



West Wing Technical Specification

Issue 4

13th February 2007

This specification is published to give users as much information as possible regarding the facilities available at the West Wing. Frequent improvements are made to the facilities and users should check that they are using the latest issue of this document. Also, while every effort is made to ensure that all equipment and facilities are maintained to a high standard, equipment is sometimes unavailable due to failure, breakage or theft. Users are advised to check equipment availability with the Technical Manager.

Amendments

Issue	Date	Changes
1	9 th May 2005	Initial release
2	7 th September 2005	<ol style="list-style-type: none"> 1. Fly bar positions corrected on plan 2. FOH barrel positions and lengths corrected on plan 3. Elevation added to plans 4. All instances of logo updated to new version 5. Access equipment added
3	15 th February 2006	<ol style="list-style-type: none"> 1. Fly bar labels corrected on plan 2. FOH 3 Lighting bar added to plan 3. Dressing room plan added 4. Foyer/bar plan added 5. Equipment lists updated 6. Working light details added
4	13 th February 2007	<ol style="list-style-type: none"> 1. Added extra information regarding house lights 2. Added dimensions of get-in door 3. Added dimensions of control platform 4. Updated sound equipment list 5. Updated extra lighting equipment list 6. Removed Patchwork logo

Auditorium & Seating

14.6 m X 24 m (48' X 79')

The hall is effectively partitioned by the seating stand which is fixed approx 6 m (20') from the rear of the hall and, therefore, appears as a wall upon entering the hall. The auditorium proper is accessed from around the seating stand. The lobby area behind the seating stand can be used as additional foyer space or for art exhibition etc. There is a staircase from this lobby up to the top of the seating stand. The seating stand has a total of 199 seats: 10 rows of 18 and one row of 19. Access to seating is via side aisles. There is no central gangway. At the rear of the seating stand is a control platform which has all the main control facilities for sound, lighting and projection. These are described in detail later in this document. The seating stand can be retracted to give a total floor space of 14.6 m wide X 16m to the front of the stage (48' X 52' 6"). When extended there is 7.5 m (24' 6") from the stand to the front of the stage. Additional rows of seating can be fitted in this space. There are 50 additional seats available.

Scenery access

Get-in access is via a normal fire exit stage right of the auditorium. The maximum opening is 1645mm wide by 1930 mm high.

Control Platform

The main sound and lighting control is situated on a mezzanine platform at the rear of the seating unit. A worktop runs most of the length of the platform but there is space at the ends for follow spots or video cameras. Space on the platform is limited: the worktop is 590mm deep and there is 640 mm sitting space from the worktop to the back of the platform.

House Lights

These are fluorescent fittings which are only dimmable to 10% of full power, a smooth fade to black is, therefore, not possible. House light controls are located on the control platform, on the Stage Right proscenium wall and by the reception desk in the foyer.

Stage floods are normally rigged on FOH 2 and FOH 3 to provide more controllable house lighting. Two stage dimmers are, therefore, utilized for this purpose.

Stage

Overview

This is a conventional proscenium stage with steps either side to the auditorium floor and "Juliet" balconies on either side. These balconies are used for the theatre technical equipment, lighting and dimmers stage right and sound and amplifiers stage left. The balconies are, therefore, restricted areas with access for technical staff only although they may be used for productions with the permission of the Manager.

There are doorways in the upstage corners with steps down to ground level and the dressing rooms. There is also a wheelchair lift from the backstage crossover to the stage in the upstage left corner.

Dimensions

Proscenium opening: 9.38 m wide x 3.63 m high (30' 9" x 11' 10")

Apron: 1.73 m (5' 8")

Depth: Proscenium to back wall 7.10 m 23' 4")

Total width: 14.64 m (48')

See plans for details

Facilities

Stage Floor

The stage is covered with a black Harlequin dance floor. Care should be taken to prevent damage to the surface. The use of nails and screws is strictly prohibited. PVC tape may be used to mark scenery & dance positions, no other tape or marking method should be used without the permission of the Manager.

Access Equipment

The following equipment is available:

Access Tower, alloy, 2m x 1.4m x 4m high to platform

Zarges Skymaster ladder 10 rung

Zarges Skymaster ladder 12 rung (will reach FOH for focussing)

Over Stage

Details of the fly-lines and lighting barrels are given on the plan.

House tabs are electric and can be operated from the Prompt Corner and from the Control Platform.

A Triple-E curtain track is available. This is normally installed on winch-line 2 but may be moved elsewhere. The track has fittings allowing up to three cloths to be run independently. Rear-fold runners are also available.

There are four pairs of black legs on swivel arms, two sets of black tabs and a white cyclorama cloth.

Electrical Services

There are service points in each of the four corners of the stage which carry mains power, sound power and lighting circuits as well as sound tie-lines and communication circuits. There are additional service boxes in each balcony and in the auditorium floor. Details of the services available at each point are given in the table and on the plan.

Working Lights

Stage working lights are fluorescent fittings over the stage and dimmable blue fluorescent fittings in the wings. Both are switched from the DSL corner.

Communication and Stage-Management Facilities

All communication systems are controlled from the Stage Manager's Desk (Prompt Desk) in the stage left prompt corner.

The facilities on the desk are as follows:

- 2 channel Metro Audio headset communication system base station
Headsets can be connected at electrical service points as shown on the plans. Four Headsets/Belt-packs are available in addition to the base-station. The Metro system is compatible with Tec-Pro etc.
- 4-way cue light control
Cue lights can be connected at electrical service points as shown on the plans. A patch panel under the stage connects them to the four channels of the SM desk.
- Show relay to dressing rooms
Show relay uses the same microphones as the IR hearing system. Show relay level is adjustable in each dressing room. The amplifiers for the relay are in the SM desk.
- Show relay to foyer
Uses the same input as the dressing room relay. Fixed level to foyer, corridor and toilets with volume controls for bar and office.
- CD player to foyer (Denon DCD-685)
- Calls to dressing rooms
Calls can be made from the SM desk. The calls override the volume controls in the dressing rooms.
- Calls to Foyer
Calls can be made from the SM desk. The calls override the volume controls in the bar and office.
- Foyer bells
Bells for starting the show can be operated from the SM desk, the Control Platform and from the Foyer.
- Bar Buzzer
A signal to warn bar staff of an impending interval. This can be operated from the SM desk and the Control Platform.
- Clock
- Timer
- Reading Lights
- CCTV Monitor of the stage from FOH

Lighting

Overview

There are three lighting barrels on stage and two front of house all with interwired barrels. There are sixteen circuits on each barrel. In addition, there are three dip circuits in each corner of the stage and three in the stage left balcony. Some of the circuits are hardwired to the dimmers and some are patchable. All stage lighting bars are on winches max loading 250kg. The hemp lines may also be used for lighting if wiring is run to them from the stage sockets. Max loading on hemp lines is 80kg.

Dimmers

72 channels of Light Processor Paradim^e dimmers located in the stage right balcony. Main power for the dimmers is controlled from here.

Circuits

The dimmers are wired to the barrels as shown on the diagram. The sockets prefixed with "P" are patchable to the dimmer channels indicated. FOH1 and FOH2 are phase 1, LX1 and LX2 are phase 2 and LX3 and dips are phase 3. There are three separate patch panels, one for each phase, in the stage right balcony. The panels use Neutrik PowerCon connectors.

HSE guidelines recommend that there be only one phase on a barrel.

Control

Strand 300 series 48/96 console located on the control platform.
Riggers remote control plugs-in at stage left float box.

Lanterns

6 off Strand SL 36 600W profile spot (fixed 36°)
12 off Strand T-54 1kW profile spot (fixed 20°)
2 off Selecon Axial Zoomspot 600W profile spot (variable 18°-34°)
2 off Selecon Axial Zoomspot 600W profile spot (variable 24°-44°)
20 off Strand Pattern 743 1kW Fresnel spot 15° to 80°
6 off Par64 with 1kW CP62 lamp
12 off Strand Coda 1kW cyclorama flood

Other Lighting Equipment

6 off free-standing 4.5m lighting boom
2 off Powerdrive stand
2 off 4 way Tee bar
10 off 15A 2 way splitter
Go-bo holders for T-spots and SLs (both 'A' and 'B' sizes)
Go-bo holders for Acclaims ('M' size)

Sound

Overview

The main, fixed, sound system for the venue consists of a pair of Nexo PS10 speakers arranged as a theatre style centre cluster. There is a 24 channel mixing console on the control platform along with a rack of sound source equipment and other outboard devices. The main amplifier and foldback amplifier are in the Stage Left balcony. There are sound tie-lines to all four corners of the stage, to floor boxes in the stage floats and to boxes in the auditorium floor. All sound lines are patchable using the jack-field in the control platform sound rack.

There is also a mobile sound system built into a wheeled 19" rack which can be connected to the main system using its line output or stand alone by connecting the spare Bose speakers to the rack's amplifier output.

Equipment

Control Platform

Allen & Heath GL3 24 channel Mixer
Behringer DSP1124P Feedback destroyer
Marantz PMD340 CD Player
Denon DRW-695 Dual Cassette Player/Recorder
Tascam MD-350 Mini Disc Player/Recorder
Harrison 31 band stereo Graphic Equalizer
Lexicon MPX 550 Reverb/Effects Processor

Main Amplifier and Speakers

2 off Nexo PS10 Speaker
Nexo PS10 TD Controller
Camco Tecton amplifier

Foldback Amplifier and Speakers

2 off Bose 802 speaker
Bose 802C Controller/EQ
HH V500 Amplifier

Mobile Sound System (Rack Mounted)

Behringer UB1204-PRO Mixer
Denon DCD-685 CD Player
Denon DRM-595 Cassette Player/Recorder
HH V500 Amplifier

Additional Items

- 1 off HH V500 Amplifier
- 2 off Bose 802 speaker
- 3 off Numark M80 powered DJ monitor speaker
- 2 off AKG C1000 Microphone
- 2 off Audio Technica ATM41HE Microphone
- 4 off Audio Technica Pro4L Microphone
- 4 off Audio Technica Pro44 Microphone
- 2 off Trantec S3.5LM Lapel Radio Microphone
- 3 off Behringer Ultra-DI DI20 Active Dual DI Box/Splitter
- 1 off Emo Passive Dual DI Box
- 5 off Boom Microphone Stand
- 3 off Short Microphone Stand
- 2 off Heavy Base Microphone Table Stand
- 2 off Speaker stand

Sound Wiring – Detailed Explanation

Tie-Lines

The sound tie lines are located in the four corners of the stage, the balconies and the auditorium floor. Details are given in the table and on the plan. All tie-lines run to the jack-field patch panel on the back of the sound rack on the control platform.

Jack Field

All the microphone tie-lines and line returns terminate at the jack field located on the rear of the main sound rack. The majority of the mixer connections and all the out-board equipment in the rack also terminate at this panel.

The panel uses ¼ inch jack sockets throughout so it is possible to connect any line to any other line with a jack-to-jack patch lead.

The complete jack field comprises of four separate panels each with two rows of 24 sockets. There is a general convention that outputs are on the top row and inputs on the bottom row and this has been adhered to on this system. These panels use a technique called “normalling” (or “normalizing” in America) whereby the top socket is connected to the bottom socket without the need for a patch lead. Inserting a lead in either socket breaks this connection and allows the line to be connected to a different line. Thus a particular output is normally (hence the name) connected to a particular input unless re-routed with a patch lead. Not all connections are normalled, the links are made inside the panel and are specific to the installation.

In this system the nomalled lines are indicated on the panel with red text.

They are as follows:

- Mic tie lines 1 to 24 are normalled to mixer Mic inputs 1 to 24 - 1 to 1; 2 to 2 etc.
- Mixer Main Left Output is normalled to Line Return 1
- Mixer Main Right Output is normalled to Line Return 2
- Mixer Aux 1 Output is normalled to Line Return 3
- Mixer Aux 2 Output is normalled to Line Return 4
- Mixer Aux 3 Output is normalled to Line Return 5
- Mixer Aux 4 Output is normalled to Line Return 6
- The CD player outputs are normalled to Mixer Line Inputs 19 and 20
- The Cassette outputs are normalled to Mixer Line Inputs 21 and 22
- The Mini Disc outputs are normalled to Mixer Line Inputs 23 and 24

Thus: a microphone plugged into mic tie line 6, in the Stage Centre floats box, will be connected directly through to channel 6 of the mixer. The main mix outputs will appear on Line Returns 1 and 2 on the Stage Left panel and can from there be patched to the Centre Cluster inputs to the amplifier. It is anticipated that many productions will not require the use of any patch leads.

Stage Box and further patching

A high proportion of the tie-lines and returns terminate at the stage box on the Stage Left Proscenium wall. The stage box also has tie lines referred to as Amplifier Tie Lines (ATM) to the Stage Left balcony which can be patched to the line returns using XLR patch leads.

All the speaker lines terminate in the Stage left balcony so that additional amplifiers can easily be installed here.

The input to the centre cluster amplifier is also patched at the stage box and two further tie-lines connect the stage box to the Stage Left dip box. This allows the mobile sound system output to be sited in front of the stage and connected to the centre cluster amplifier without running to the main patch-panel and back.

All the tie-lines and returns use XLR connectors and balanced microphone cable and may be used in whatever configuration is most expedient.



West Wing Technical Specification

Service point	13A Power	Sound Power	LX Circuits	Comms	Cue Lights	Misc.	Mic Tie Lines	Line Returns	Speaker Ccts	Misc Sound
Down Stage Left Prompt Corner	4 off	SP 2	Ccts 29-31	Ring 1	Cct 1	SM Desk connector	Lines 11-26 and 39-46	Lines 1-6	Cct 1	Amp tie lines 1-6 Centre Cluster in L-R Dip audio out L-R
Down Stage Right Opposite Prompt	2 off	SP 3	Ccts 35-37	Ring 1	Cct 2		Lines 27-28	Line 7	Cct 2	
Up Stage Right	2 off	SP 4	Ccts 32-34	Ring 1	Cct 3		Lines 29-30	Line 8	Cct 3	
Up Stage Left	2 off	SP 1	Ccts 38-40	Ring 1	Cct 4		Lines 31-32	Line 9	Cct 4	
Stage Right Balcony	2 off	SP 5, 6	-	Ring 1&2	Cct 11		Line 37		Cct 5	
Stage Left Balcony	2 off	SP 7-10	Ccts 41-43	Ring 1&2	Cct 12		Line 38		Ccts 1-5	Amp tie lines 1-6
SR Float							Lines 1-2			
SCR Float							Lines 3-4	Line 10	Cct 6	
SC Float					Cct 5		Lines 5-6	Line 11		
SCL Float							Lines 7-8	Line 12	Cct 7	
SL Float						LX Riggers	Lines 9-10			Dip audio in L-R
Audit Floor box 1	2 off			Ring 1&2	Cct 6		Lines 33-34	Line 13		
Audit Floor box 2				Ring 1&2	Cct 7		Lines 35-36	Lines 14-15		
Audit Floor box 3	2 off				Cct 8					
Control platform	8 off	SP 11, 12		Ring 1&2	Cct 9-10					

Table 1 - Electrical Services

Audio Visual

Overview

The auditorium is equipped with a 6m wide projection screen fitted to the proscenium and a 5200 ANSI lumens digital projector. There are two DVD players and one VHS recorder with the facility to preview and set-up one video source while another is playing. There is 7.1 surround sound which is separate from the theatre system. Super Audio CDs can be played on this system. This equipment is mounted in a rack on the control platform.

There is a pull-down screen in the bar with a small digital projector that can be mounted on the bar ceiling. This projector is portable and can be used elsewhere.

Wiring

Additional audio and video sources can be connected to the system on the control platform.

The following tie-lines exist between the control platform and the stage left proscenium:

- Computer Video VGA 15 pin connector
- Stereo audio, 2 off phono (unbalanced)
- Cat 5

Equipment List

Fixed in auditorium

Harkness Denham roller screen 6m width
Sanyo XF31 XGA Multimedia projector 5200 ANSI lumens
Sony SLV-SE830G Hi-Fi VHS Recorder
Denon DVD-2901 DVD Player
Denon DVD-700 DVD Player
Denon AVC-A1SR AV Surround Amplifier

Portable

Extron SW2 VGA DA2 A 2 into 2 VGA and audio switch/buffer amp
Extron SW4 VGA Ars 4 into 1 VGA and audio switch
Sanyo PLC-XE20 XGA Multimedia projector 1800 ANSI lumens
Sanyo VHR-H803E VHS Recorder
Sanyo DVD-SL40 DVD Player
14" Monitor TV
Kodak Carousel S-AV 1050 35mm Slide Projector
Da-lite Fast fold projection screen 10' x 7' 6" with:
 Front projection screen
 Rear projection screen
 Drapes set: Skirt, legs and valance

Additional Equipment

There is some additional theatre equipment which is not part of the venue's standard fit but can often be made available if requested in advance.

Lighting

- 9 off Strand Pattern 743 1kW Fresnel spot
- 4 off Strand Pattern 123 500kW Fresnel spot
- 6 off Selecon Acclaim 650W Fresnel spot
- 4 off CCT Minuette 500W Flood
- 10 off Par 16 "Birdie" with dimmable transformer
- 10 off Par64 with 1kW CP62 lamp (some CP61 lamps may be available)
- 2 off Strand Solo CSI Follow Spot

Effects

- 1 off UV Black gun, 400W
- 1 off Strobe ***high power***, with DMX remote
- 1 off Le Maitre Pyro-flash 6 way detonator
- 4 off Standard flash pod
- 4 off Angled flash pod
- 1 off Le Maitre Power Mist
- 1 off Le Maitre G300 smoke or haze effect.
- 1 off Martin Magnum 800 Smoke machine
- 1 off Source Aquahaze Jnr Haze machine
- 1 off Phone ringer

Sound

Microphones

- 3 off Nakamichi electret condenser with cardioid, omni or pin-point omni capsule
- 2 off Shotgun capsule for above
- 1 off Crown PCC 160 boundary mic
- 1 off AKG D310 Vocal mic
- 2 off AKG D224 High quality Dynamic mic.
- 2 off AKG CK47 Hypercardioid Pencil mic with gooseneck
- 3 off AKG C547BL Boundary mic
- 1 off AKG HM1000 hanging mic with CK31 capsule
- 2 off Audio Technica AT835b shotgun mic
- 2 off Audio Technica ATM41HE vocals mic
- 1 off Audio Technica AT831R Instrument mic. with various fixings
- 1 off Audio Technica AT853 Hanging Mic
- 1 off Shure SM57 Instrument/Vocals mic
- 3 off Behringer active Direct Inject box

Sennheiser radio microphones

- 2 off 1083 VHF (with MKE2 miniature mic)
- 8 off ev300 series UHF (with ME2 miniature mic,)

Mixers

- 1 off Teac 6 to 2 with stereo RIAA amp
- 1 off Spirit Folio 8 mic, 2 stereo
- 1 off Behringer MX2004 8mic, 4 stereo
- 1 off Allen & Heath GL2200 24 channel

Source Equipment and FX etc.

- 1 off Denon 555 Cassette recorder/player
- 1 off Citronic CD-2 Dual CD player
- 1 off Denon DM-M2000R Mini disc recorder/player with hot-start
- Reel to Reel, various machines
- 1 off Alesis Midiverb 4: Digital reverb/effects
- 1 off Behringer Feedback destroyer
- 1 off Behringer Ultramizer: Compressor
- 3 off Behringer Shark: Mic pre-amp, compressor, delay filter etc. etc.

Amplifier

- 1 off 250W into 8 Ω , 2 channel

Speakers

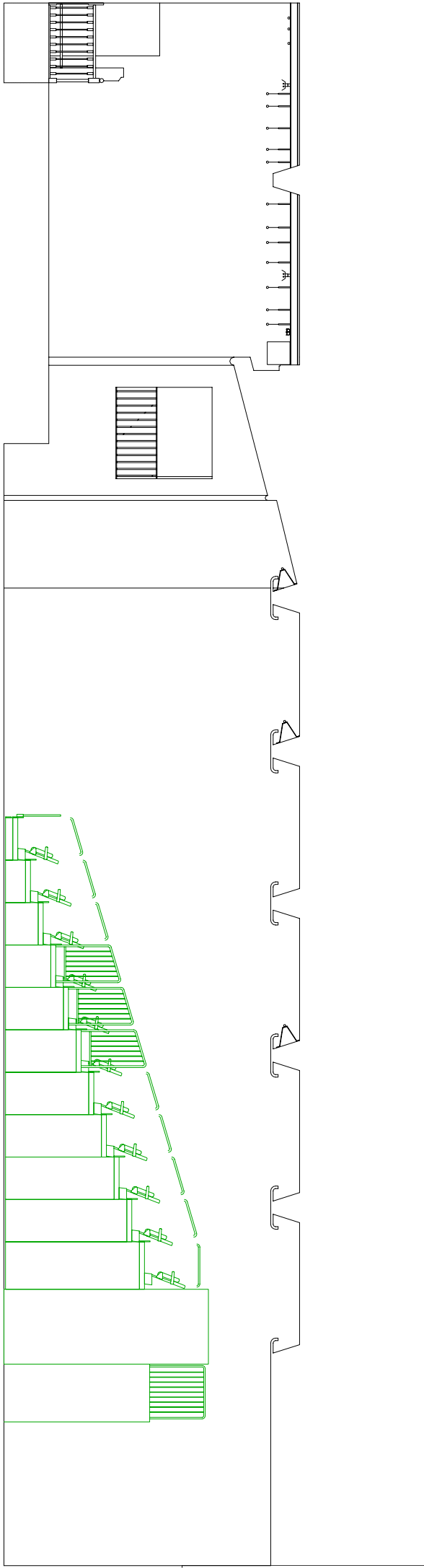
- 2 off Bose 802 250W 8 Ω
- 1 off Controller for 802
- 4 off Hanging bracket with hook clamp
- 2 off Stand adaptor
- 2 off Power drive stand

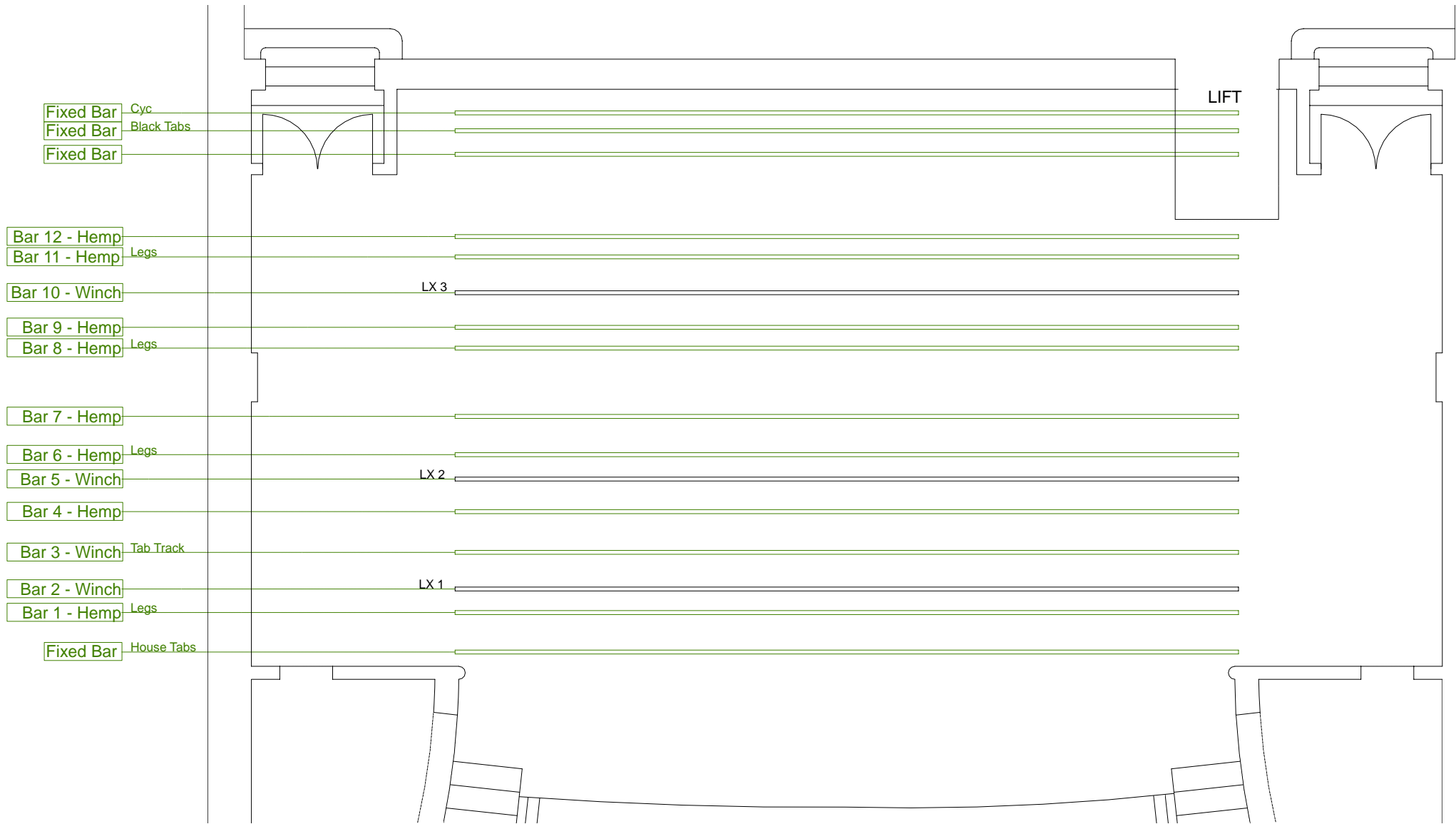
Communications

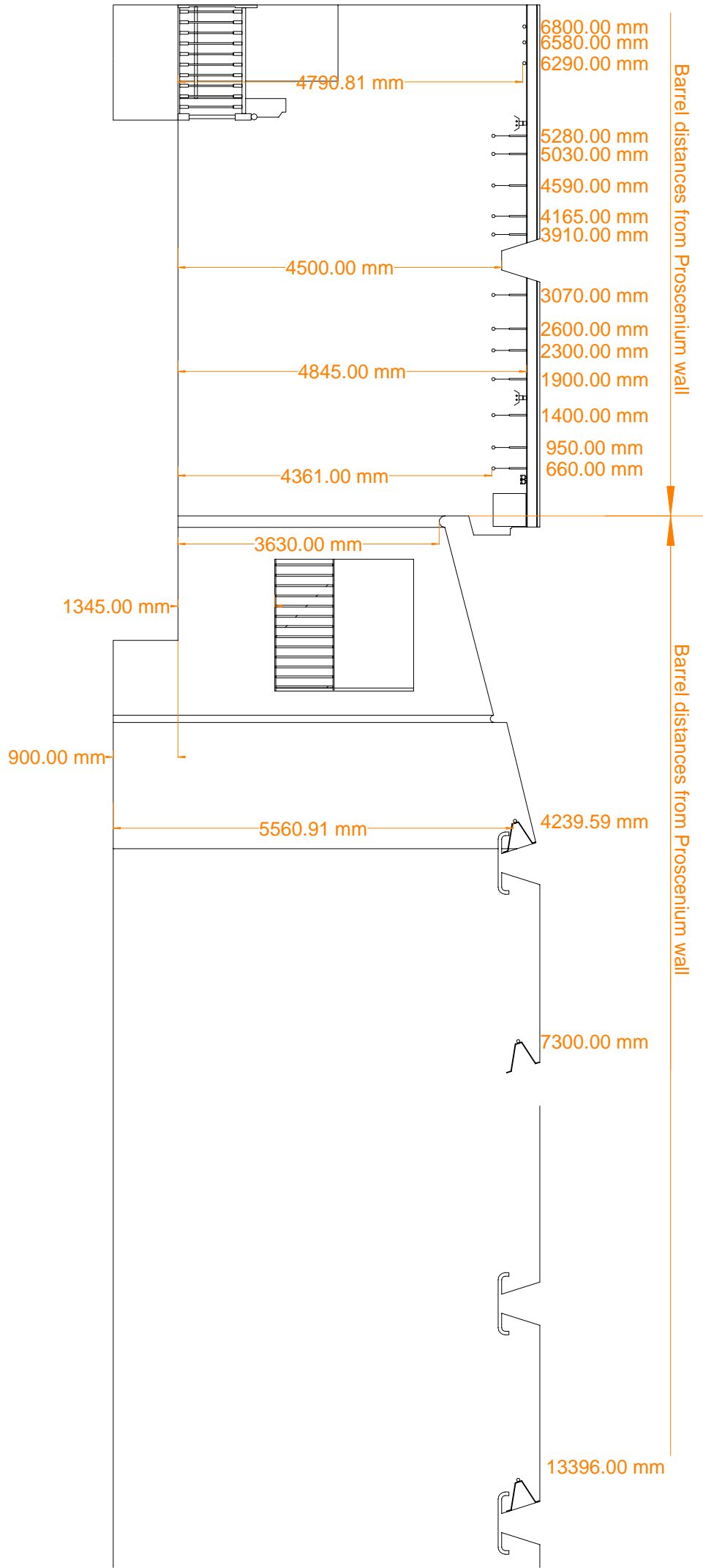
- 4 off Communication beltpack and headset

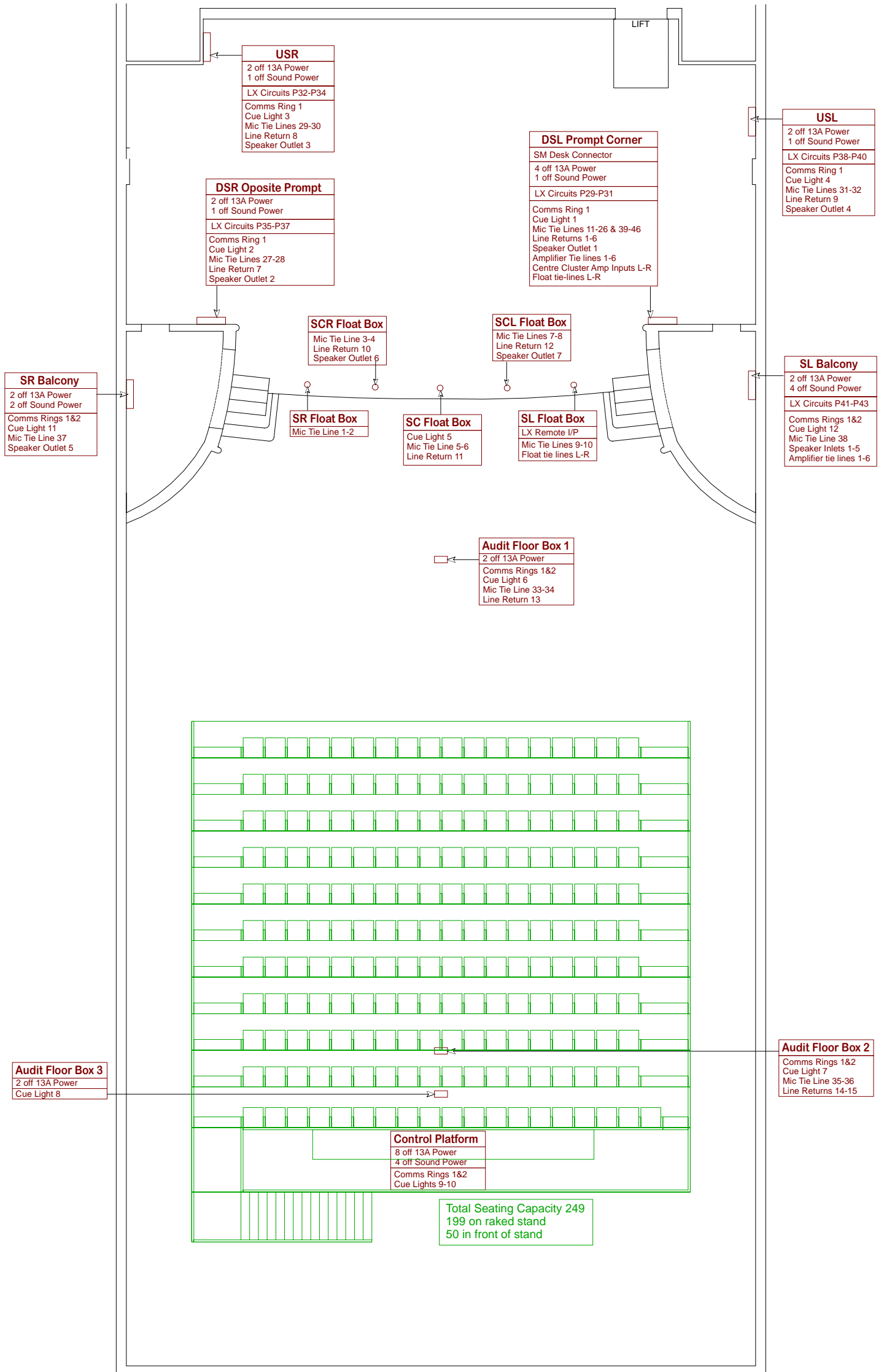
Audio Visual

- 2 off Sanyo PLC-XT16 Multimedia projector 3500 ANSI lumens
- 2 off Harkness Projection screen 12 ft x 6 ft with skirt
- 2 off Panasonic DVD-529 DVD player (Flightcased with VHS below)
- 2 off Panasonic NV-SV121EB VHS Recorder (Flightcased with DVD above)
- 2 off Unicol projector stand with 2 shelves
- 3 off Surround sound system each comprising:
 - 1 off Sony STR-DE597 Surround receiver
 - 5 off Skytronic 2 way speaker
 - 4 off Speaker stand
 - 1 off Sony SA-WM250 Powered sub-woofer









USR
 2 off 13A Power
 1 off Sound Power
 LX Circuits P32-P34
 Comms Ring 1
 Cue Light 3
 Mic Tie Lines 29-30
 Line Return 8
 Speaker Outlet 3

DSR Oposite Prompt
 2 off 13A Power
 1 off Sound Power
 LX Circuits P35-P37
 Comms Ring 1
 Cue Light 2
 Mic Tie Lines 27-28
 Line Return 7
 Speaker Outlet 2

DSL Prompt Corner
 SM Desk Connector
 4 off 13A Power
 1 off Sound Power
 LX Circuits P29-P31
 Comms Ring 1
 Cue Light 1
 Mic Tie Lines 11-26 & 39-46
 Line Returns 1-6
 Speaker Outlet 1
 Amplifier Tie lines 1-6
 Centre Cluster Amp Inputs L-R
 Float tie-lines L-R

USL
 2 off 13A Power
 1 off Sound Power
 LX Circuits P38-P40
 Comms Ring 1
 Cue Light 4
 Mic Tie Lines 31-32
 Line Return 9
 Speaker Outlet 4

SCR Float Box
 Mic Tie Line 3-4
 Line Return 10
 Speaker Outlet 6

SCL Float Box
 Mic Tie Lines 7-8
 Line Return 12
 Speaker Outlet 7

SR Balcony
 2 off 13A Power
 2 off Sound Power
 Comms Rings 1&2
 Cue Light 11
 Mic Tie Line 37
 Speaker Outlet 5

SR Float Box
 Mic Tie Line 1-2

SC Float Box
 Cue Light 5
 Mic Tie Line 5-6
 Line Return 11

SL Float Box
 LX Remote I/P
 Mic Tie Lines 9-10
 Float tie lines L-R

SL Balcony
 2 off 13A Power
 4 off Sound Power
 LX Circuits P41-P43
 Comms Rings 1&2
 Cue Light 12
 Mic Tie Line 38
 Speaker Inlets 1-5
 Amplifier tie lines 1-6

Audit Floor Box 1
 2 off 13A Power
 Comms Rings 1&2
 Cue Light 6
 Mic Tie Line 33-34
 Line Return 13

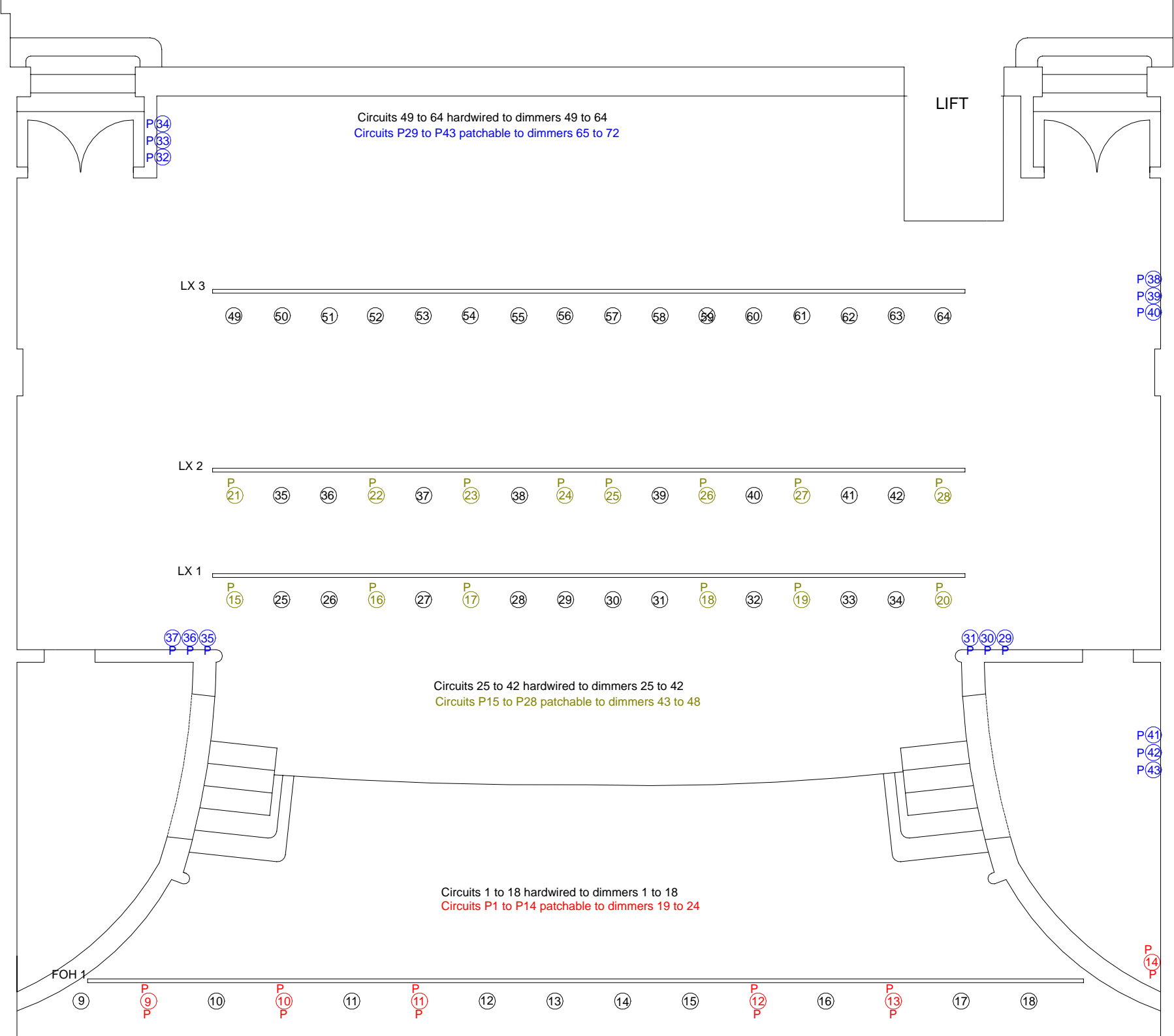
Audit Floor Box 3
 2 off 13A Power
 Cue Light 8

Audit Floor Box 2
 Comms Rings 1&2
 Cue Light 7
 Mic Tie Line 35-36
 Line Returns 14-15

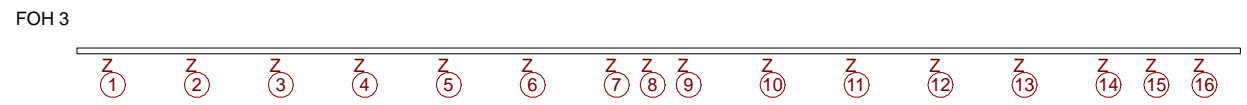
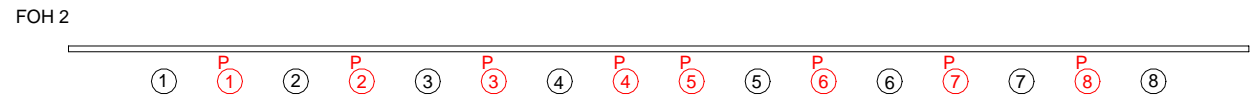
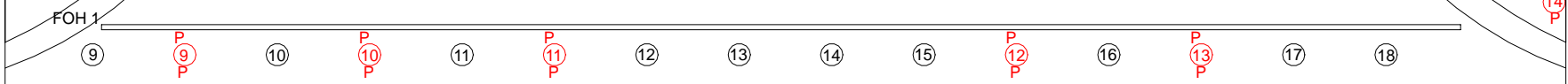
Control Platform
 8 off 13A Power
 4 off Sound Power
 Comms Rings 1&2
 Cue Lights 9-10

Total Seating Capacity 249
 199 on raked stand
 50 in front of stand

LIFT



Circuits 1 to 18 hardwired to dimmers 1 to 18
Circuits P1 to P14 patchable to dimmers 19 to 24

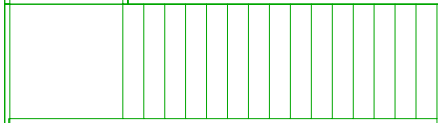
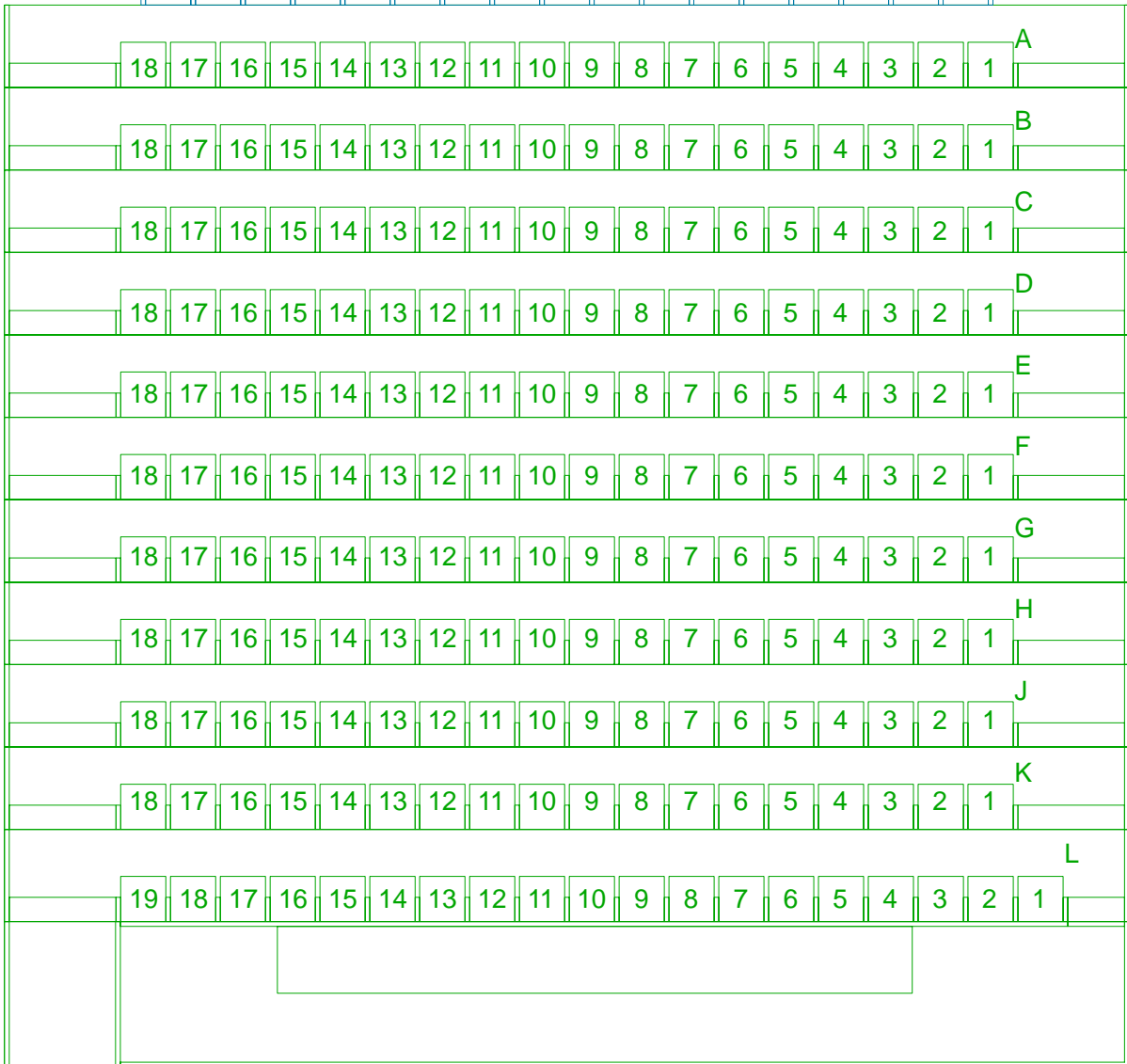


8 7 6 5 4 3 2 1

11 10 9 8 7 6 5 4 3 2 1

14 13 12 11 10 9 8 7 6 5 4 3 2 1

17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



Total Seating Capacity 249
199 on raked stand
50 in front of stand

