light output, beam shape at multiple distances.

PIXELATION - Colored shadows created by using multiple sources of Red, Green, Blue, White and Amber LEDs.

SCENE - The lighting effect created by adjusting several channels of lighting to the desired intensity.

System 1 (seating up to 200)

Lighting Package 1 is designed to illuminate an area 15 by 25 feet. It consists of:

Qty	Product	Description
16	PAR56	lighting fixture with 500 Watt lamp
4	AS-40L	4 channel 600 Watt LMX dimmer
1	TL-4008	16 channel 8 scene controller

The TL-4008 console provides 16 channels of control, 8 programmable scenes and 2 programmable chases. The four AS-40L dimmers will supply 16 dimming channels with a maximum capacity of 600 Watts per channel.



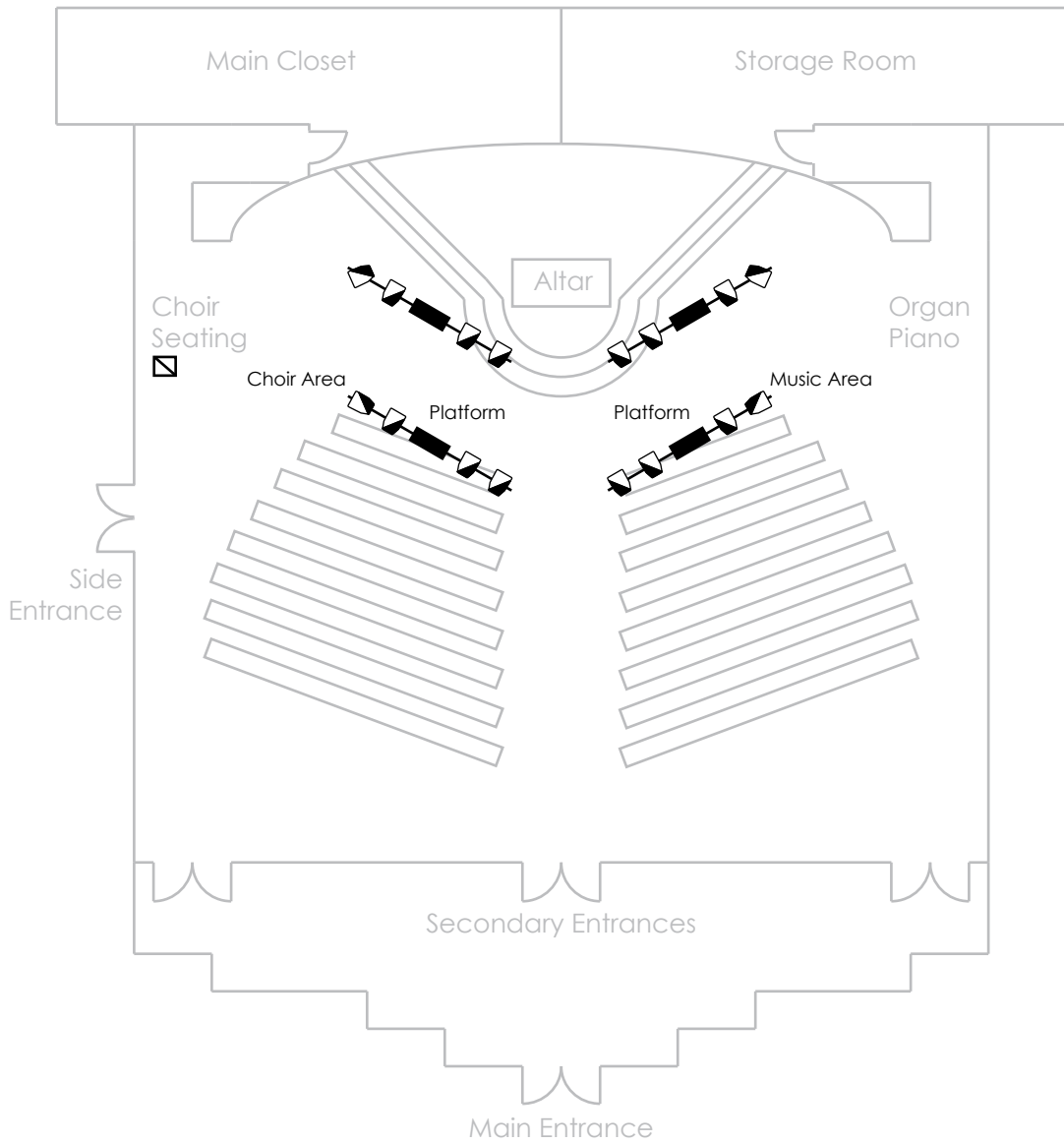
PAR56



AS-40L

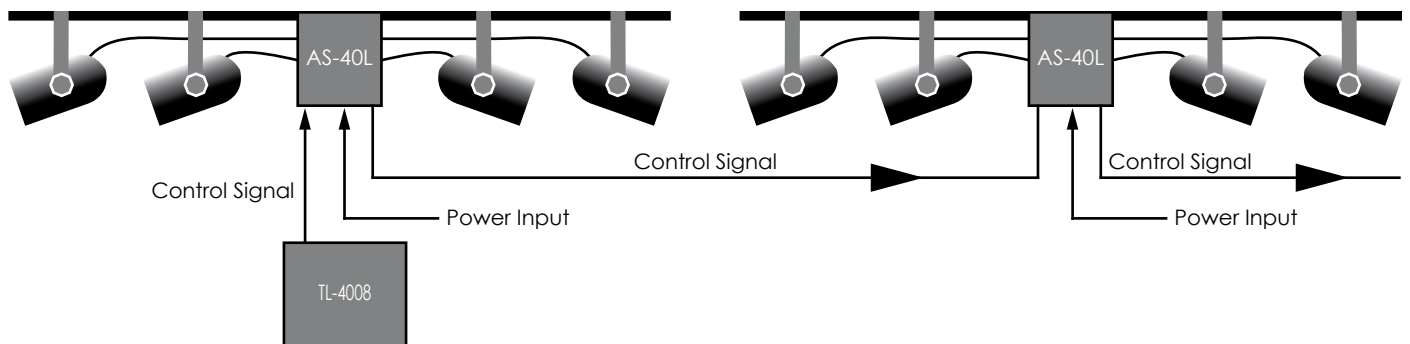


TL-4008



- | | |
|--|--|
| | Lightronics PAR56 Lighting Fixture |
| | Lightronics AS-40L Portable LMX Dimmer |
| | Lightronics TL-4008 LMX Control Console |

Typical System Diagram



System 2 (seating up to 500)

Lighting Package 2 is designed for an area approximately 25 by 35 feet. This package consists of:

Qty	Product	Description
4	FXLD154WAI	LED lighting fixture - white / amber / white
12	PAR56	PAR lighting fixture with 500 Watt lamp
8	ELLIPSOIDAL	lighting fixture with 575 Watt lamp
5	AS-42D	4 channel 1200 Watt DMX/LMX dimmer
1	AC-1109	<i>Unity</i> architectural remote station 8 scene and off
1	SR-516D	<i>Unity</i> DMX 16 scene 512 channel controller with remote
1	TL-5024	24 channel 192 scene controller, DMX required

The six AS-42D dimmers provide 24 dimming channels with each channel rated at 1200 Watts maximum capacity. The lighting console will provide you with 24 channels of control, 192 memory scenes and twelve 20 step chases. The SR-516D will enable you to use the AC-1109 which will allow access of up to 8 pre-stored scenes from one remote location.



FXLD154WAI



PAR56



ELLIPSOIDAL



AS-42D



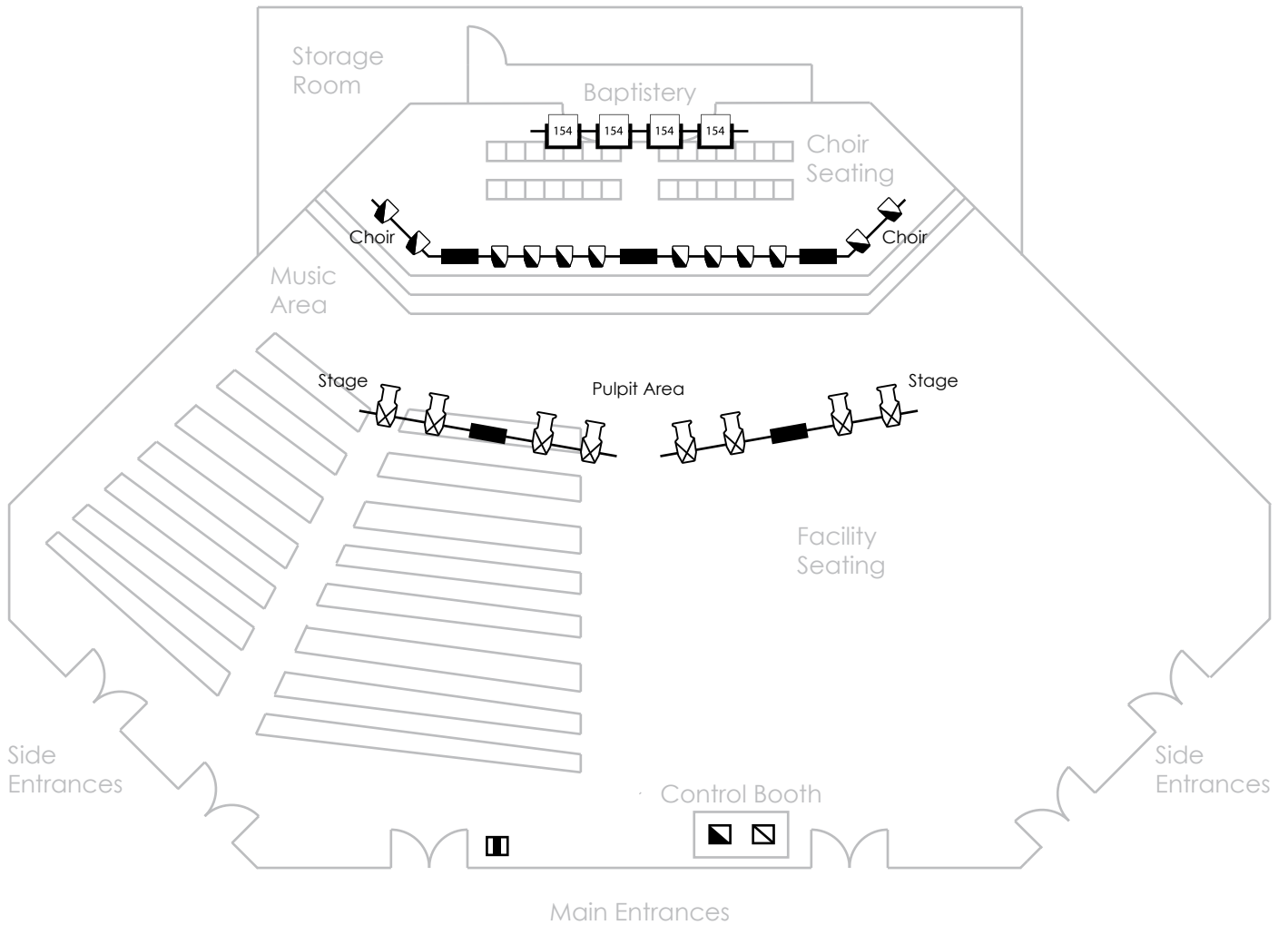
Unity AC-1109



Unity SR-516D

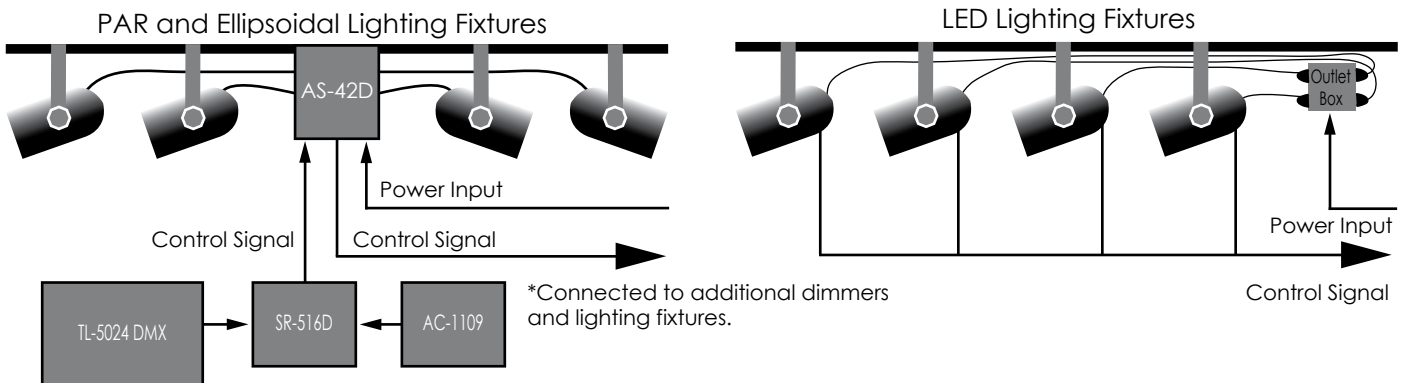


TL-5024



	Lightronics FXLD154WAI LED Lighting Fixture		Lightronics AS-42D LMX/DMX Portable Dimmer
	Lightronics PAR56 Lighting Fixture		Lightronics <i>Unity</i> AC-1109 Remote Station
	Lightronics Ellipsoidal Lighting Fixture		Lightronics <i>Unity</i> SR-516D Architectural Controller
			Lightronics TL-5024 DMX Control Console

Typical System Diagram



System 3 (seating up to 1000)

Lighting Package 3 is designed to illuminate several areas. The platform area, stage area and baptistry. The system will include:

Qty	Product	Description
2	FXLD100E	LED Ellipsoidal lighting fixture - White
4	FXLD1012C4I	LED PAR lighting fixture - 4in1 Quad-Color
2	FXLD1018R4I	LED WASH lighting fixture - 4in1 Quad-Color
6	PAR⁴	PAR lighting fixture with 575 Watt lamp
12	ELLIPSOIDAL	lighting fixture with 575 Watt lamp
2	AR-1202	<i>Unity</i> architectural 12 channel 2400 Watt wall dimmer
3	APP01	<i>Unity</i> simple input remote switch
1	AC-2116	<i>Unity</i> architectural remote station 16 scene
1	TL-2448	48 channel 1200 scene controller

Control will be via the TL-2448 console which provides 48 channels of control, 600 memory scenes, 600 moving light scenes, 36 programmable chases, and a 600 scene cue list. The three AR-1202 units will provide 36 channels of dimming with each channel rated at 2400 Watts maximum. At the main entrance you will be able to activate pre-stored scenes with the AC-2116 and several APP01 remote switches will be placed throughout the area giving availability for simple on/off functions.



FXLD100E



FXLD1012C4I



FXLD1018R4I



PAR⁴



ELLIPSOIDAL



Unity AR-1202



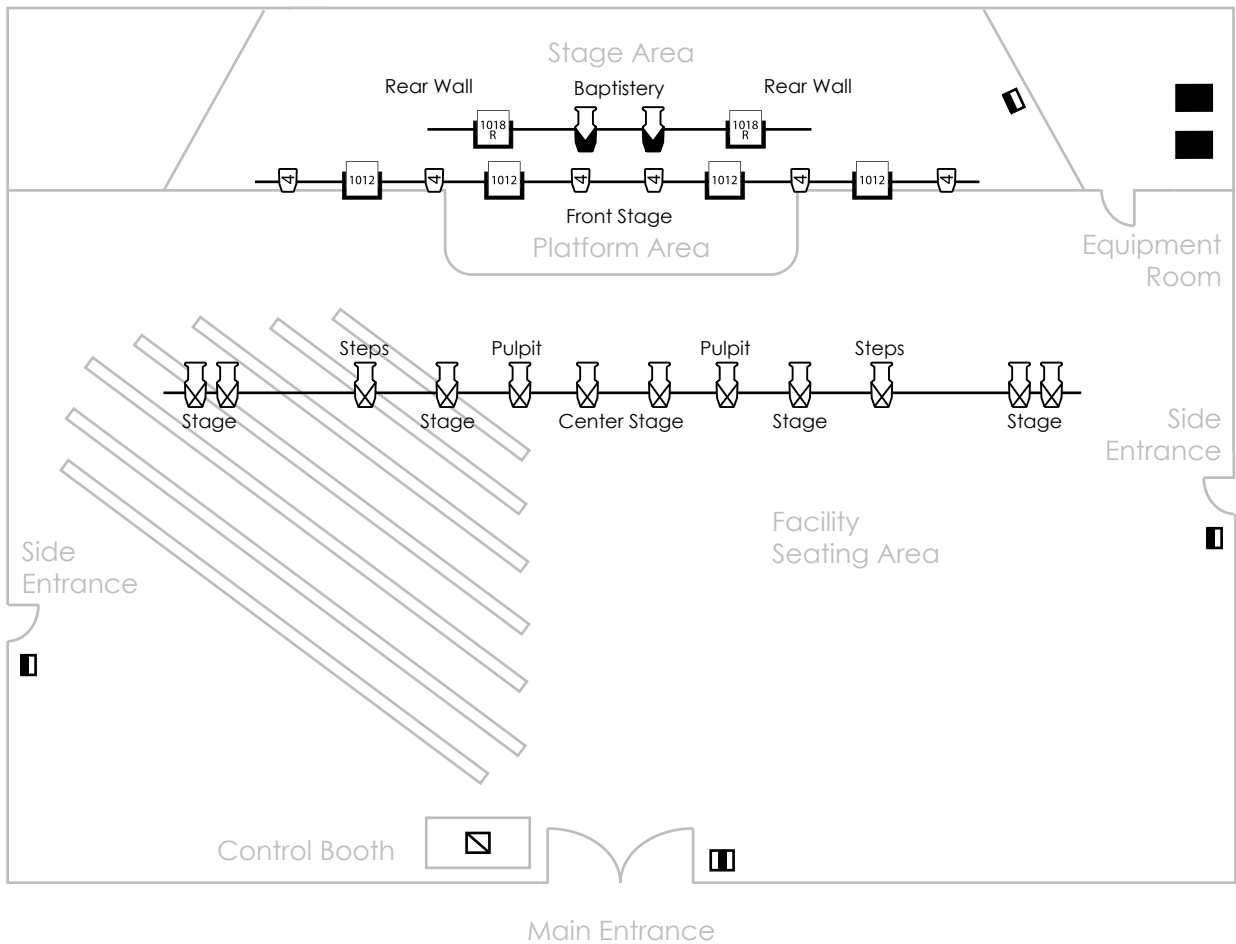
Unity APP01



Unity AC-2116

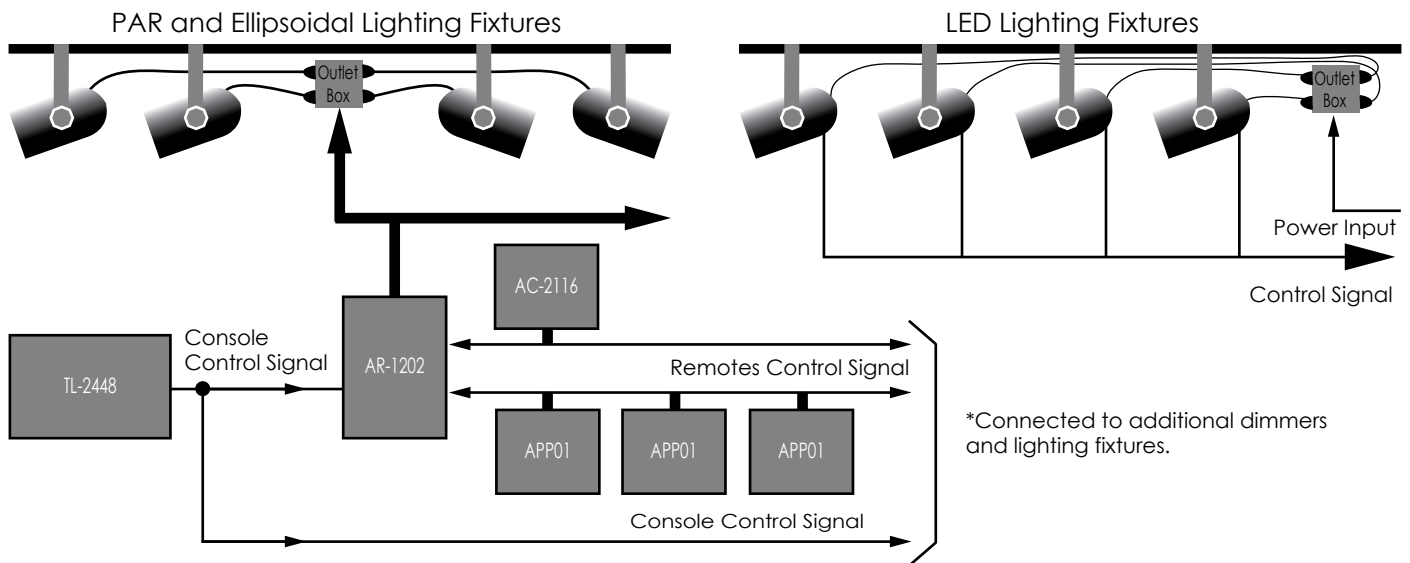


TL-2448



	Lightronics FXLD100E LED Ellipsoidal Lighting Fixture		Lightronics <i>Unity</i> AR-1202 Architectural Wall Dimmer
	Lightronics FXLD1012C4I LED Lighting Fixture		Lightronics <i>Unity</i> APP01 Simple Remote
	Lightronics FXLD1018R4I LED Lighting Fixture		Lightronics <i>Unity</i> AC-2116 Remote Station
	Lightronics PAR⁴ Lighting Fixture		Lightronics TL-2448 Control Console
	Lightronics Ellipsoidal Lighting Fixture		

Typical System Diagram



System 4 (seating up to 2000)

Lighting Package 4 is also designed for several areas. The main area would be the stage and secondary areas such as a choir loft and pulpit are included. It consists of:

Qty	Product	Description
6	FXLD1018C4I	LED PAR lighting fixture - 4in1 Quad-Color
6	FXLD1018R4I	LED WASH lighting fixture - 4in1 Quad-Color
8	PAR⁴	PAR lighting fixture with 575 Watt lamp
12	ELLIPSOIDAL	lighting fixture with 575 Watt lamp
4	DB-612	6 channel 1200 Watt distributed dimming bar
1	AR-1202	<i>Unity</i> architectural 12 channel 2400 Watt wall dimmer
1	IDW112	DMX opto-isolator, 1 DMX-512 input to 12 Outputs
1	APP01	<i>Unity</i> simple input remote switch
1	AC-2116	<i>Unity</i> architectural remote station 16 scene
1	SR-516W	<i>Unity</i> DMX 16 scene 512 channel controller with remote
1	TL-2448	48 channel 1200 scene controller

The eight DB-612 dimmers will provide 48 channels of dimming with each channel rated at 1200 Watts maximum. The lighting console will provide 48 channels of control, 600 memory scenes, 600 moving light scenes, 36 programmable chases, and a 600 scene cue list. The remote stations will enable you to activate specific pre-stored scenes from locations of your choice and the accent lighting instruments will be used to light very specific positions.



FXLD1018C4I



FXLD1018R4I



PAR⁴



ELLIPSOIDAL



DB-612



Unity AR-1202



IDW112



Unity APP01



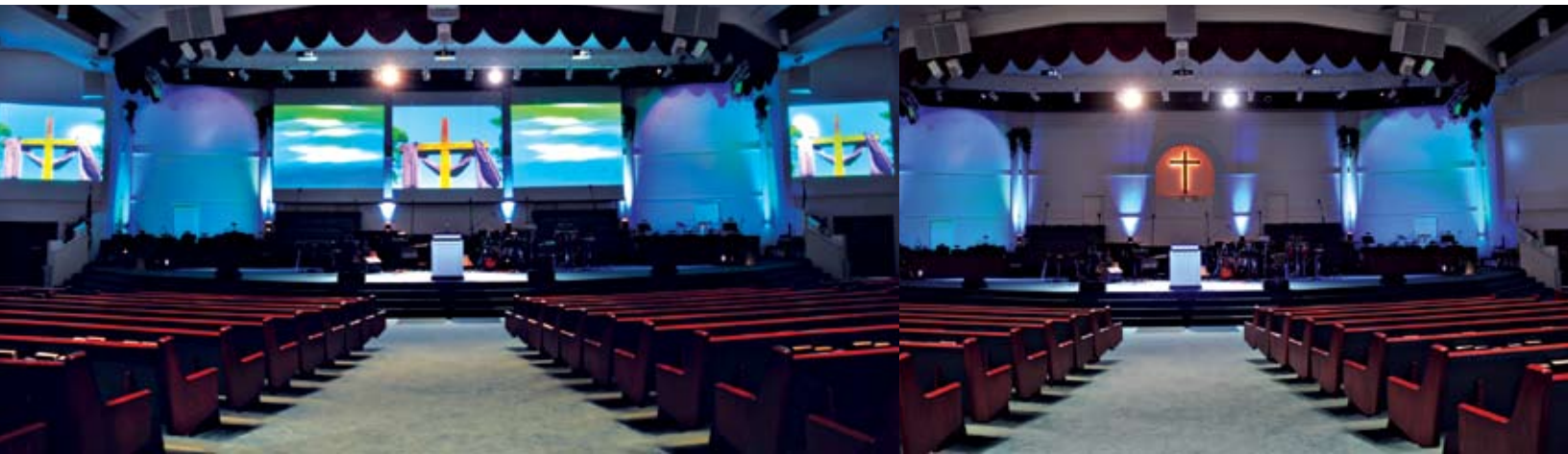
Unity AC-2116



Unity SR-516W



TL-2448



Special Thanks to London Bridge Baptist Church of Virginia Beach, VA

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