THE LIQUID ROOM

VENUE SPECIFICATION

This document outlines all technical and production services provided for events at the Liquidroom, Edinburgh. Tour managers & promoters are recommended to familiarize themselves with relevant sections prior to the event. Contact details for operations staff may change, please contact office for updated information.

2011

Contents

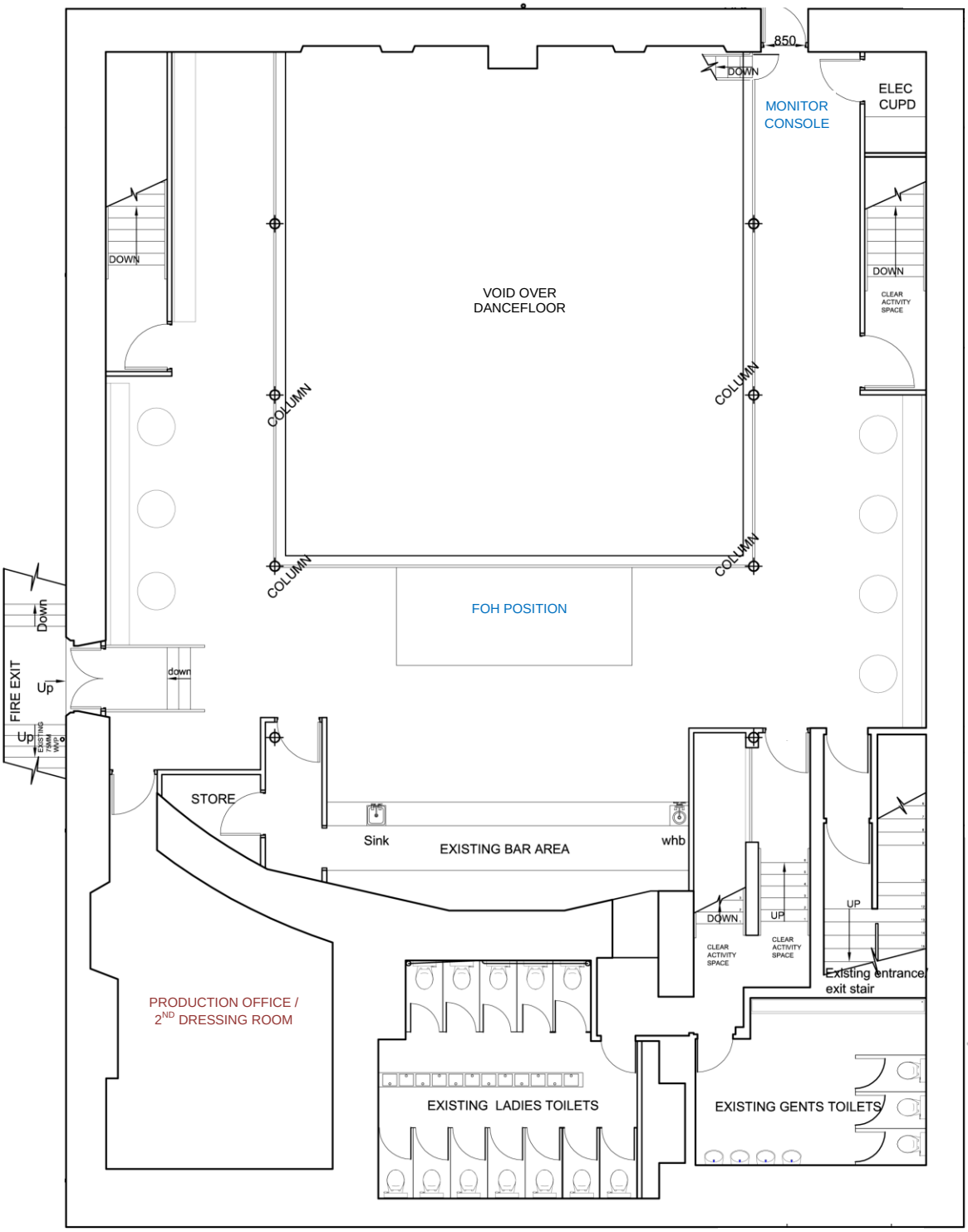
Contact Details

Venue Address:	The Liquidroom Ltd. 9c Victoria Street, EDINBURGH EH1 2HE
Telephone:	+44(131) 225 2564
Fax:	+44(131) 225 2574
Website:	www.liquidroom.com
Tech Support:	tech.liquidroom.com
Director of Operations & Safety:	Ewen Williams ewen@liquidroom.com
Events Manager & Bookings:	Kath Mackenzie kath@liquidroom.com
Events & Bookings:	Paul Cunningham paul@liquidroom.com
Technical Director:	Glynne Dewar glynne@liquidroom.com
Technical Manager:	Barrie Pitt barrie@liquidroom.com

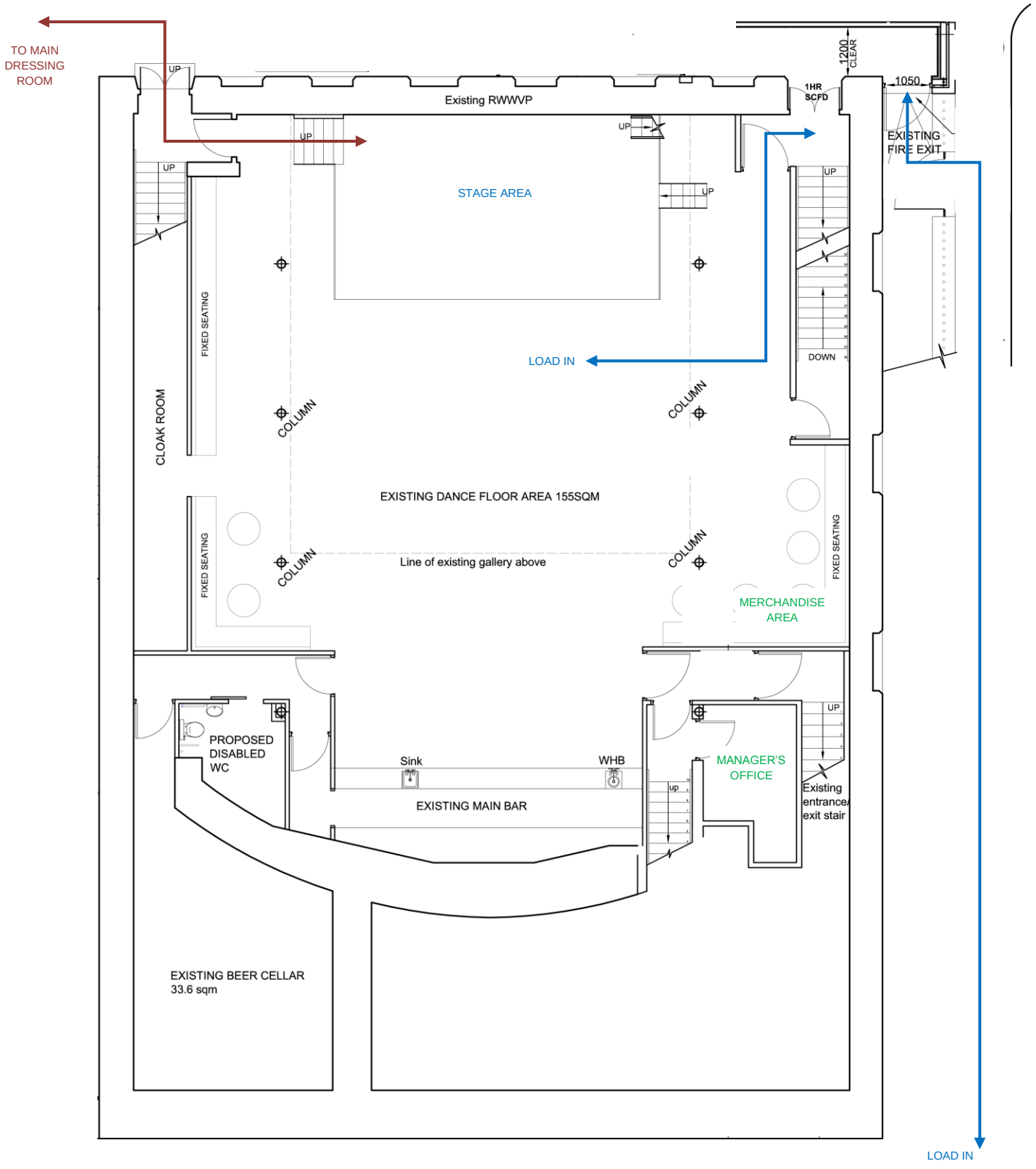
General Information

Venue Capacity:	Currently 600 on main floor, 150 on balcony, 60 in smoking garden.
Parking:	Directly outside venue, 32A supply at front door for tour buses
Load in Access:	Down lane to right of venue, through fire doors to stage left position, distance 25m.
Storage:	Directly under stage.
Barrier:	8m Steel Mojo barrier.
Stage Risers:	Not currently supplied but available to rent on request with prior notice, rolling risers not suitable.
Crew:	Not Supplied by venue but available on request with prior notice, charge applicable.
Security:	Yes
Dressing Rooms:	Currently one temporary dressing room is available in porta-cabins to the rear of the venue (stage right) with toilet & Wi-Fi, no shower. The production office is currently being used as a second dressing room where necessary. No toilet or shower is available in the production office.
Production Office:	Currently the balcony office is available for production personnel. Phone, fax and Wi-Fi available.
Catering:	Microwave, kettle and fridge supplied in main dressing room. Numerous good restaurants and fast food outlets within 5 min walk, ask venue staff for details.
Merchandise:	Corner of dance-floor area. Table, lighting and power available.
Box Office:	Cashdesk attendant and/or float available on request with prior notice, small charge may apply. There is currently no facility for pre-event ticket sales at the venue, general & security ticket printing is available with prior notice (typically 6 weeks), charge will apply. Tickets can be sold online via Ticket Scotland or locally via Ripping Records (within 10 mins of venue).
Music Shops:	Sound Control, 5min from venue (General) Ricky's Music, 10min from venue (Guitars) Drum Central, 20min from venue (Percussion)
Venue Times:	Typically 7pm doors with strict 10pm curfew (Wed/Fri/Sat) Alternative times may be possible only by prior arrangement, charges may apply.

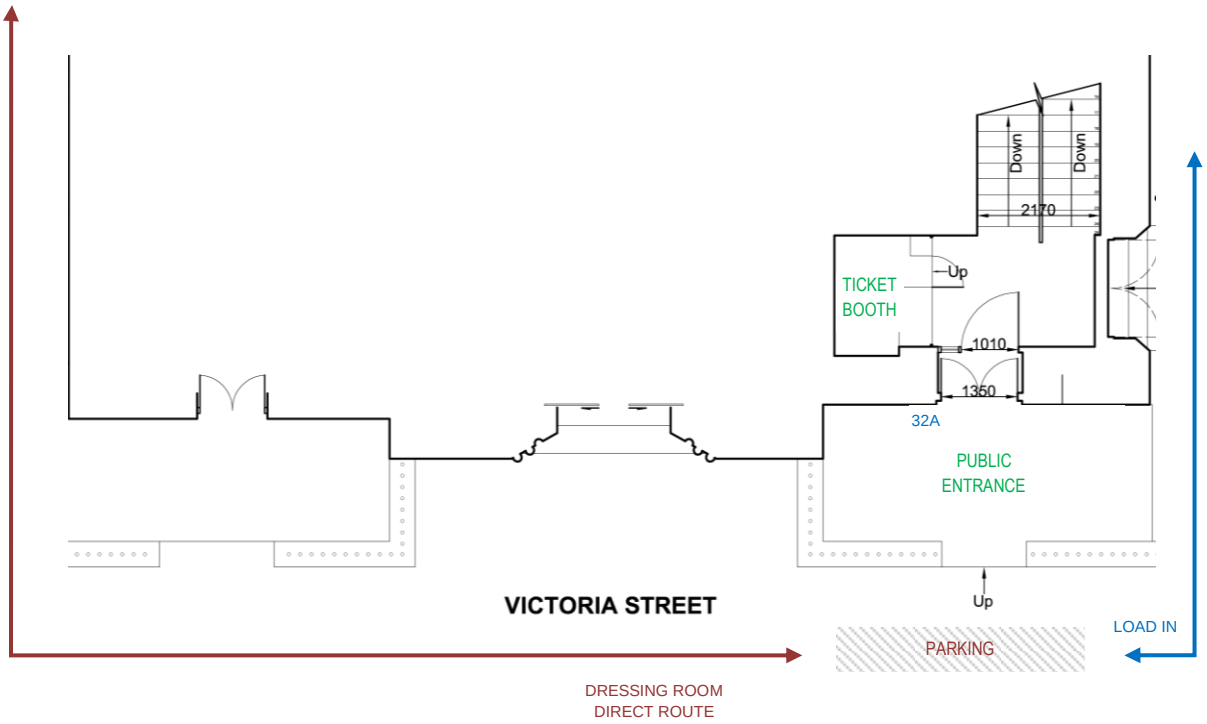
Venue Balcony Plan



Venue Dancefloor Plan



Venue Entrance Plan



General Technical Information

Stage Dimensions:	8m x 4.5m x 1.2m
Stage Access:	Rear of stage right
Backline Tech Position:	Either side of stage
Clearance:	Stage to lowest installed obstruction (moving head light) 2.1m
Facilities Power:	3Ø Power-lock via 125A 'D' type MCB (5m from stage) 32A 3Ø via 30A 'D' type MCB (rear of stage)
Backline Power:	4 x 16A with 4 x 13A snakes (rear of stage)
FOH Power:	32A 3Ø via 30A 'B' type MCB 8 x 13A via 1Ø of above.
Flying Points:	1 x 8m Ladder truss rear of stage on 2 Lodestar 500kg (Rear Stage) 1 x 8m wide by 1.5m deep truss with 4 x 500mm ribs hung on 4 Lodestar 500kg (Mid Stage) 1 x 8m wide by 2m deep truss with 4 x 1m ribs hung on 4 Lodestar 500kg (Front Stage) 4 x Lodestar 500kg (Over Dancefloor) Additional Trussing as per specification below is stored in-house, please contact for configuration options. Please refer to lighting plan for typical layout. All truss is Litec QD-30s Heavy Duty truss with 290mm sides. All motors are 500kg Lodestar motors running at 4m per minute fall rate; all are fitted with double brakes, bi phase optical encoders and kinesys load shackles. ONLY IN-HOUSE TECHNICIANS ARE AUTHORISED TO OPERATE THIS EQUIPMENT. Touring productions should send a plan of any supplemental lighting complete with weights and positions on truss prior to show.

Sound Specification

FOH Speakers:	10 x D&B Audioteknik® Q1 Mid-high Enclosures 2 x D&B Audioteknik® Q10 Mid-high Enclosures 4 x D&B Audioteknik® J Sub Enclosures 2 x D&B Audioteknik® J Infra Sub Enclosures
FOH Amplifiers:	10 x D&B Audioteknik® D12 Amplifiers
Foldback Speakers:	12 x D&B Audioteknik® M4 Wedges including Listener 2 x Logic System ETHOS 315 Bandpass Sub Enclosures
Foldback Amplifiers:	12 x Mixes of M4 Wedges on D&B Audioteknik® D12 Amplifiers
FOH System Control:	D&B Audioteknik® CANBUS Ethernet System Management Motion Computing Wi-Fi Tablet Remote
FOH Console:	Midas XL8 Digital Console (Touring consoles are only permitted under special circumstances)
FOH Outboard:	Klark Teknik® DN9331 RAPIDE Graphic Controller TASCAM CD200i C.D. & iPod Playback Insert & FX as per XL8 specification in Midas appendix
Monitor Console:	Midas Pro6 Digital Console (Touring consoles are only permitted under special circumstances)
Monitor Outboard:	Klark Teknik® DN9331 RAPIDE Graphic Controller Insert & FX as per Pro6 specification in Midas appendix
Additional Outboard:	2 x Klark Teknik® Helix DN9344E Quad Equaliser Motion Computing Wi-Fi Tablet Remote with Rapide Software
Multi-core & Splitters:	Dual Fibre Optic Dual Cat 5e Ethernet 2 x Midas DL451 Modular I/O 4 x Midas DL431 Active 3 way Splitters (96 channel) 1 x Kelsey 48 Channel splitter to stage extender 4 x Kelsey 12 Channel Snakes

Microphones:

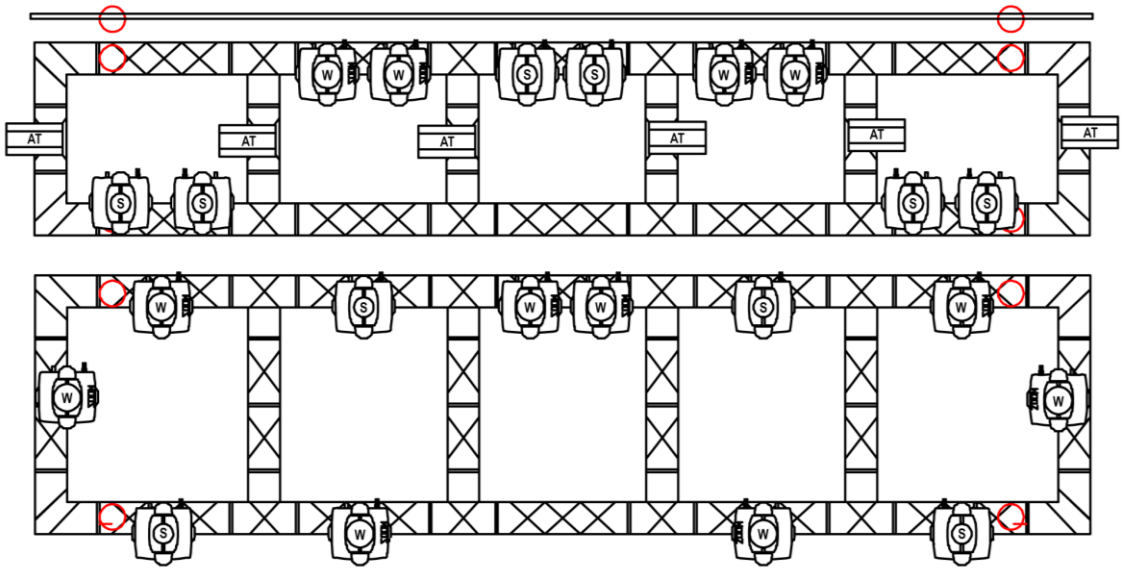
SHURE SM58	SENNHEISER MD904
SHURE BETA 58	SENNHEISER MD906
SHURE SM57	AKG C414 B XLS CONDENSER
SHURE BETA 57	AKG C451 CONDENSER
SHURE BETA 91	RADIAL ACTIVE DI
SHURE BETA 52	EV RE20
SHURE BETA 56	AUDIX D6

Stands & Cabling: Numerous K&M stands and cabling

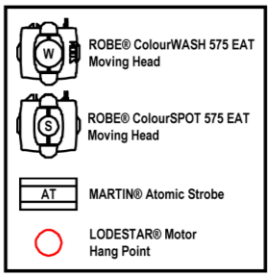
Lighting & Video Specification

Fixtures:	16	x	ROBE® ColourSpot 575 EAT Moving Heads
	12	x	ROBE® ColourWash 575 EAT Moving Heads
	6	x	Martin Atomic 3000 Strobes
	3	x	ETC S4 750 Profiles 36º Lens
Smoke:	1	x	Jem K2 Hazer
Control:	Highend / Flying Pig Wholehog IPC Console		
	Zero88 Fatfrog Console		
	Additional 15" Touchscreen		
Dimming & Switching:	60 Channels Avolites ART2000i Switching Circuits		
	36 Channels Avolites ART2000i Dimming Circuits		
Video Screens:	2	x	2.5m by 1.8m motorised screens suspended rear of stage
	2	x	1800 lumens DLP Projectors
Video Outboard:	1	x	DVD Player inc USB input
	1	x	Videonics Digital 4 channel Mixer

Lighting Plan



LEGEND



Appendix A | Sound Data

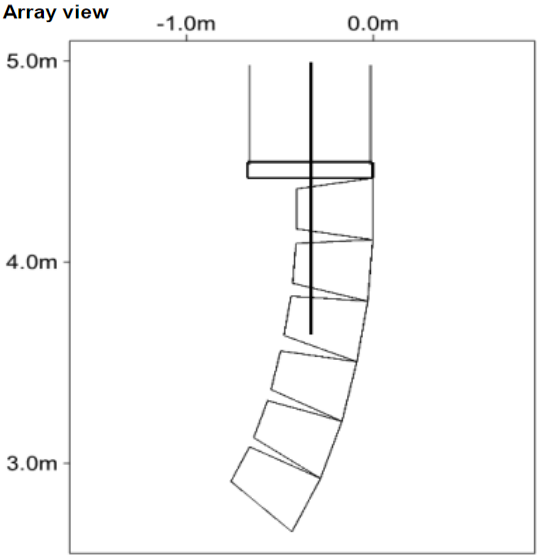
Array settings

Position x:	3.5 m	Position y:	4.0 m
Frame height front:	4.5 m	No. of Q-SUB	0
Horizontal aiming:	3.0 °	No. of Q1	5
Frame angle:	0.0 °	No. of Q7	1
Delay (abs.):	0.3 ms		

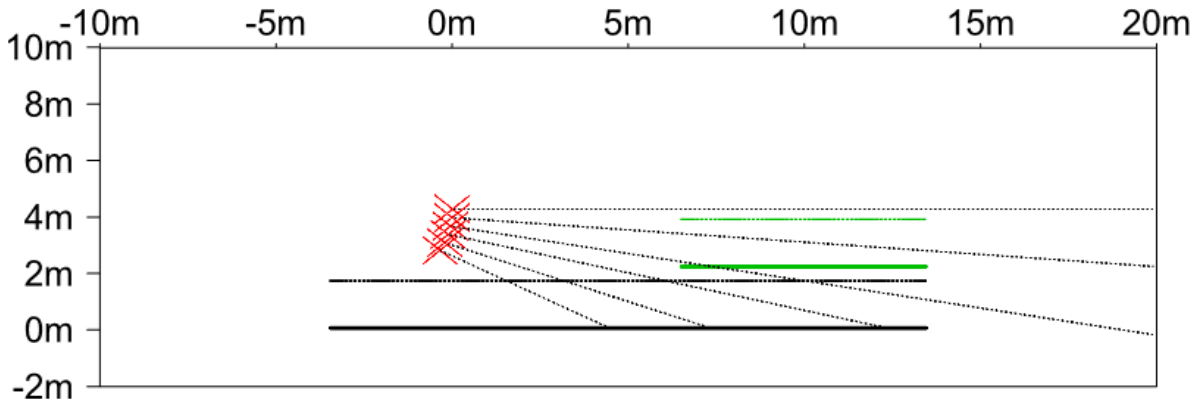
TOPs

CUT:		Off	CPL:		0	
Cab.	Line/Arc	Level/dB	HFC		Abs.:	Splay:
1	Line	0.0	--	Q1	0.0 °	0.0 °
2	Line	0.0	--	Q1	-5.0 °	5.0 °
3	Line	0.0	--	Q1	-11.0 °	6.0 °
4	Line	0.0	--	Q1	-15.0 °	4.0 °
5	Line	-1.0	--	Q1	-22.0 °	7.0 °
6	Line	0.0	--	Q10	-30.0 °	8.0 °

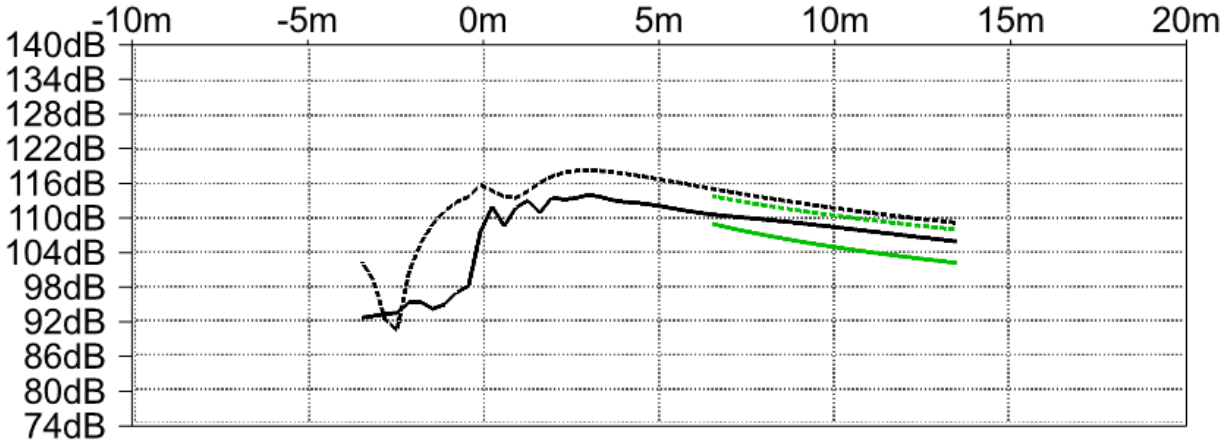
Array view



Profile at 3° aiming



Direct sound level vs. distance / dB SPL



Signal selection		Air absorbtion	
Level (dBu):	0.0	On / Off:	Off
Curve 1:	1000 Hz	Temperature:	20 °C
Curve 2:	250 Hz	Humidity:	std - 60%

Sub Bass

Layout

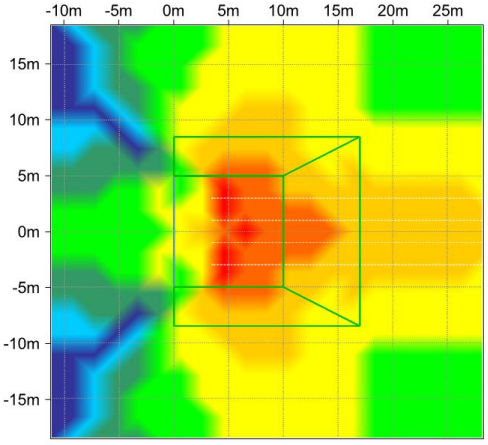
No. of sources (1..25):	6
Equally spaced along:	6.0 m
At x =	3.5 m
Source spacing:	1.2 m
Max. freq. for pattern control:	171 Hz
Delay for nom. dispersion of:	110 °
Alignment delay to main system:	6.4 ms

Cabinet setup

J-INFRA: 70Hz: Off | J-SUB: INFRA: On | HCD: On

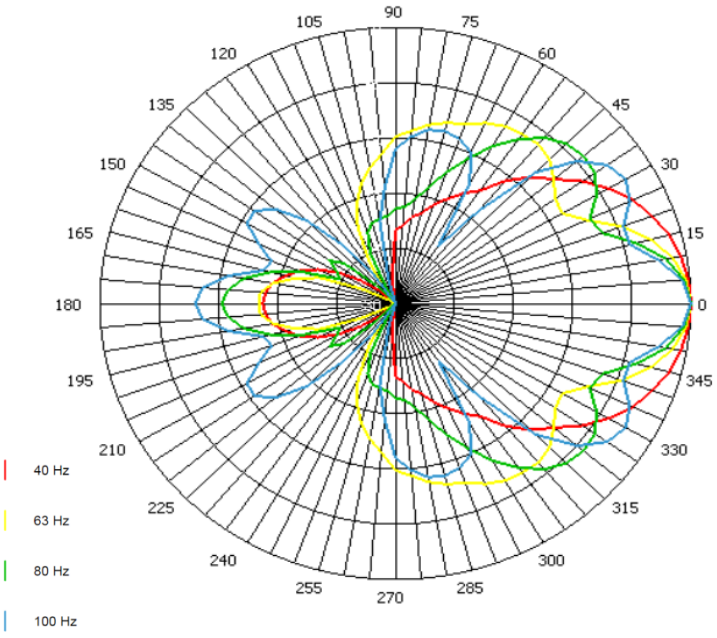
	No	Type	x	y	Level/dB	rotation	delay	total delay
R3	1	J-SUB	3.5 m	3.0 m	0.5	0 °	3.1 ms	9.5 ms
R2	1	J-SUB	3.5 m	3.0 m	0.5	0 °	0.6 ms	7.0 ms
R1	1	J-INF	3.5 m	1.0 m	0.5	0 °	0.0 ms	6.4 ms
L1	1	J-INF	3.5 m	-1.0 m	0.5	0 °	0.0 ms	6.4 ms
L2	1	J-SUB	3.5 m	-3.0 m	0.5	0 °	0.6 ms	7.0 ms
L3	1	J-SUB	3.5 m	-3.0 m	0.5	0 °	3.1 ms	9.5 ms

SPL mapping / 6dB per division



Simulated frequency: 63 Hz
Show dispersion of: none

Free and far field polar pattern



Appendix B | Midas Specifications

Effects Processing and Graphic EQs

Midas digital consoles include an ever expanding library of effects processing devices. The 2010 range includes:

- KT DN780 reverb with multiple styles
  Hall
  Plate
  Room
  Chamber
  ALIVE!
  Non-linear
  Reverse
  Infinite room
- Multi-band compressor
- Stereo pitch shifter
- KT Square ONE 8-channel dynamics processor
- KT DN370 Graphic EQ
- Stereo delay with precision tap tempo
- Stereo flanger

The effects devices are presented as a virtual rack of units. XL8 can have up to 16 multichannel devices (plus 32 Graphic EQs), PRO Series has 6 or 8 devices depending on model (plus Graphic EQs). The effects device types can be changed and/or re-patched on a scene by scene basis.

There are many patching options for the effects processors and graphic EQs. Some of these are:

- Assign to any insert send/return
- Assign to any network input or output
- Assign FX out to aux return
- Assign FX in to aux send (post fade)
- Assign FX out to bus direct in
- Assign FX in to channel direct out

The Midas' FX and dynamics are incorporated within the systems automatic delay management system, so that wherever they are patched, the audio will be absolutely phase-coherent when summed into the mix.

Graphic Equalisers

You can have up to 36 1/3 octave Klark Teknik® GEQs on a PRO series and up to 51 on an XL8, which can be patched into any output or insert point. The Graphic EQs can be controlled by a Klark Teknik® DN9331 Rapide fader remote which is standard on the XL8 and an option on the PRO Series or from controls on the console surface. The STS system allows the use of a select button on a Send to automatically pause the Rapide motor faders to move to settings for that send.

Appendix C | Midas XL8 Quick mix guide

Fast zone and detail panel areas
The input module is divided into two areas, the "fast zone" (the eight channel strips to the left on the input bay), where all of the "must have now" controls are located, and the detailed channel strip (the vertically orientated channel on the right on the input bay), which gives more comprehensive control. Visual feedback for both areas is provided from the screen above. Scroll the input modules' view using scroll buttons above the keypad, until the desired channels appear on the screen.

Digital signal path and input routing
Once the digital network is configured, the default state of the system is for input 1 on mic box 1 to be routed to channel 1 on the control surface. This follows through to channel 24, at which point input 1 on mic box 2 routes to channel 25, through to 48, etc.

Setting the input gains
The XL8 has two input gains, one is the remote analogue gain for the mic box, the other is a digital trim. Both are set from the common gain rotary, using the "gain swap" button to select analogue gain or digital trim. Select the analogue gain, and set input level for desired preference. Once this is achieved, select digital trim and set for preferred gain structure. The gain rotary in the detail area always controls the alternative "swap" to the fast zone.

Routing to master stereo outputs
Press the "stereo" button above the "image" rotary on the fast zone, check nothing is muted and the master faders are up, you will have audio!

Input equalisation (E-zone)
Switch the EQ section in using the button on the fast zone. Select desired filter using fast zone navigation buttons, or E-zone nudge buttons (found in the detail panel). Use filter controls in E-zone to apply EQ. The "mode" switch selects the filter types for the high and low shelving filters individually. Variable high and low pass filters are located next to the mic gain in the detail area, both feature a choice of two filter slopes. Visual feedback for EQ is provided from the screen, a graphical representation of the filters is shown above the detail area.

Input dynamics processing (D-zone)
Switch dynamics processors in using the buttons on the fast zone. Select desired process (Comp or gate) using fast zone navigation buttons, or D-zone nudge buttons (found in the detail panel). Use controls in D-zone to apply processing. Mode switch selects from a choice of four compressor styles, visual feedback for both comp and gate is provided from the fast zone hardware meters, the dashboard meters, and the screen above the appropriate input.

VCA-centric mixing and POPulation (POP) groups
The VCA-centric method of mixing was conceived around the way engineers use visual recognition to navigate around a desk, rather than memorising channels in numerical sequences. XL8 has been designed so the engineer doesn't have to think in terms of numbers, pages or layers. Users navigate the system and identify channels by colours and groupings, which they themselves create. VCA-centric mixing allows an individualised approach to the system, rather than working within hardware-dictated numerical limitations. This reassuringly familiar way of operating is central to the console, and ensures that engineers don't have to change their mindset to be able to mix on the XL8.

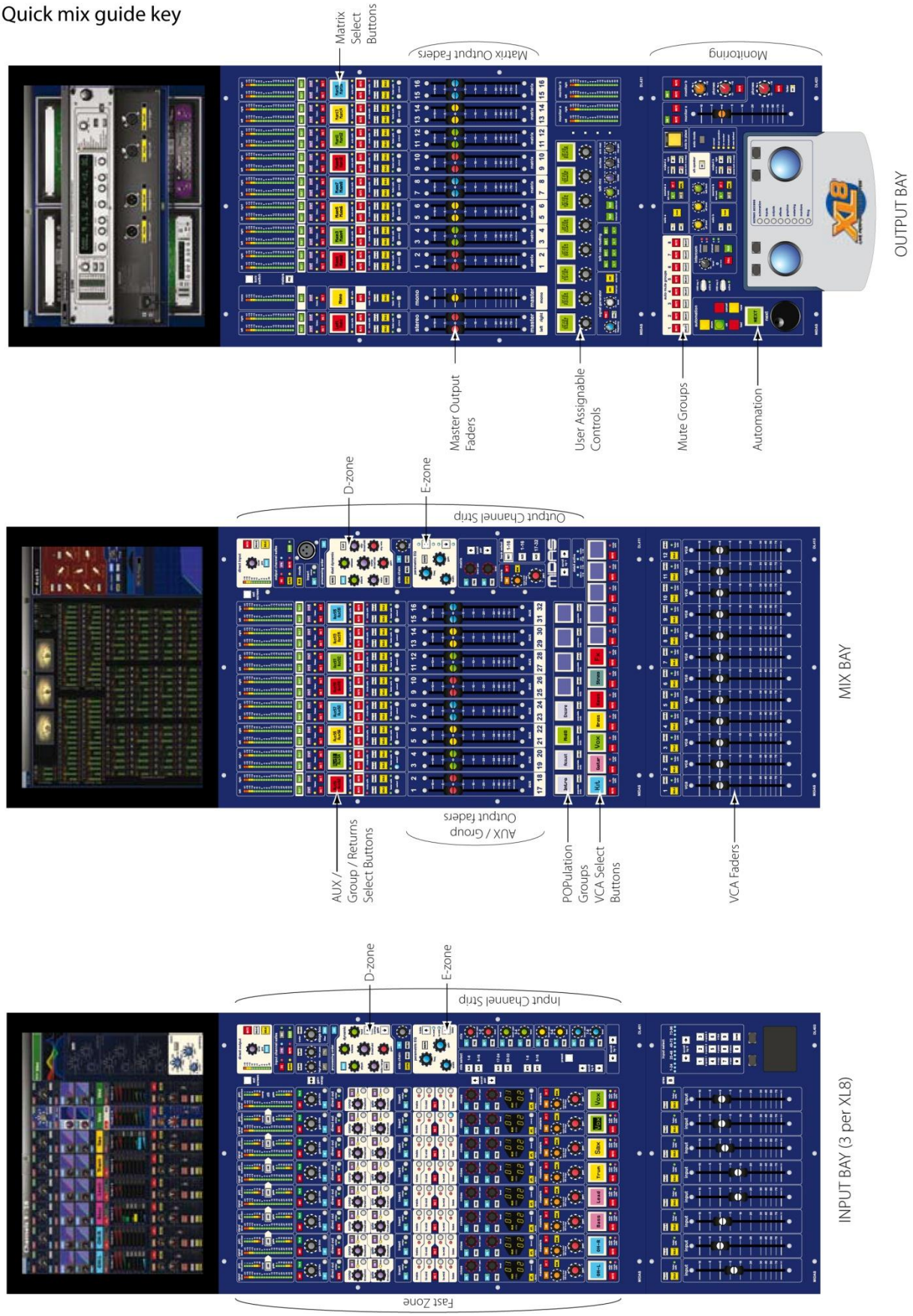
Assigning to VCAs (variable control association)
Press and hold desired VCA select button. Press channel select buttons to assign to VCA. Release VCA select button to confirm selections. The assigned input channels will adopt the VCA's (user defined) colour as a default (this can be edited).

Assigning to POP (population) **groups**
Population groups are created to bring a user-configured group of input channels to a desired area of the control centre, for viewing or adjustment. Press and hold desired POP group select button. Press channel select buttons to assign to POP group. Release POP group select button to confirm selections. The assigned input channels will adopt the POP groups (user defined) colour as a default (this can be edited).

Setting an AUX preset
Aux presets are created to enable an operator to "lock" the most relevant pair of aux or matrix sends to each channel, on a scene-by-scene basis.
Press and hold the "preset" button in the detail panel. Scroll through the 48 mix busses using the "scroll pair" buttons in the aux assign area. Press the aux select button in the fast zone when the required pair of mixes appears at each channel. Release the "preset" button to confirm selections. The preset will be displayed whenever the preset button is pressed. Mix send rotary controls will display the default colour of the selected busses.

Building the FX rack
Press the "effects" button on the trackball area (output module). You will be presented with an empty 19" rack on the screen above. Using the right-hand trackball, click on one of the blank rack panels, click on the "change device type" button at the top of the blank rack panel. Select your desired effects processor from the menu, then click the "ok" button to load it into your effects rack. Click on the front panel of your effect to open a processor for editing, use the buttons and rotary controls immediately below the matrix output faders for parameter entry. You need to look no further than the XL8 effects rack for the best in performance enhancing creative processing.

Quick mix guide key



Appendix D | Wholehog Hog® iPC™ Specification

The Hog® iPC™ console offers maximum flexibility for productions in an economical, mid-range controller. It is designed to take full advantage of the Wholehog 3 operating system's advanced features and functionality while being backwards compatible with the discontinued, but widely-used Wholehog 2 operating system.

The Hog iPC console houses a PC motherboard and hard drive optimized to operate with the Hog 3PC application. The Windows® XP embedded (XPe) operating system — a streamlined version of Windows XP, is custom configured for its specific use within the Hog iPC console.
Hog iPC uses four universes of DMX output direct from the console, expandable to eight universes using USB DMX Widgets or a USB DMX Super Widget. An unlimited number of DMX outputs is also available through the use of Wholehog 3 DMX Processors (DP's). In addition the Hog iPC console includes one SMPTE input, and MIDI in/out/thru capabilities as well as two 12-inch high-brightness color touchscreens with adjustable viewing angles. A backlit trackball with four buttons can be configured to provide cursor and position control.

Ten Playback faders feature familiar Wholehog 3 playback controls (choose, go, pause & flash). Hog iPC offers an internal hard drive, and re-writeable CD-ROM drive; five Universal Serial Bus ports for touchscreens, external drives, printer, and Wholehog 3 accessories (e.g. playback wing, expansion wing, and additional USB DMX Widgets). A third monitor or touchscreen can also be connected to the DVI video output to provide maximum viewing flexibility.

An Ethernet connector allows communications with Hog 3PC computers, other Hog iPC consoles, Wholehog 3 console systems, and Wholehog 3 DMX and Timecode Processors. Remote Focus functionality is available when networked with a computer or tablet PC running Hog 3PC software.
In addition to operating optimally with Hog 3PC software, the Hog iPC console is backwards compatible with the Hog® 2PC application. Utilizing the Hog iPC console internal hardware, the Hog 2PC application provides four universes of DMX output (expandable to seven), as well as one SMPTE input and MIDI in/out/thru capabilities.

Note: *Although show files can be programmed using either Hog 3PC or Hog 2PC software on the Hog iPC console, show files remain specific to each application and are not interchangeable.*

Other Contacts

Ticket Outlets:	Ripping Records	0131 226 7010
	Ticket Scotland	0131 220 3234
	Ticket Web	08444 999 999
Music Shops:	Sound Control	0131 229 8211
	Scayles Music	0131 226 8241
	Drum Central	0131 667 3844
Backline Rental:	DM Audio	0131 661 3097
	Banana Row	
Lighting Rental:	FS Lighting	0131 665 0990
	Northern Light	0131 553 2383
	The Warehouse	0131 555 6900
Sound Rental:	The Warehouse	0131 555 6900
	DM Audio	0131 661 3097
	EFX Audio	01506 633 356
	Northern Light	0131 553 2383
Decor & Stage Design:	Event Decor Scotland	07595 715 547