

## System Summary

This summary is intended to explain, in general terms, some of the possible uses and reasons for having the recommended equipment shown in the following pages.

These pages are only meant to be a starting point, a tool to begin the design process which will give you a better understanding of the types of components which are needed to put together a flexible and fully functional dimming system.

If, after reviewing this information, you have further questions you are invited to contact a local Leviton/NSI Lighting Controls Representative for further assistance in putting together a system that meets the needs of your facility.

## General Layout

This layout is recommended for a Large Church with a platform located at one end of the facility. This Bill of Material is recommended for a platform approximately 35' by 70'.

## Dimming & Control

The dimmers dedicated to the platform circuits will allow a great deal of flexibility for lighting several different types of services or events which may be presented in a facility of this type. The system also supports the addition of additional lighting through the use of circuit splitters, known as "Two-fers", to add additional fixtures without the need to add dimmers.

The Control Console allows for control of up to 384 Stage Channels and 512 Moving Light Channels. For simplified Moving Light Control, the Console is equipped with seven encoder wheels, a trackball and a pre-programmed Moving Light attribute library. This library can be user defined, as well. This console operates in both two scene manual and multi-scene memory modes. In addition, a total of 192 submasters (24 sliders x 8 pages) can be programmed for manually accessed lighting scenes.

The Master Control Station allows for complete programmability of any of the buttons accessing presets or "looks" in any combination of house and platform dimmers or system functions. The remote stations can be programmed to be independent of the Master Control Station, or they can be programmed to mimic the preset buttons on the Master Control Station.

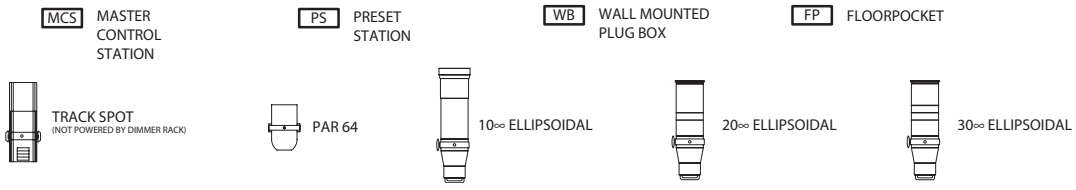
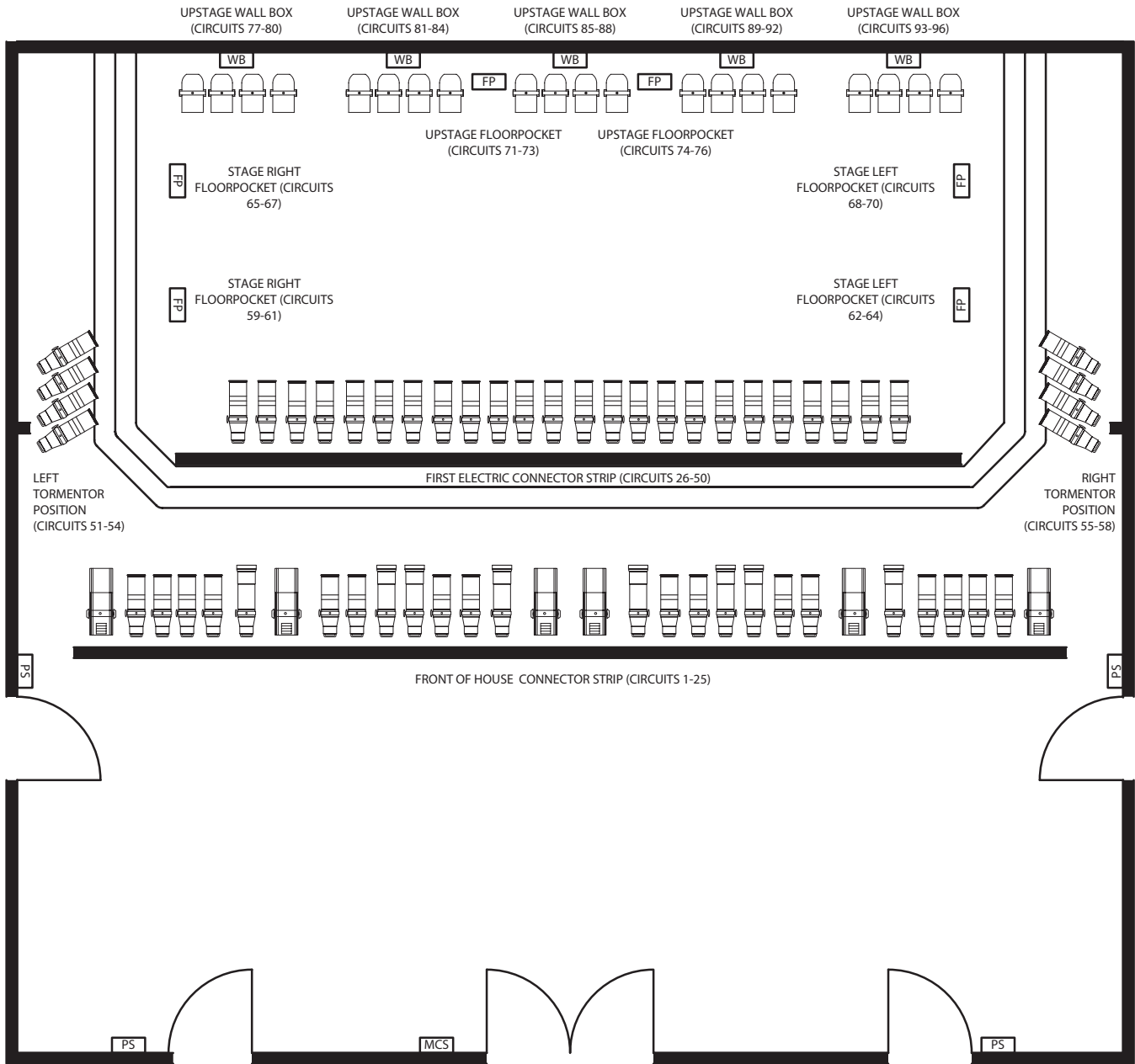
## Power Distribution

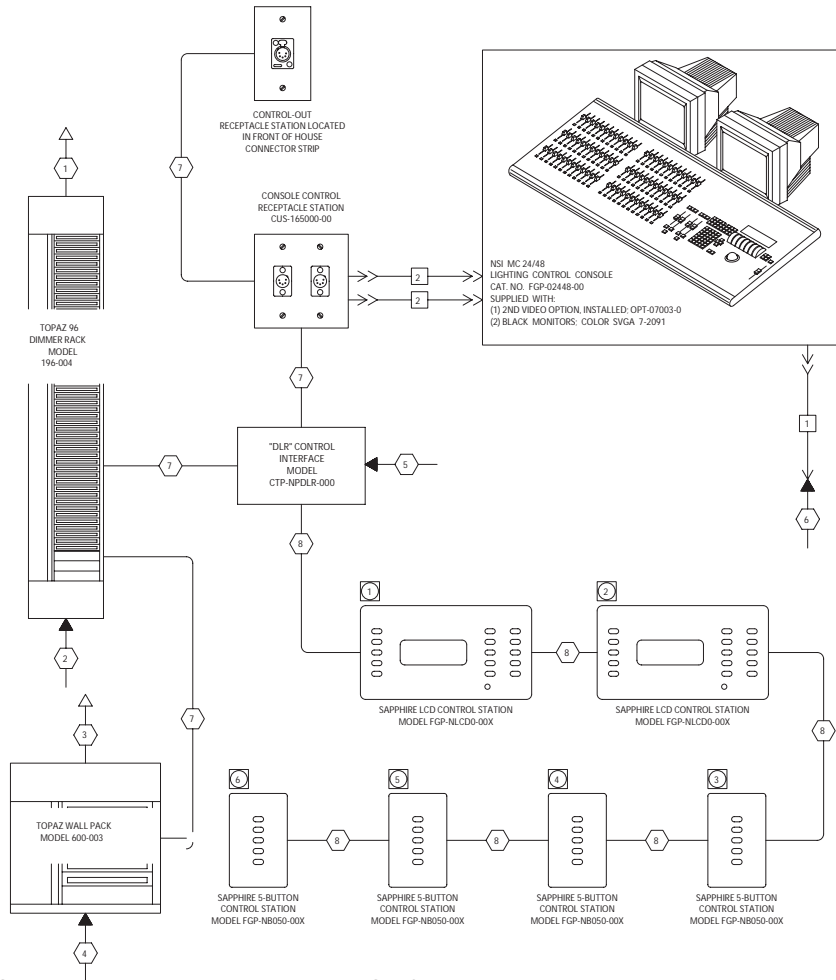
The combination of Connectors Strips, Floor Pockets and Wall Pockets helps to maximize the flexibility of system by providing power distribution to upstage and side areas of the platform, as well as the Front of House, First Electric and Tormentor positions. This allows for back lighting and side lighting, in addition to the traditional front lighting, which draws attention to certain areas and visually increases the depth of the platform and adds emotion to the presentation.

## Fixtures & Accessories

The selection of Fixtures and Accessories provides for a versatile lighting plot using general area lighting for the platform overall while maintaining a small amount of fixtures for highlighting key areas and providing side light & back light. The actual fixture requirement, however, would depend upon the requirements of the facility.

# Church Layout Large






**WIRE RUNS NOT BY LEVITON.**

- 1 LOAD CIRCUITS:  
(96) 20A, 120VAC, 2 WIRE [PULL SEPARATE NEUTRALS]
- 2 MAIN FEED:  
BUSING RATED FOR 800 AMPS. MAX. CAPACITY. 3y,  
4 WIRE PLUS GROUND 208Y/120VAC, 60HZ FEED. AMPERAGE RATING OF MAIN  
DISCONNECT TO BE DETERMINED AND PROVIDED BY OTHERS.
- 3 LOAD CIRCUITS:  
(12) 20A, 120VAC, 2 WIRE [PULL SEPARATE NEUTRALS]
- 4 MAIN FEED:  
BUSING RATED FOR 80 AMPS. MAX. CAPACITY. 3y,  
4 WIRE PLUS GROUND 208Y/120VAC, 60HZ FEED. AMPERAGE RATING OF  
MAIN DISCONNECT TO BE DETERMINED AND PROVIDED BY OTHERS.
- 5 LINE: 15AMP, 120VAC, 2 WIRE PLUS GROUND, 60HZ.
- 6 LINE: 15AMP, 120VAC, 2 WIRE PLUS COMPUTER GRADE GROUND, 60HZ.
- 7 (1) - DMX CABLE: PER WIRING CHART LABELED PER DRAWING
- 8 (1)- LUMANET CABLE: PER WIRING CHART LABELED PER DRAWING.

**CABLES PROVIDED BY LEVITON.**

- 1 6' CONSOLE POWER CORD W/ NEMA 5-15P PLUG PROVIDED WITH CONTROL CONSOLE.
- 2 25' DMX CONTROL CABLE. MODEL CTP-7-3014

**NOTES: (UNLESS OTHERWISE SPECIFIED)**

1. THIS DRAWING DOES NOT INDICATE THE NUMBER OR SIZE OF CONDUITS REQUIRED, BUT THE SEPARATION OF GROUPS OF WIRES. INTERCONNECTING WIRE AND CONDUIT ARE NOT BY LEVITON.
2. WHEREVER CONTROL WIRES SHOWN MUST BE RUN CLOSE TO CLASS 1 REMOTE CONTROL AND SIGNALING CIRCUITS AND/OR ELECTRICAL LIGHT AND POWER CIRCUITS, THESE CONTROL WIRES MUST BE RUN IN SEPARATE METAL CONDUIT.
3. PROVIDE AN EQUIPMENT GROUND, AS REQUIRED BY THE NATIONAL ELECTRICAL CODE, BETWEEN BUILDING SERVICE ENTRANCE AND THE DIMMER EQUIPMENT.
4. CABLE RUNS ARE CONTINUOUS BETWEEN CONNECTED DEVICES. NO SPLICING ALLOWED.
5. "DMX" CABLE RUN FROM END TO END, INCLUDING PLUG-IN CABLE(S), NOT TO EXCEED 1000 FEET. DAISY CHAIN ONLY, NO STARRING ALLOWED.
6. LUMANET "LN" CABLE RUN FROM END TO END, NOT TO EXCEED 2000 FEET. DAISY CHAIN ONLY, NO STARRING ALLOWED.
7. 3 1/2" DEEP INDUSTRY STANDARD GANG BACK BOXES NOT PROVIDED BY LEVITON. BACK BOXES MUST BE GROUNDED.
8.  SET DEVICE ADDRESS TO THE NUMBER SHOWN IN THE SYMBOL.
9. FOR LOW VOLTAGE CIRCUITS, THE MAGNETIC STEPDOWN TRANSFORMER PRIMARY SHOULD BE FUSED. USE MAGNETIC TRANSFORMERS ONLY. (TRANSFORMERS & FUSES NOT BY LEVITON)

LUMANET CABLE WIRING CHART. FOR "LN" CABLE RUNS.  
BELDEN #9829 LOW CAPACITANCE SHIELDED 2 TWISTED PAIR  
& (2) 14 AWG MIN. STRANDED CU CONDUCTORS

COLOR	PAIR NO.	TERMINAL	FUNCTION
SHIELD	SHIELD	-	-
WT W/BL STRIPE	1	1	REM+
BL W/WT STRIPE		2	REM-
WT W/OR STRIPE	2	N/C	-
OR W/WT STRIPE		N/C	-
BLACK (14AWG)		3	COM
RED (14AWG)		4	+V

\* SHIELDS TO BE TIED TOGETHER AND INSULATED.

DMX CABLE WIRING CHART. FOR "DMX" CABLE RUNS.  
BELDEN #9829 LOW CAPACITANCE SHIELDED 2 TWISTED  
PAIR

COLOR	PAIR NO.	PIN/ TERM.
SHIELD	SHIELD	1
WT W/BL STRIPE	1	2
BL W/WT STRIPE		3
WT W/OR STRIPE	2	4
OR W/WT STRIPE		5

# Bill of Material

## Typical Large Church

ITEM	QTY	PART NO.	DESCRIPTION
1.0	1	FGP-196-001	<b>Dimmer Rack (Platform)</b> Topaz 96 Dimmer Rack 96 - 20A Dimmed Circuits 1 - 800A Maximum 208/120VAC WYE, 60Hz, 3ø4W plus Phase Balanced Rack Control Module (Topaz 96, 2 per Rack) Ground Feed, with Main Lugs Only
1.1	48	CTP-166-362	Dual 2.4kW Dimmer Module
1.2	2	CTP-166-392	Phase Balanced Rack Control Module (Topaz 96, 2 per Rack)
2.0	1	FGP-600-003	<b>Dimmer Rack (Houselights)</b> Topaz 12 Wall Dimmer Pack for: 12 - 20A Dimmed Circuits 1 - 80A Maximum 208/120VAC WYE, 60Hz, 3ø4W plus Ground Feed, with Main Lugs Only
2.1	6	CTP-166-362	Dual 2.4kW Dimmer Module
2.2	1	CTP-LEC2102	Remote Control Module
3.0	1	CTP-NPDLR-000	<b>Network Protocol Converter</b> NPC/DLR
4.0	1	FGP-02448-00	<b>Control Console</b> MC 24/48 24/48 Channel Control Console Second Monitor Card Color Monitor - SVGA, 17" Monitor Dust Cover (17") MC 24/48 Console Dust Cover 25' Console DMX Control Cable
4.1	1	OPT-31388-00	
4.2	2	CTP-7-2091	
4.3	2	CTP-7-5107	
4.4	1	CTP-7-5061	
4.5	2	CTP-7-3014	
5.0	1	CUS-165000-00	<b>Control Receptacle Station</b> Receptacle Plate containing: 2 - DMX Input Receptacle
6.0	2	FGP-NLCD0-00W	<b>Master Control Station</b> Sapphire LCD Station w/ 15 Buttons, White <b>Note: Requires 4-gang back box by others.</b>
7.0	4	000-NB050-00W	<b>Remote Station</b> Sapphire Station w/ 5 Buttons, White <b>Note: Requires 1-gang back box by others.</b>
8.0	1	BOI-172000-00	<b>Connector Strip</b> BAL Series Connector Strip, with: 70 - Feet of 4.75" high x 3.375" deep Wireway 25 - 20A Circuits 1 - Terminal Box 25 - 20A 2P&G (Stagepin) 18" Pigtail Receptacles 1 - DMX Output Receptacle 15 - Single Pipe Hanger Brackets and Standard 2" Die Cut Circuit Labels
9.0	1	BOI-172000-00	<b>Connector Strip</b> BAL Series Connector Strip, with: 50 - Feet of 4.75" high x 3.375" deep Wireway 25 - 20A Circuits 14 - 20A L5-20 (Locking) 18" Pigtail Receptacles 11 - Single Pipe Hanger Brackets and Standard 2" Die Cut Circuit Labels
10.0	5	BOI-174000-00	<b>Recessed Mount Plugging Box</b> RM Series Plugging Box, with: 4 - 20A L5-20 (Locking) Flush Receptacles

# Bill of Material

## Typical Large Church *(continued)*

ITEM	QTY	PART NO.	DESCRIPTION
11.0	6	CTP-6-7223	<p><b>Floorpocket</b> Floorpocket, with: 3 - 20A L5-20 (Locking) Flush Receptacles</p> <p><i>Note: All Batten Pipes shall be by others.</i></p>
12.0 12.1 12.2	4 4 4	CTP-157-349 CTP-157-000 CTP-157-214	<p><b>Sidelight Boom Stand</b> Boom Base Stand - 50lbs. 1-1/2" pipe 12' Pipe Boom 24" Double Side-Arm</p>
13.0	1	CTP-6-9610	Cable - Stage 12/3 SO 20A L5-20 (Locking) - 10 foot
14.0	1	CTP-6-9625	Cable - Stage 12/3 SO 20A L5-20 (Locking) - 25 foot
15.0	1	CTP-6-9650	Cable - Stage 12/3 SO 20A L5-20 (Locking) - 50 foot
16.0 16.1 16.2	8 8 9	CTP-650-075 OPT-00006-02 CTP-176-187	<p><b>10 Degree Ellipsoidal Spotlight</b> 10 Degree Ellipsoidal with "C" Clamp, Color Frame, Safety Cable and 3' cord 20A L5-20 (Locking) Connector (attached to Fixture) 750W EHG Lamp (includes 10% spares)</p>
17.0 17.1 17.2	26 26 29	CTP-650-045 OPT-00006-02 CTP-176-187	<p><b>20 Degree Ellipsoidal Spotlight</b> 20 Degree Ellipsoidal with "C" Clamp, Color Frame, Safety Cable and 3' cord 20A L5-20 (Locking) Connector (attached to Fixture) 750W EHG Lamp (includes 10% spares)</p>
18.0 18.1 18.2	30 30 33	CTP-650-035 OPT-00006-02 CTP-176-187	<p><b>30 Degree Ellipsoidal Spotlight</b> 30 Degree Ellipsoidal with "C" Clamp, Color Frame, Safety Cable and 3' cord 20A L5-20 (Locking) Connector (attached to Fixture) 750W EHG Lamp (includes 10% spares)</p> <p><i>Note: The 30 Degree Ellipsoidal Spotlight is shipped with the parts to convert it to a 20 Degree or 40 Degree unit.</i></p>
19.0 19.1 19.2 19.3 19.4	20 20 20 20 22	FGP-PAR64-B OPT-00006-02 CTP-158-003 CTP-138-059 CTP-176-059	<p><b>PAR64</b> Black PAR64 with Color Frame and 3' cord 20A L5-20 (Locking) Connector (attached to Fixture) C-Clamp Safety Cable 1000W FFR Lamp (MFL), 120V (includes 10% spares)</p>
20.0 20.1	6 6	BOI-157000-00 CTP-7-3014	<p><b>Moving Light</b> High End Systems Trackspot with Lamp 25' DMX Control Cable</p> <p><i>Note: Power for Moving Lights shall be by others.</i></p>
21.0	75	BOI-128000-00	<p><b>Color Media</b> Sheet of Lee Color Media, Standard Color</p>
22.0	1	FGP-ECO-020	<p><b>Engineering Check-Out (ECO) Service</b> Engineering Check-Out: Maximum one (1) day ECO by NSI Technician on-site (USA only). This service covers standard NSI equipment only, with no greater than 96 dimmer channels and no greater than 5 control stations. ECO requires a minimum of three (3) weeks advance notice.</p>



**For more information, contact your Leviton representative or:**

**Leviton Manufacturing Co., Inc.**

P.O. Box 2210 Tualatin, Oregon 97062

Phone: (503) 404-5500 • Fax: (503) 404-5600

Tech Line (8:30AM-7:30PM E.S.T. Monday-Friday) 1-800-824-3005

[www.leviton.com](http://www.leviton.com)

