

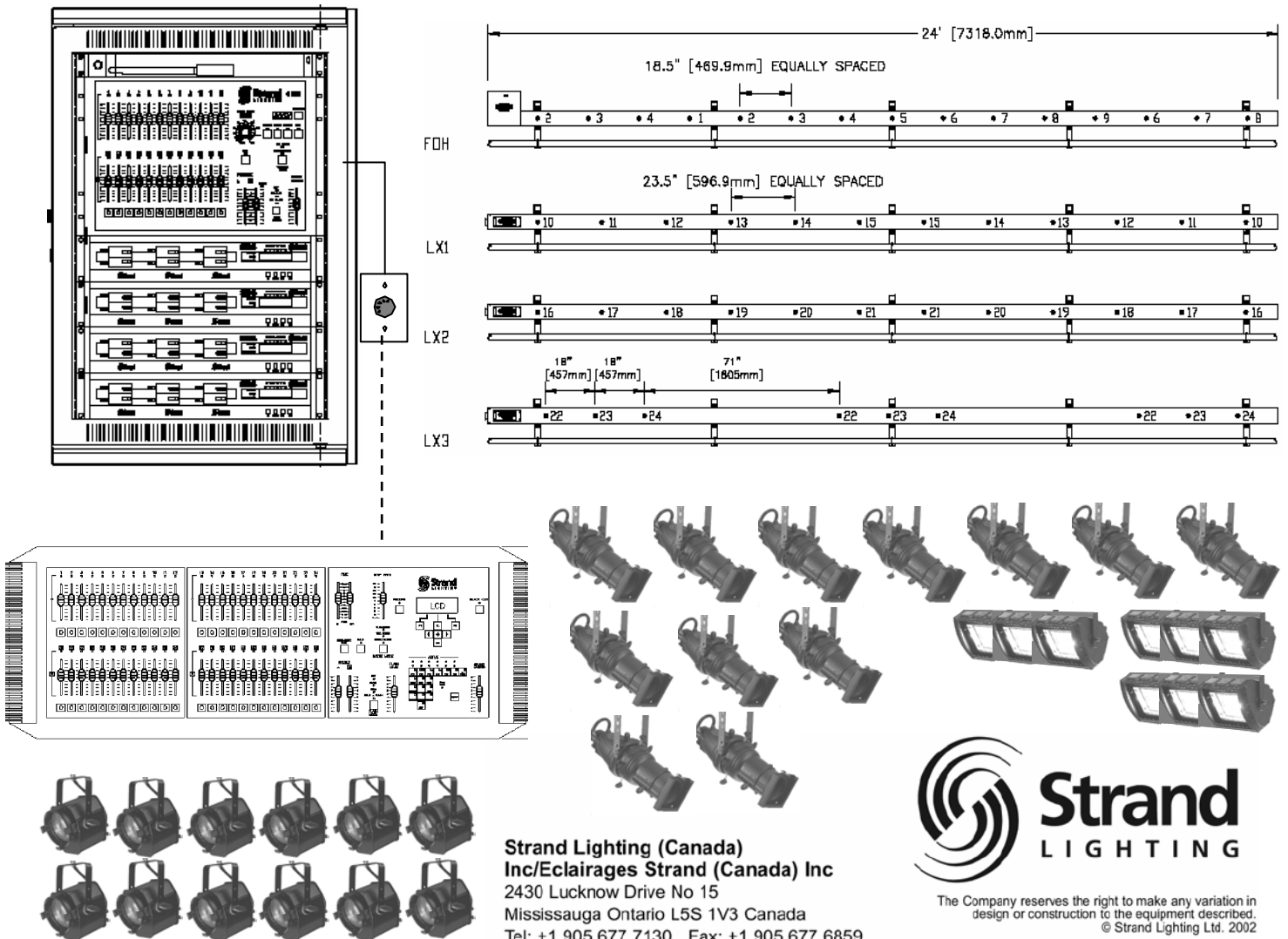


24 Dimmer Advanced System Model 98506

- Four SD 6C dimmer packs
- Permanent Manual & portable Memory lighting console
- Rack with locking front door.
- Twelve 15-32 Zoom spotlights
- Twelve 6 inch Fresnels
- Three 3 Circuit CYC Lights
- Four 24 foot circuit strips

Applications:

- Proscenium openings from 20 feet to 30 feet.
- Secondary School or High school systems, ballrooms, large conference centers
- House of Worship, medium size Theatre, Live music



**Strand Lighting (Canada)
 Inc/Eclairages Strand (Canada) Inc**
 2430 Lucknow Drive No 15
 Mississauga Ontario L5S 1V3 Canada
 Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
 © Strand Lighting Ltd. 2002
 Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.

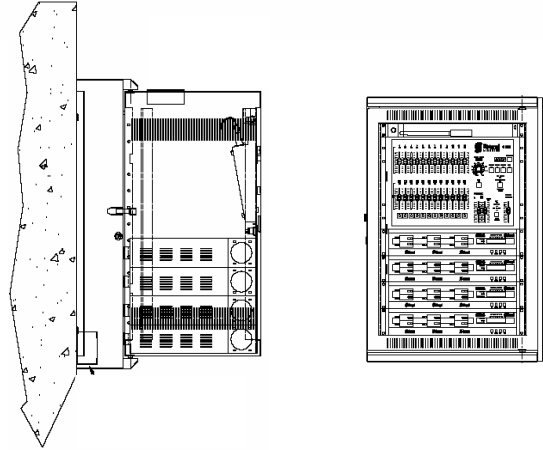
Small System Packages



Strand Dimming Systems

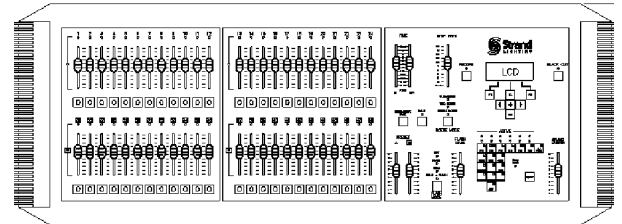
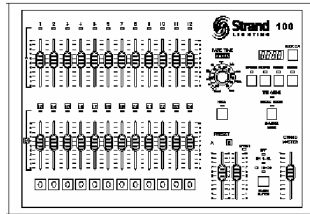
Dimmers:

- Capacity 24 channels of 1800W each
- Secondary input for additional lighting console
- Full output of all channels simultaneously with suitably rated supply.
- Internally configured supply for single phase 120/240V 3 wire + ground or three phase 120/208V 4 wire + ground.
- Toroidal chokes for high quality filtering
- Over temperature protection



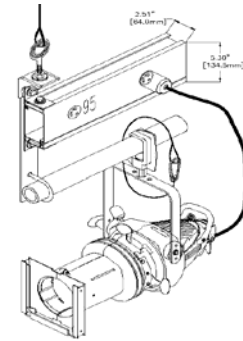
Lighting Console (two provided):

- 100 Series 24 Channel Manual console mounted in the rack for easy operation.
- 200 series 48 channel Memory for portable use or larger shows



Distribution:

- Four 24 foot pre-wired channelmount
- Lightweight Aluminum construction
- 120V, 15A U-ground receptacles
- Terminal strip connections at one end
- Black finish with pre-defined circuit numbers
- Single Pipe hangers standard
- Includes schedule 40 pipe
- Pre-engineered. CSA Listed



Fixtures:

- Professional quality Zoom Spotlight, Fresnel and Cyc Light
- Includes color frame, connector, C-clamp, and safety cable
- Includes long life lamp and one spare of each type
- Zoom focusing for ease of setup
- Wide Fresnel focus adjustment



* *Note: System package does not include installation, wiring, conduit boxes, commissioning or items not described herein.*

**Strand Lighting (Canada)
Inc/Eclairages Strand (Canada) Inc**
2430 Lucknow Drive No 15
Mississauga Ontario L5S 1V3 Canada
Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
© Strand Lighting Ltd. 2002
Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



System Components

Qty	Part No.	Description
SL SERIES ELLIPSOIDAL SPOTLIGHT		
<i>supplied w/ med. 2 pin socket, C-clamp & colour frame</i>		
12	11411	SL Series Spotlight 15-32 degree 575 W
Accessories for SL Series Spotlight (19 - 50 degree)		
12	82003	Safety Cable (18" length / 100 lbs.)
12	98001	15A Grounded 3 Wire U-Ground Parallel Blade
13	GLA	575W Philips Broadway Lamp, 1500 Hours. (Recommended)
FRESNELITES - Theatre		
<i>supplied with medium pre-focus socket, C-clamp,wireguard,colour frame</i>		
12	12081	Fresnelite 6" (152mm) 500/1000W(3380)
Accessories for Fresnelite 6" - Theatre		
12	82003	Safety Cable (18" length / 100 lbs.)
12	98001	15A Grounded 3 Wire U-Ground Parallel Blade
13	BTL	500 W Lamp
CODA CYCLIGHT/BACKDROP FIXTURES		
3	14131	CODA/3 Backdrop/Cyclight w/o connectors
3	82003	Safety Cable (18" length / 100 lbs.)
9	98001	15A Grounded 3 Wire U-Ground Parallel Blade
6	82019	2" (51mm) C-clamp (1555)
10	FDN	500 W Lamp
100 & 200 SERIES LIGHTING CONTROL CONSOLES		
1	61312	12 channel 2 scene preset/ 24 channel single scene manual console
1	64320	24 channel 2 scene preset/ 48 channel single scene memory console
SD 6 DIMMER		
4	75409	6 X15 Amp dimmers with rear panel w/ knock-outs
5	98091	Patch Cable DMX - 1' (A5F to A5M)
1	98513	Wall rack with locking door / fan / Racklite
DISTRIBUTION & ACCESSORIES		
1	98506-001	FOH - 24' blk. / 9 cct. / 15 U-grd / hanger kit
2	98506-002	LX1 & LX2 - 24' blk. / 6 cct. / 12 U-grd / hanger kit
1	98506-003	CYC - 24' blk. / 3 cct. / 9 U-grd / hanger kit
4	98506-004	Schedule 40 pipe
4	98506-005	Pipe connector
2	98506-006	Dimmer Wiring Kit for 12 dimmers c/w flexible cable and terminal strips
1	98506-007	DMX merger
1	98204	Single D5M Receptacle on 1 gang wall plate (DMX in)
2	98401	Apollo Perfgel Colour Media (Lt.Blue #AP4500)
2	98401	Apollo Perfgel Colour Media (Lt. Amber #AP7300)
2	98401	Apollo Perfgel Colour Media (Amber #AP7500)
2	98401	Apollo Perfgel Colour Media (Blue #AP4350)
1	98401	Apollo Perfgel Colour Media (Red #AP8300)
1	98401	Apollo Perfgel Colour Media (Green #AP5300)
1	98401	Apollo Perfgel Colour Media (Blue #AP4250)

List price \$46,000.00

(Canadian Dollars). Dealers or Representatives may sell for less

**Strand Lighting (Canada)
Inc/Eclairages Strand (Canada) Inc**
2430 Lucknow Drive No 15
Mississauga Ontario L5S 1V3 Canada
Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
© Strand Lighting Ltd. 2002
Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



24 Dimmer Advanced System Recommended Design

FIXTURE PLAN

The front of house, (FOH) lighting position is populated with twelve 15/32 zoom ellipsoidal fixtures lamped at 575W for energy saving. The zooms are aimed at three on stage focus positions coloured “cool” and “warm” providing a basic pool of front light that may be controlled with the lighting console to suit “mood” of the scene. The warm and cool fixtures are paired on circuits allowing three spare dimmers for future purchased or rented fixtures for specials or effects. Zoom fixtures are provided for their ease of focusing and variety of beam angles to suit the placement of the FOH circuit strip relative to the stage.

The on stage LX1 and LX2 are populated with theatrical Fresnels lamped at 500W for energy saving. The wide focus angle of the Fresnel allows a three point focus on stage for each LX1 and LX 2. The optical design of the Fresnel allows the beam to be “cut” providing control of light spill with optional barn doors. Circuit pairing and warm/cool media selection provides basic overhead light “fill”. Spare circuits are provided for future purchased or rented fixtures as specials or effects

On stage LX3 accents the advanced system with CYC lighting. The rear-wall fill with colour mixed red, green blue light is a fundamental component of professional lighting design but at an affordable scale in the advanced package. A white painted rear wall or the addition of optional CYC material provides a surface for the wide coverage and balanced floor to ceiling properties of the CYC fixture. Using the attached lighting plan and pre-cut colour media the installer may focus the lighting fixtures and demonstrate a complete, working lighting system to the owner.

DIMMER RACK

The dimmer rack is EIA 19 inch format with swing out centre section and “see through” front door. For ease of installation the lighting console and SD 6C dimmers are shipped out of the rack. The open rear enclosure of the rack may be detached from the main section to make the installation of conduit and boxes easier. When the electrical boxes and flexible conduit are complete, the rack may be mounted on the back box and made ready for the component installation. Starting from at the bottom, the SD 6C dimmers are rack mounted one at a time and wired in by the contractor. In the unlikely event a dimmer requires service, it may be unscrewed from the rack and pulled out with the flexible conduits approximately $\frac{3}{4}$ of the way. A split in the top cover provides access to the “no tools” replacement of plug in Triac and Opto coupler components.

It is recommended to limit the maximum dimmer output voltage, (when the incoming supply voltage is high) by 5% to 10% below the recommended lamp voltage to significantly extend lamp life. This may be programmed on the SD 6C front panel controls.

LIGHTING CONTROL

A simple to operate and permanently available 100 Series console is rack mounted in the system. It can be used to light a show with a few lighting changes or for quick setup stage lighting. A secondary console input is provided for the more advance 200 Series console that may be stored away until a larger show is called for. . The secondary input is merged with the 100 Series rack mounted console in highest takes precedence fashion. Simply connect another console to the secondary input and turn the 100 Series grand master off. However, the 100 series still remains operational to “pile on” levels to the secondary input as a backup console or additional back stage control panel.



24 Dimmer Advanced System Specification

1.0 PURPOSE AND INTENT

- .1 The purpose and intent of these Specifications is to obtain proposals for the supply and commissioning of a new lighting system, The system must be packaged to include dimmers, console, fixtures, distribution, schedule 40 pipe, lamps, plugs, colour media, design layouts, electrical drawings, focus plans and instructions for installation and commissioning. Provide the owner a complete, tested, working and demonstrated system.
- .2 The system shall include a wall mount EIA19 inch equipment rack with rear swing out access and front hinged locking “see through” door. The rack shall contain a rack mounted lighting console and rack mounted dimmers. Provide a secondary DMX input to merge highest takes precedence with the dimmers when another lighting console is plugged in and outputting DMX.
- .3 The equipment shall be supplied by Division 11 or Division 16 as detailed in the “System Components” section included in this document. The equipment shall have a one year manufacturer’s limited warranty. Manufacturers must have Canadian parts and service Authorized Service Centres across Canada and service response time of 24 hours or less.
- .4 The system design is provided as a guide to simplify the engineering, lighting design and installation work and to provide the information for a working and fully commissioned package by the installing contractor.. Approval drawings are by cut sheet sign-off included in the “Design and Installation Manual” included with this document. Where engineers, architects or consultants drawings are provided they supercede the drawings and plans included in this document.
- .5 All dimmers, fixtures, consoles and distribution supplied with the system must be cUL, CSA or ETL approved for use in Canada.

2.0 DIMMERS

- .1 Provide 24 x 1.8kw dimmers with over current protection at 15 Amps each. Dimmer packs shall be rack mounted in 6 or 12 dimmer increments. Dimmers must be field configured for single phase 120/240 volt (2 pole) or 120/208 volt three phase (3 pole) supply. Dimmers must be rated to supply 80% of all outputs continuously and simultaneously with fully rated supply.
- .2 Dimmer packs shall have toroidal chokes for high quality filtering, over temperature protection, cooling fan and front panel LCD with keypad for simple setup.
- .3 Dimmer packs must have programmable Minimum and Maximum level for each dimmer to set occupancy safety levels or top-set dimmer levels to increase lamp life. Dimmers must include DMX addressing with individual patching for all dimmers.

- .4 Top cover access to the dimmer without completely removing it from the rack shall be provided. Triac or SCR pass devices and associated opto-couplers shall be removable without soldering or removal of main dimmer components.
- .5 The dimmer shall indicate the presence of DMX and provide front panel control of dimmer channels without the console signal present.

3.0 LIGHTING CONSOLES

- .1 Rack mounted permanent console
 - .1 Shall be 24 channel with 12 channel two scene preset and 24 channel, single scene manual capability.
 - .2 Split cross fader with time function, bump buttons, Grand Master and Blackout, built in effect operation and DMX 512 output
- .2 Portable console
 - .1 Shall be 48 channel with 24 channel two scene preset operation.
 - .2 Split cross fader with time function, bump buttons, Grand Master and Blackout, 24 effects, two pages of submasters and DMX 512 output with patch

4.0 PROFILE SPOTLIGHTS

- .1 The luminaire shall have a precision optical 15-32 degree zoom system designed around a Dichroic reflector in combination with a high efficiency, low energy consumption, long life 575W lamp.
- .2 The Housing shall rotate 360 degrees to provide optimum luminaire orientation at all times. The shutters shall be stainless steel. The shutters shall operate in three independent planes.
- .3 Pattern and gobo size shall be B. Exterior finish shall be available in black epoxy powder coat. The rear housing assembly shall open for reflector cleaning.

5.0 FRESNEL SPOTLIGHTS

- .1. The luminaire shall be a variable focus Fresnel spotlight designed to accommodate tungsten-halogen or incandescent medium pre-focus base lamps in 500, 750, and 1000 watt sizes. Wide angle coverage 1/2 peak angle 7° - 59° in one lens is required.
- .2 Lens door construction shall be of spun steel for strength and durability. Die cast aluminum accessory clips shall be screw retained to the lens door and shall be capable of holding a combination of a barn door and three color frames and/or scrims.
- .3 The fixture shall produce a defined cut in the projected beam when used with a barn door to control "light spill" on curtains, stage and scenery. Par fixtures that do not provide this feature shall not be acceptable.

6.0 CYC

- .1 The Coda cyclorama luminaires shall be of modular construction to allow for three light units. Each compartment shall accommodate a 500W double-ended tungsten-halogen lamp
- .2 The luminaires may be pipe or floor mounted for even coverage of backdrops and cycloramas. Lamp access shall be through the front of each compartment by removing the wireguard.

7.0 DISTRIBUTION

- .1 The circuit strips shall be Channelmount custom built plug in strip and wire way including a lighting instrument mounting system with schedule 40 pipe. They shall be made from heavy duty, corrosion resistant, light weight (compared to steel) extruded aluminum and pre-wired for simple field connections.
- .2 Splice bars and pipe joiners are supplied with segmented construction to ease assembly shipping. Single Pipe hangers are supplied standard.
- .3 Rigging the Channelmount to the building structure is not included in the system package and shall be supplied and installed by the rigging contractor.
- .4 Terminal strip wiring device shall be provided at one end for contractors tie-in. All receptacles shall be home run to the terminal strip to allow future circuit expansion. All internal wiring to the terminal block shall be #12 AWG and complete from the receptacle to the terminal strip.
- .5 All receptacles are 120V 15A Parallel blade U-Ground, flush mounted. Circuit identification shall be black on yellow adhesive label minimum one inch high.

8.0 INSTALLATION

- .1 All load and supply high voltage electrical wiring, rigid or flexible conduit, boxes, breaker panels and breakers, connectors and low voltage wiring for the secondary input required to install the components specified herein are supplied and installed by the contractor and are not included in this package.
- .2 System commissioning is not included in the system package however, information shall be provided to install, hang, aim, focus and program the lighting system. The manufacturer shall provide 800 number technical support and factory trained staff to provide any additional information to the installing contractor as required.
- .3 The installing contractor shall mount the supplied colour media and aim / focus the fixtures according to the supplied plan and demonstrate the basic operation of the system to the owner at the convenience of the contractor.

9.0 ORDERING

- .1 The system shall be Strand Lighting Canada Model 98506.

Small System Packages



Strand Dimming System

www.strandlighting.com

**Strand Lighting (Canada)
Inc/Eclairages Strand (Canada) Inc**
2430 Lucknow Drive No 15
Mississauga Ontario L5S 1V3 Canada
Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
© Strand Lighting Ltd. 2002
Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



24 Dimmer System Model 98506



DESIGN & INSTALLATION MANUAL

**Strand Lighting (Canada)
Inc/Eclairages Strand (Canada) Inc**
2430 Lucknow Drive No 15
Mississauga Ontario L5S 1V3 Canada
Tel: +1 905 677 7130 Fax: +1 905 677 6859



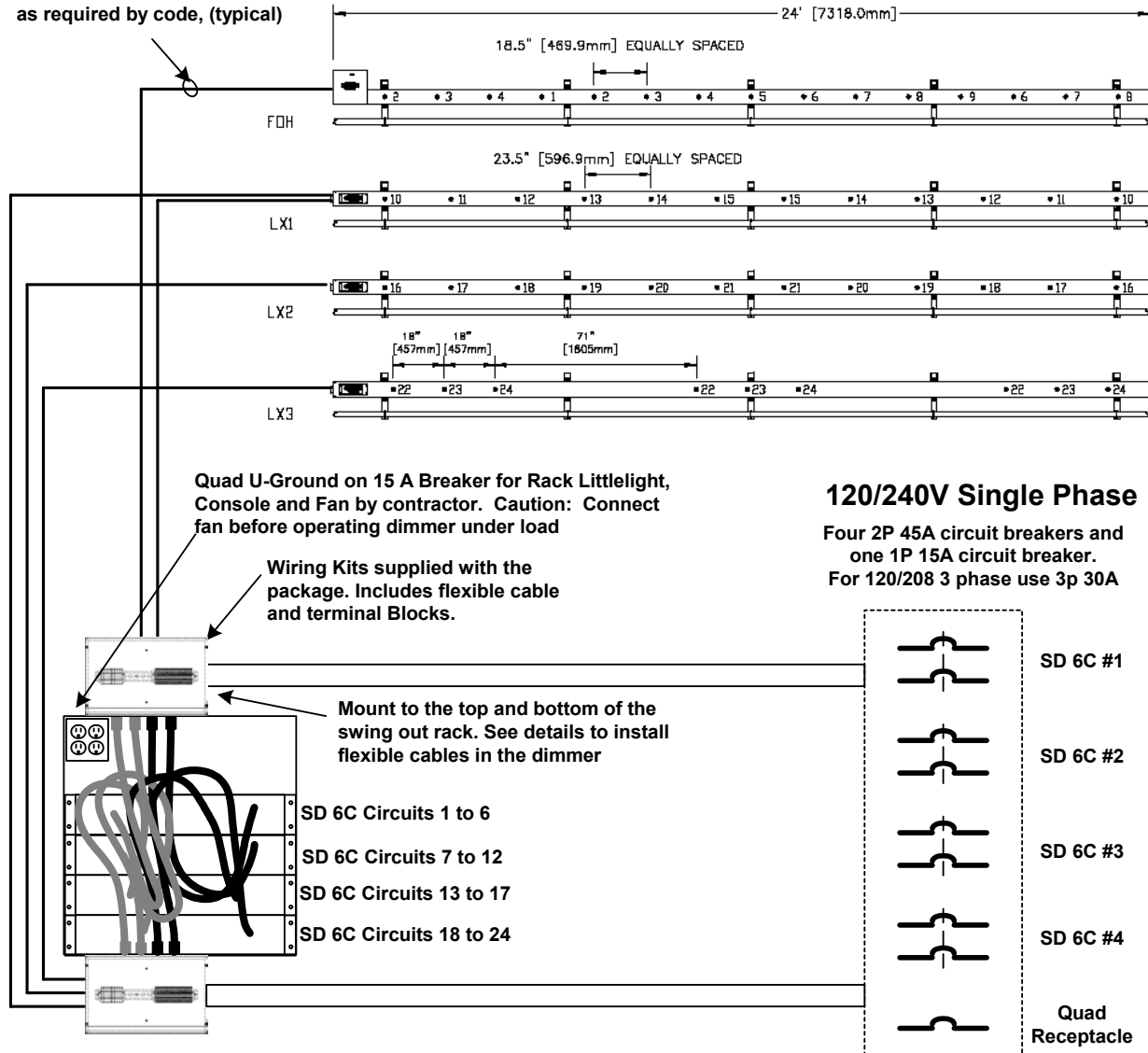
The Company reserves the right to make any variation in design or construction to the equipment described.
© Strand Lighting Ltd. 2002
Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



Small System Packages

Model 98506 High Voltage Electrical Drawings

1 hot, 1 neutral for each circuit number. No shared neutrals. Ground as required by code, (typical)



120/240V Single Phase

Four 2P 45A circuit breakers and one 1P 15A circuit breaker. For 120/208 3 phase use 3p 30A

Note: Electrical panel, wiring, conduit and circuit breakers supplied and installed by contractor. Not included with system package

Note: Channel Mount distribution strips are provided with single pipe hangers. Rigging to structure or "fixture cages" are not included with this system package. Supply and install by a qualified rigging contractor.

Strand Lighting (Canada) Inc/Eclairages Strand (Canada) Inc
2430 Lucknow Drive No 15
Mississauga Ontario L5S 1V3 Canada
Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
© Strand Lighting Ltd. 2002
Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



Model 98506 Low Voltage Electrical Drawings

Components inside wall rack
Rear view shown

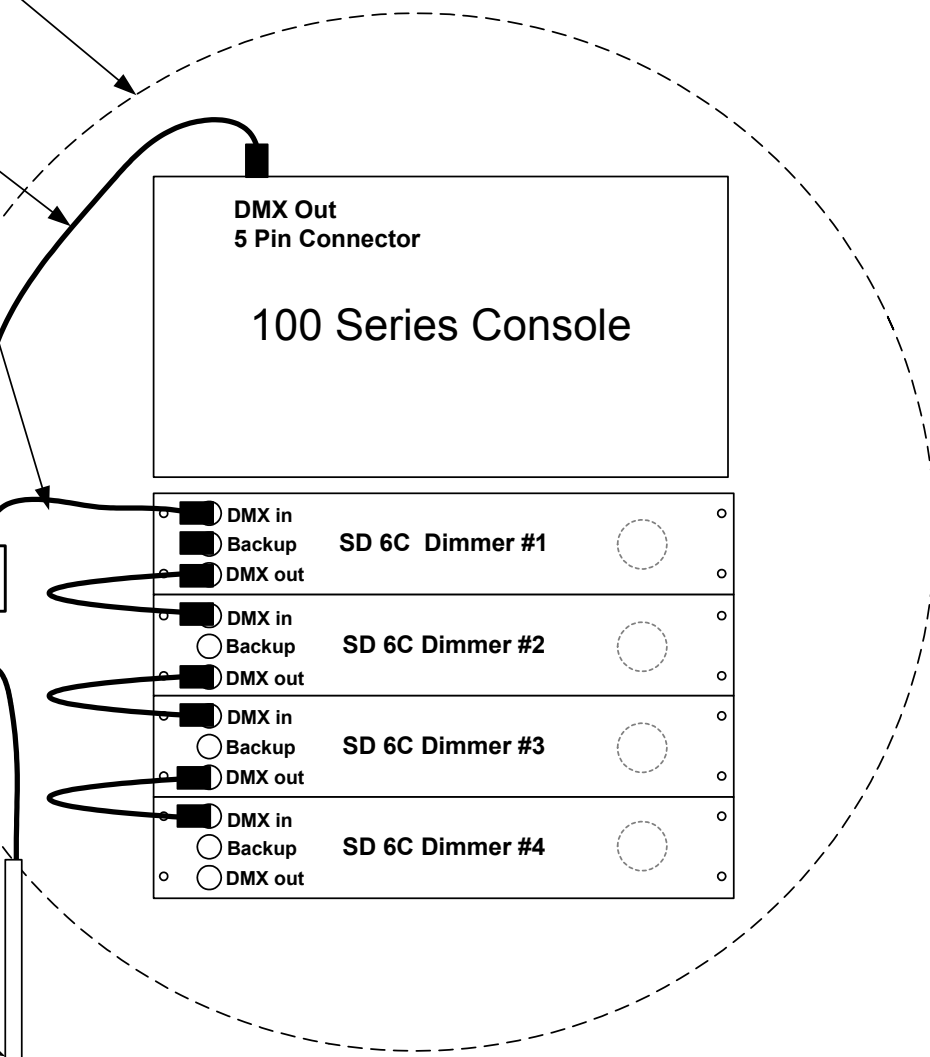
DMX cables from console to dimmers and dimmer interconnect are supplied with the system package

DMX Merger supplied with the package

Belden 9829 or equivalent supplied and installed by contractor

Conduit supplied and installed by contractor

DMX In faceplate supplied in package. Typically mounted at the front of the stage



DIMMER PROGRAMMING NOTES (See the SD 6C Manual):
DMX START ADDRESS (Menu 1):
 SD 6C #1 Start address = 1
 SD 6C #2 Start address = 7
 SD 6C #3 Start address = 13
 SD 6C #4 Start address = 19

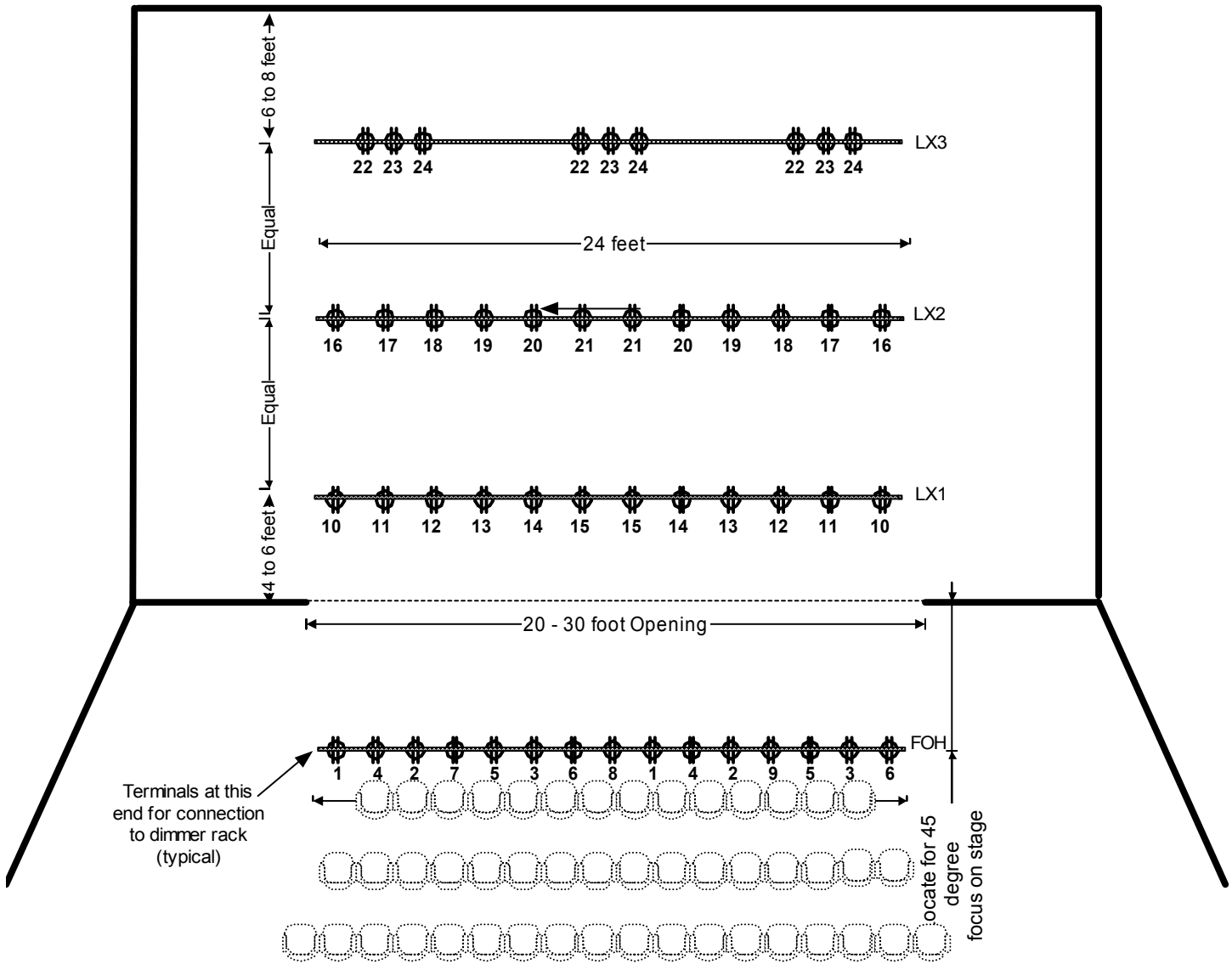
Strand Lighting (Canada)
 Inc/Eclairages Strand (Canada) Inc
 2430 Lucknow Drive No 15
 Mississauga Ontario L5S 1V3 Canada
 Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
 © Strand Lighting Ltd. 2002
 Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



Model 98506 Circuit & Distribution Plan



Note: This is only a guide for circuit placement distribution with this package system. If other project drawings specify this information it should be confirmed which is accurate.

Caution: Safe, approved rigging practices and electrical code must be followed. This is not intended as an electrical schematic or engineered rigging document.

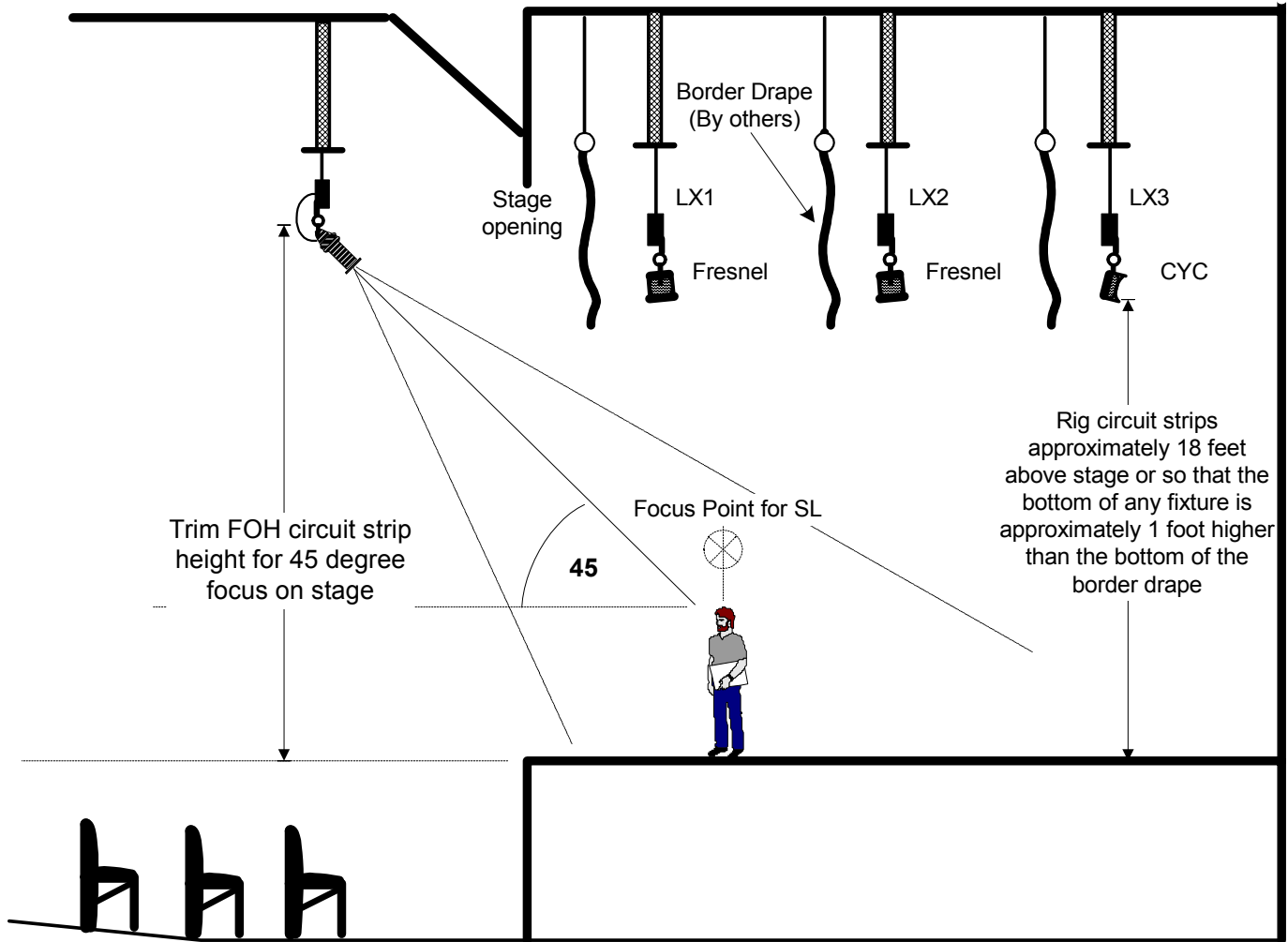
Strand Lighting (Canada) Inc/Eclairages Strand (Canada) Inc
 2430 Lucknow Drive No 15
 Mississauga Ontario L5S 1V3 Canada
 Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
 © Strand Lighting Ltd. 2002
 Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



Model 98506 Circuit & Distribution Elevation



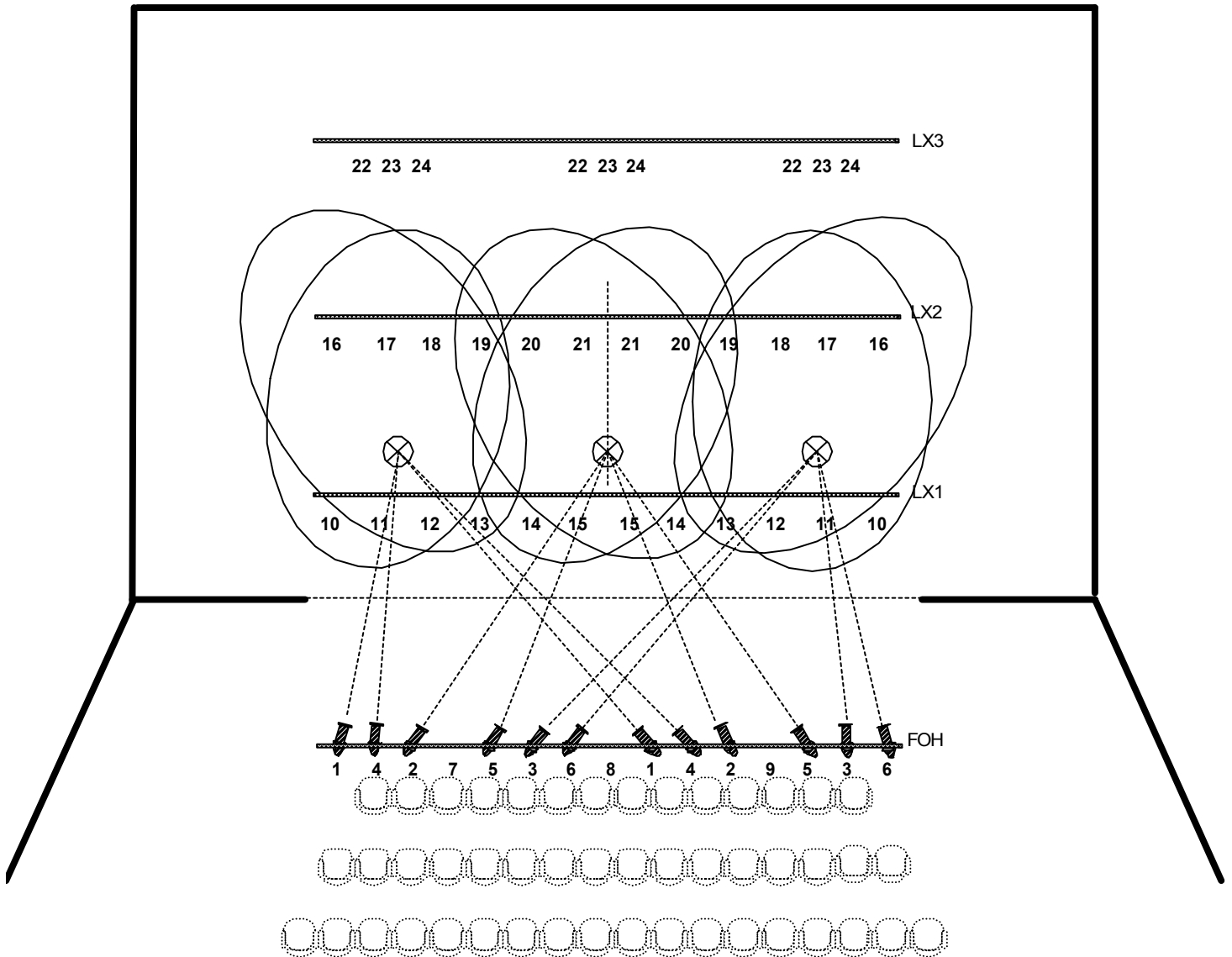
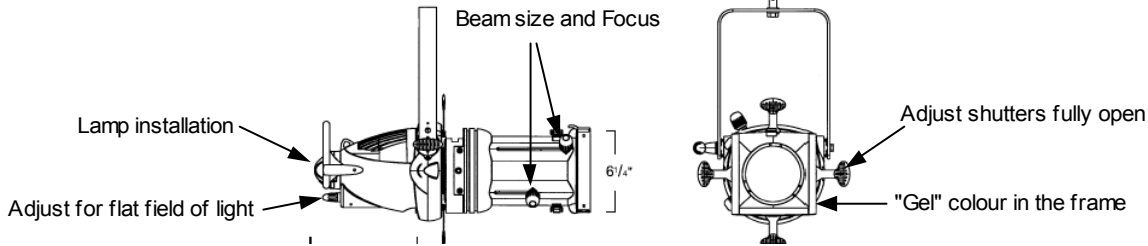
Strand Lighting (Canada)
Inc/Eclairages Strand (Canada) Inc
2430 Lucknow Drive No 15
Mississauga Ontario L5S 1V3 Canada
Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
© Strand Lighting Ltd. 2002
Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



Model 98506 SL Focus Plan



Caution: Use safety cables from the fixture to the pipe

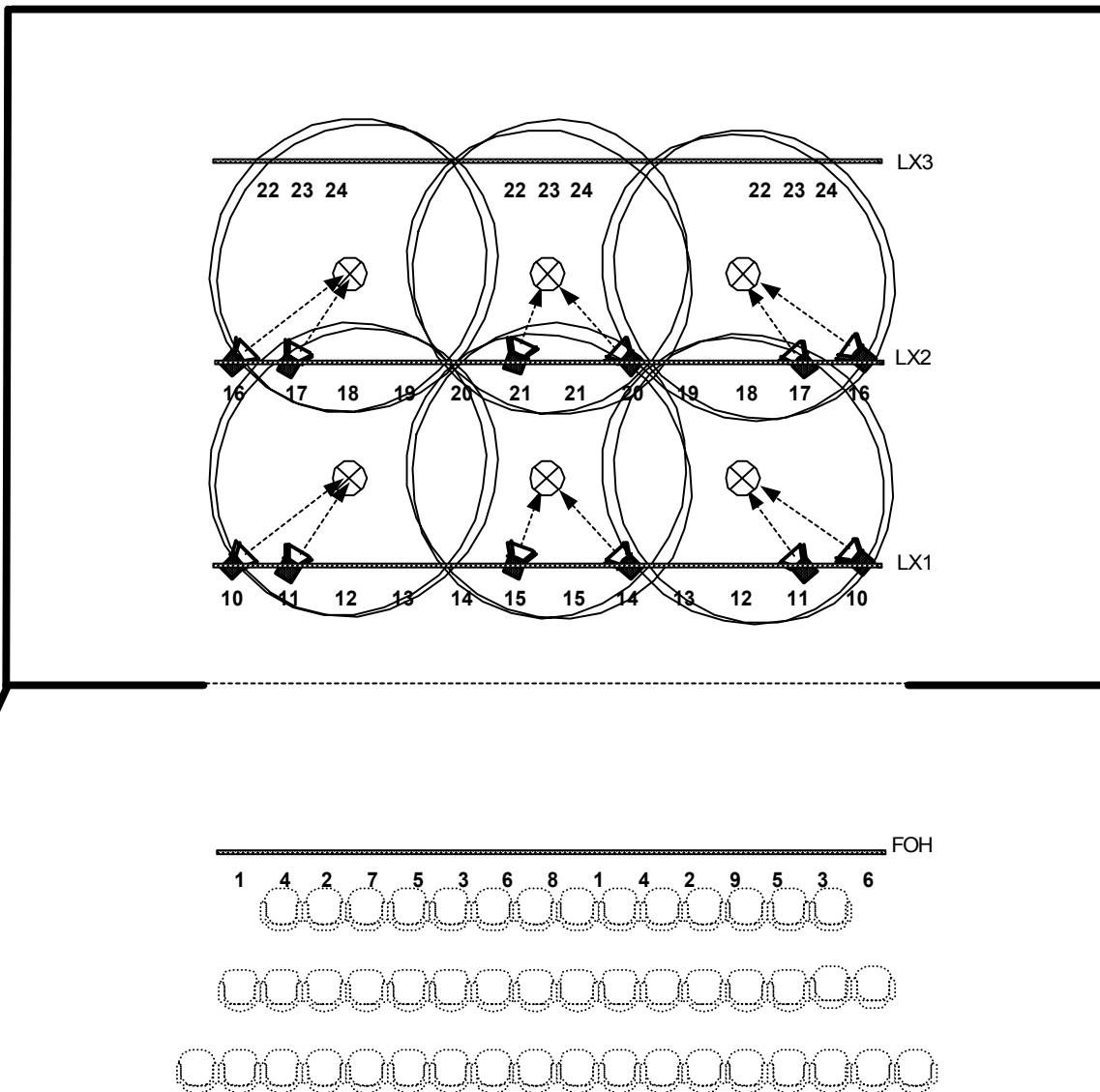
**Strand Lighting (Canada)
Inc/Eclairages Strand (Canada) Inc**
2430 Lucknow Drive No 15
Mississauga Ontario L5S 1V3 Canada
Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
© Strand Lighting Ltd. 2002
Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



Model 98506 Fresnel Focus Plan



Caution: Use safety cables from the fixture to the pipe

**Strand Lighting (Canada)
Inc/Eclairages Strand (Canada) Inc**
2430 Lucknow Drive No 15
Mississauga Ontario L5S 1V3 Canada
Tel: +1 905 677 7130 Fax: +1 905 677 6859



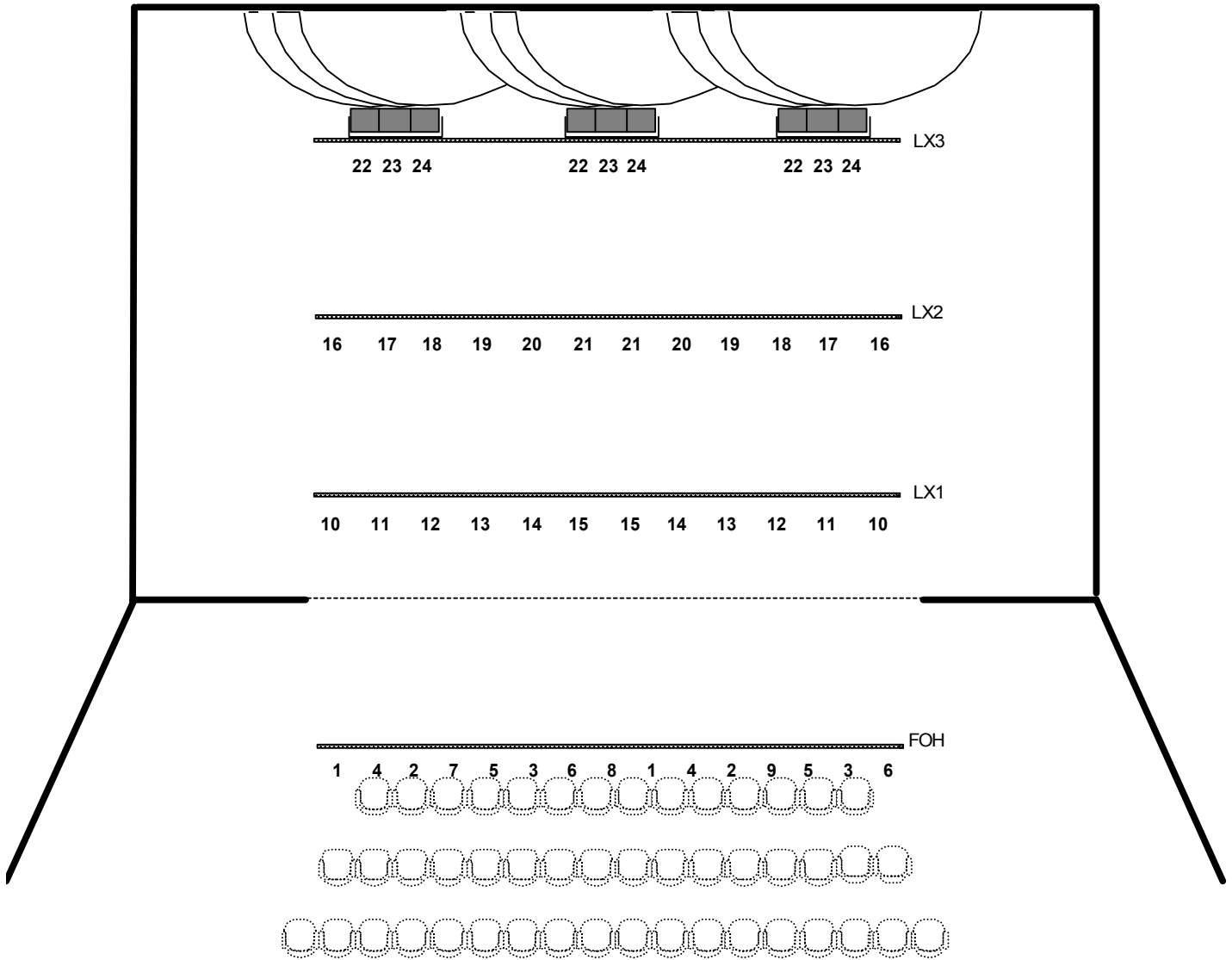
The Company reserves the right to make any variation in design or construction to the equipment described.
© Strand Lighting Ltd. 2002
Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



Model 98506 CYC Focus plan



Angle nearly horizontal to achieve the best top to bottom flat field on the rear wall



Caution: Use safety cables from the fixture to the pipe

Strand Lighting (Canada) Inc/Eclairages Strand (Canada) Inc
 2430 Lucknow Drive No 15
 Mississauga Ontario L5S 1V3 Canada
 Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
 © Strand Lighting Ltd. 2002
 Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.



Model 98506 Colour Media Plan

**Cut the media to fit the colour frame of the fixture specified.
Match the colour to the circuit plan and install in the fixture**

Circuit Number	Color Name	Fixture	Position
1	Light Blue	SL Zoom 575W	FOH
2	Light Blue	SL Zoom 575W	FOH
3	Light Blue	SL Zoom 575W	FOH
4	Light Amber	SL Zoom 575W	FOH
5	Light Amber	SL Zoom 575W	FOH
6	Light Amber	SL Zoom 575W	FOH
7		SL Zoom 575W	FOH
8		SL Zoom 575W	FOH
9		SL Zoom 575W	FOH
10	Amber	Fresnel x 2	LX1
11	Blue	Fresnel x 2	LX1
12			LX1
13			LX1
14	Amber	Fresnel	LX1
15	Blue	Fresnel	LX2
16	Amber	Fresnel x 2	LX2
17	Blue	Fresnel x 2	LX2
18			LX2
19			LX2
20	Amber	Fresnel	LX2
21	Blue	Fresnel	LX2
22	Red	Coda 3 CYC	CYC
23	Green	Coda 3 CYC	CYC
24	Blue	Coda 3 CYC	CYC

Strand Lighting (Canada)
Inc/Eclairages Strand (Canada) Inc
2430 Lucknow Drive No 15
Mississauga Ontario L5S 1V3 Canada
Tel: +1 905 677 7130 Fax: +1 905 677 6859



The Company reserves the right to make any variation in design or construction to the equipment described.
© Strand Lighting Ltd. 2002

Strand™, Strand Lighting™, Strand Quartzcolor™ are trademarks of Strand Lighting Limited and Strand Lighting Inc.