## 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 Medium Church with a platform located at one end of the facility. This Bill of Material is recommended for a platform approximately $20^{\prime}$ by $40^{\prime}$.

## 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 difference in dimmer count between the circuits shown on the System Layout and the Bill of Material is the number of circuits being dedicated to House Lights.

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 Main Control Station allows for 4 programmable zones of control and 6 programmable presets or "looks" in any combination of house and platform dimmers. The preset stations can be programmed to be independent of the Main Control Station, or they can be programmed to mimic the preset buttons on the Main Control Station.

## Power Distribution

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

## 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 backlight. The actual fixture requirement, however, would depend upon the requirements of the facility.

## Church Layout Medium Advanced



FRONT OF HOUSE CONNECTOR STRIP (CIRCUITS 1-24)
 $\square$ PAR 64 号 $20 \infty$ ELLIPSOIDAL



## WIRE RUNS NOT BY LEVITON.



LOAD CIRCUITS (60) 20A, 120VAC, 2 WIRE [PULL SEPARATE NEUTRALS]
2) MAIN FEED:

BUSSING RATED FOR 800 AMPS. MAX. CAPACITY. Зÿ, 4 WIRE PLUS GROUND 208Y/120VAC, 60HZ FEED. AMPERAGE RATING OF MAIN DISCONNECT TO BE DETERMINED AND PROVIDED BY OTHERS.LINE: 15AMP, 120VAC, 2 WIRE PLUS GROUND, 60 Hz .LINE: 15AMP, 120VAC, 2 WIRE PLUS COMPUTER GRADE GROUND, 60 HZ .

5 (1) - DMX CABLE: PER WIRING CHART LABELED PER DRAWING
(1)- LUMANET CABLE: PER WIRING CHART LABELED PER DRAWING.

## CABLES PROVIDED BY LEVITON.

6' CONSOLE POWER CORD W/ NEMA 5-15P PLUG PROVIDED WITH CONTROL CONSOLE$25^{\prime}$ DMX CONTROL CABLE. MODEL CTP-7-3014| LUMANET CABLE WIRING CHART. FOR "LN" CABLE RUNS. BELDEN \#9829 LOW CAPACITANCE SHIELDED 2 TWISTED PAIR \& (2) 14 AWG MIN. STRANDED CU CONDUCTORS |  |  |  |
| :---: | :---: | :---: | :---: |
| COLOR | $\begin{aligned} & \text { PAIR } \\ & \text { NO. } \end{aligned}$ | 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.

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. $31 / 2^{\prime \prime}$ DEEP INDUSTRY STANDARD GANG BACK BOXES NOT PROVIDED BY LEVITON. BACK BOXES MUST BE GROUNDED.
8. $x$ 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)

| DMX CABLE WIRING CHART. FOR "DMX" CABLE RUNS. <br> BELDEN \#9829 LOW CAPACITANCE SHIELDED 2 TWISTED <br> PAIR |  |  |
| :---: | :---: | :---: |
| COLOR | PAIR <br> NO. | PIN/ <br> TERM. |
| SHIELD | SHIELD | 1 |
| WT W/BL STRIPE | 1 | 2 |
| BL W/WT STRIPE |  | 4 |
| WT W/OR STRIPE | 2 | 5 |
| OR W/WT STRIPE |  |  |
|  |  |  |

# Bill of Material Typical Medium Advanced Church 

| ITEM | QTY | PART NO. | DESCRIPTION |
| :---: | :---: | :---: | :---: |
| $\begin{gathered} 1.0 \\ \\ 1.1 \\ 1.2 \\ 1.3 \end{gathered}$ | $\begin{gathered} 30 \\ 18 \\ 2 \end{gathered}$ | $\begin{aligned} & \text { FGP-196-001 } \\ & \\ & \text { CTP-166-362 } \\ & \text { CTP-1666-360 } \\ & \text { CTP-166-392 } \end{aligned}$ | Dimmer Rack <br> Topaz 96 Dimmer Rack 60-20A Dimmed Circuits 1-800A Maximum 208/120VAC WYE, 60Hz, 3ø4W plus Ground Feed, with Main Lugs Only <br> Dual 2.4kW Dimmer Module <br> Airflow Module <br> Phase Balanced Rack Control Module (Topaz 96, 2 per Rack) |
| 2.0 | 1 | CTP-NPDLR-000 | Network Protocol Converter NPC/DLR |
| $\begin{aligned} & 3.0 \\ & 3.1 \\ & 3.2 \\ & 3.3 \\ & 3.4 \\ & 3.5 \end{aligned}$ | $\begin{aligned} & 2 \\ & 2 \\ & 1 \\ & 2 \end{aligned}$ | FGP-02448-00 <br> OPT-31388-00 <br> CTP-7-2091 <br> CTP-7-5107 <br> CTP-7-5061 <br> CTP-7-3014 | Control Console <br> MC 24/48 24/48 Channel Control Console <br> Second Monitor Card <br> Color Monitor - SVGA, 17" <br> Monitor Dust Cover (17") <br> MC 24/48 Console Dust Cover <br> 25' Console DMX Control Cable |
| $4.0$ $5.0$ | 1 1 | CUS-165000-00 <br> FGP-NS041-00W | Control Receptacle Station <br> Receptacle Plate containing: <br> 2 - DMX Input Receptacle <br> Control Station <br> Sapphire Station w/ 4 Sliders \& 11 Buttons, White Note: Requires 3-gang back box by others. |
| 6.0 | 3 | 000-NB050-00W | Remote Station <br> Sapphire Station w/ 5 Buttons, White Note: Requires 1-gang back box by others. |
| 7.0 | 1 | CUS-165000-00 | DMX Thru Wallplate (for Moving Light Control) <br> Receptacle Plate containing: <br> 1 - DMX Input Receptacle <br> 1 - DMX Output Receptacle |
| 8.0 | 1 | CTP-7-4021 | DMX Out Wallplate (for Moving Light Control) <br> Single-Gang Control Wallplate, with: <br> 1 - DMX Output Receptacle <br> Note: Requires 1-gang back box by others. |
| 9.0 | 1 | BOI-172000-00 | Connector Strip <br> BAL Series Connector Strip, with: <br> 48 - Feet of $4.75^{\prime \prime}$ high x $3.375^{\prime \prime}$ deep Wireway <br> 24-20A Circuits <br> 16-20A L5-20 (Locking) 18" Pigtail Receptacles <br> 11 - Single Pipe Hanger Brackets <br> and Standard 2" Die Cut Circuit Labels |

# Bill of Material <br> Typical Medium Advanced Church (continued) 

| ITEM | QTY | PART NO. | DESCRIPTION |
| :---: | :---: | :---: | :---: |
| 10.0 | 1 | BOI-172000-00 | Connector Strip <br> BAL Series Connector Strip, with: <br> 40 - Feet of 4.75 " high x 3.375" deep Wireway <br> 16-20A Circuits <br> 14-20A L5-20 (Locking) 18" Pigtail Receptacles <br> 9 - Single Pipe Hanger Brackets <br> and Standard 2" Die Cut Circuit Labels |
| 11.0 | 5 | BOI-174000-00 | Recessed Mount Plugging Box <br> RM Series Plugging Box, with: <br> 3-20A L5-20 (Locking) Flush Receptacles <br> Note: All Batten Pipes shall be by others. |
| $\begin{aligned} & 12.0 \\ & 12.1 \\ & 12.2 \end{aligned}$ | $\begin{aligned} & 16 \\ & 16 \\ & 16 \end{aligned}$ | CTP-650-045 <br> OPT-00006-02 <br> CTP-176-187 | 20 Degree Ellipsoidal Spotlight <br> 20 Degree Ellipsoidal with "C" Clamp, Color Frame, Safety Cable and 3' cord 20A L5-20 (Locking) Connector (attached to Fixture) 750W EHG Lamp |
| $\begin{aligned} & 13.0 \\ & \\ & 13.1 \\ & 13.2 \end{aligned}$ | $\begin{aligned} & 20 \\ & 20 \\ & 20 \end{aligned}$ | CTP-650-035 <br> OPT-00006-02 <br> CTP-176-187 | 30 Degree Ellipsoidal Spotlight <br> 30 Degree Ellipsoidal with "C" Clamp, Color Frame, Safety Cable and 3' cord <br> 20A L5-20 (Locking) Connector (attached to Fixture) 750W EHG Lamp <br> Note: The 30 Degree Ellipsoidal Spotlight is shipped with the parts to convert it to a 20 Degree or 40 Degree unit. |
| $\begin{aligned} & 14.0 \\ & 14.1 \\ & 14.2 \\ & 14.3 \\ & 14.4 \end{aligned}$ | $\begin{aligned} & 10 \\ & 10 \\ & 10 \\ & 10 \\ & 10 \end{aligned}$ | FGP-PAR64-B <br> OPT-00006-02 <br> CTP-158-003 <br> CTP-138-059 <br> CTP-176-059 | PAR64 <br> Black PAR64 with Color Frame and 3' cord 20A L5-20 (Locking) Connector (attached to Fixture) <br> C-Clamp <br> Safety Cable <br> 1000W FFR Lamp (MFL), 120V |
| $\begin{aligned} & 15.0 \\ & 15.1 \end{aligned}$ | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | $\begin{aligned} & \text { BOI-157000-00 } \\ & \text { CTP-7-3013 } \end{aligned}$ | Moving Light <br> High End Systems Trackspot with Lamp 12' DMX Control Cable |
| 16.0 | 50 | BOI-128000-00 | Color Media <br> Sheet of Lee Color Media, Standard Color |
| 17.0 | 1 | FGP-ECO-020 | Engineering Check-Out (ECO) Service <br> 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. |

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