

GREAT HALL

THE PEOPLE'S PALACE

TECHNICAL SPECIFICATIONS

INTRODUCTION

The Great Hall is a multi-purpose venue which can be used in a variety of configurations, but is generally offered as a 778 seat theatre with a large and extremely versatile stage area.

Queen Mary, University of London does not guarantee that all of these facilities and equipment are available or suitable for the venue user. Any prospective users should always check with the Venue Manager to ensure this information is up to date and to check if any equipment is temporarily unavailable.

Use of the venue and the technical equipment listed in this document by any visiting company or hirer is only permitted subject to the provisions of the venue's Health and Safety Policy and the Terms and Conditions of Hire. Use of certain equipment or technical installations is subject to an assessment of the competency and experience of personnel employed or engaged by the visiting company or hirer, and the venue shall have absolute discretion in this regard. The provision of technical staff appointed by the venue to operate or supervise use of the equipment contained within this document may be a condition of hire – please discuss your requirements in advance.

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UNLOADING AND PARKING

NOTE: Due to construction of a new building at the Mile End campus, vehicle access and load-in to the Great Hall will be changed until September 2016 as per the below:

Load-in

Vehicles (up to 19t rigid body trucks – NO ARCTICS) can enter the driveway from Mile End Road. Driveway entrance can be identified by a large clock-tower opposite a branch of Sainsbury's Local. Postcode of entrance is E1 4NS (Building number 327, Mile End Road).

Vehicles can then be unloaded to ground level and equipment taken through the People's Palace main entrance, through the foyer and into the ground floor of the Great Hall. Entire route is flat-roll and the smallest door-way along the route is 2.0m (h) by 1.8m (w). Length of route from unloading area to ground floor area in front of the stage is approx. 150m.

Once unloaded, vehicles must be moved to the Queen Mary Staff Car Park at the rear of campus, if remaining on site – parking permit will be issued on the day. We regret that no parking is available in close proximity of the venue – a limited number of parking spaces can be offered in the Queen Mary Staff Car Park by prior arrangement.

PLEASE NOTE: Loading/Unloading via the foyer can only be undertaken when audiences are not in the building.

AUDITORIUM

Capacities:

Maximum capacity (Standing Ground Floor + Seated Balcony): **962**

Standing Ground Floor: **550**

Seated Balcony: **412**

Maximum seated capacity: **778** (Ground floor retractable seating: 366, Balcony seating: 412)

Ground Floor:

Wooden varnished floor – non-sprung.

Retractable raked bleacher seating (366 fully upholstered seats with alphanumeric labelling).

Seating can be retracted by prior arrangement to offer an open flat-floor space for up to 550 standing. Seating system occupies approximately 1.3m of the rear of the auditorium and the front row of 26 seats remains accessible when in the retracted position.

4 x 13A double sockets positioned around the perimeter of the ground floor auditorium as well as 3 floor boxes each containing 2 x 13A double sockets.

Ground Floor Auditorium can be accessed by audience members from 2 entrances from the foyer/bar and cloister, with an additional 3 fire exits offered which are not used for regular audience access/egress.

Balcony:

Fixed raked seating (412 fully upholstered seats with alphanumeric labelling – 4 have restricted view).

Balcony can be accessed by audience members from a centre vomitorium entrance, with an additional 2 fire exits offered at the rear of the balcony which are not used for regular access/egress.

Production & auditorium lighting and sound control is situated at the rear centre of the balcony seating. The production control area is not an enclosed booth.

The walls to the balcony area feature two large windows fitted with motorised black-out blinds and red velour curtains.

STAGE

Proscenium

Proscenium Width	14.0m
Proscenium Height:	6.7m

Stage area:

Iron to rear wall:	9.5m
Iron to front of stage (apron):	3.5m
Front of stage apron to rear wall:	13.0m
Maximum performance area:	14.0m(w) x 13.0m(d)
Stage height from auditorium floor:	1.3m
Stage rake:	Unraked
Wings:	SL: 3.3m(w) x 7.6m(d) (note area is also used to store a grand piano). SR: 1.9m(w) x 9m(d)

The front 2.4m of the stage apron is constructed from Steel Deck panels which can be removed to reveal the orchestra pit. Please note that this is a time-consuming process and can only be undertaken by prior arrangement.

Access from the dressing rooms is via double doors located USL and DSR.

Fixed steps to the stage from the auditorium floor are located each side of the apron (8 steps, 1.8m wide with single handrail fixed to auditorium wall).

Stage surface is non-sprung black painted wooden boards, except for the orchestra pit cover which is Steel Deck panels with black laminate finish to match the main stage. Stage generally cannot be painted for short running productions, but fixings/screws are permitted in certain areas if discussed in advance.

The front edge of the stage apron can be fitted with removable guard rails by prior arrangement.

FLYING & RIGGING

FOH Advance Truss:

16.0m Milos M520 Quatro 529mm x 529mm aluminium truss (black finish) with electric hoist (Maquinas Iberica) operated via pendant controller from SL position.

Top dead from auditorium floor to bottom chord of truss: 10.0m

Certified to **2000kg** SWL uniformly distributed load on truss.

FOH Truss is permanently rigged with approximately **900kg** of audio/lighting equipment – see relevant sections for details. Additional equipment may be hung only by prior arrangement and in accordance with a rig plan agreed by the Venue Management. Bottom dead from auditorium floor to bottom chord of truss is **limited to 3.0m** due to line array hangs - suitable access equipment should be factored in to any rig plan.

Stage Grid:

Grid floor height above stage:	16.8m
Height to underside of grid from stage:	16.4m
Top dead of bars above stage level:	14.5m (except bar 11: 13.9m)
Bottom dead of bars above stage level:	1.1m

Grid can also accommodate temporary chain hoists/motors subject to agreed rig plan – please ask for details.

Counterweight Bars:

27 x Single purchase counterweight sets (15m battens)
 10 x Double purchase counterweight sets (15m battens)
 Certified to **450kg** UDL per bar uniformly distributed load

All sets are 4 line drop with hemp rope operating line.
 Single purchase sets operated from stage level in SL wings.
 Double purchase sets operated from raised gallery in USL wings.
 Loading gallery and grid accessed via staircase from stage.

IMPORTANT: Most counterweight sets carry 75mm 'gas barrel' battens – you should ensure that any equipment you wish to rig from these barrels are fitted with 75mm hook clamps, or bring other suitable rigging equipment for your luminaires/fixtures. 7 sets have been changed to 48mm 'ladder beam' barrels.

House Rigging Schedule:

Line set	Type	Barrel diameter	Distance from Iron (m)	Description/Usage
n/a	Iron	n/a	0.00	Iron
n/a	Motorised Curtain Track	n/a	0.15	House Traveller (red velour with gold trim)
1	Single Purchase	75mm	0.25	House Guillotine (red velour with gold trim)
2	Single Purchase	48mm	0.50	Empty
3	Single Purchase	75mm	0.75	12190mm x 9120mm Rear Projection Screen
4	Single Purchase	75mm	1.00	House working floods/examination lighting (disconnected due to screen)
5	Single Purchase	48mm	1.25	LX1: 6 x Chauvet COLOrado II Zoom LED Wash
6	Single Purchase	75mm	1.50	BWS Legs – 2 x 3m(w) x 7.5m(h)
7	Single Purchase	75mm	1.75	Empty
8	Single Purchase	48mm	2.00	LX2: 4 x Martin MAC III Profile 1500w Moving Head
9	Single Purchase	75mm	2.25	Empty
10	Single Purchase	75mm	2.50	House working floods/examination lighting
11	Single Purchase	75mm	2.75	Black Wool Serge Border – 17m(w) x 4.5m(h)
12	Single Purchase	75mm	3.00	Black Wool Serge Legs – 2 x 3m(w) x 7.5m(h)
13	Single Purchase	48mm	3.25	LX3: 5 x Chauvet COLOrado II Zoom LED Wash, 4 x Elation 5R Beam
14	Single Purchase	75mm	3.50	Empty (<i>note set 14 is a short barrel – approx. 8m in length</i>)
15	Single Purchase	75mm	3.75	Empty
16	Single Purchase	75mm	4.00	House working floods/examination lighting
17	Single Purchase	75mm	4.25	Empty
18	Single Purchase	75mm	4.50	Empty
19	Single Purchase	75mm	4.75	Black Wool Serge Border – 17m(w) x 4.5m(h)
20	Single Purchase	48mm	5.00	Empty
21	Single Purchase	75mm	5.25	Black Wool Serge Legs – 2 x 3m(w) x 7.5m(h)
22	Single Purchase	75mm	5.50	Empty
23	Single Purchase	48mm	5.75	LX4: 4 x Martin MAC III Profile, 5 x Chauvet COLOrado II LED Wash
24	Single Purchase	75mm	6.00	House working floods/examination lighting
25	Single Purchase	75mm	6.25	Black Wool Serge Border – 17m(w) x 4.5m(h)
26	Single Purchase	48mm	6.50	LX5: 8x Chauvet PIXPAR 24 LED Wash, 6 x Elation 5R Beam
27	Single Purchase	75mm	6.75	Empty
28	Double Purchase	75mm	7.00	Empty
29	Double Purchase	75mm	7.25	5 x White Silk Legs (1200mm wide) lit by 5 x Chauvet PIXPAR 24 LED Wash
30	Double Purchase	75mm	7.50	Black Wool Serge Rear Black – 17m(w) x 7.5m(h)
31	Double Purchase	75mm	7.75	Empty
32	Double Purchase	75mm	8.00	House working floods/examination lighting
33	Double Purchase	75mm	8.25	Empty
34	Double Purchase	75mm	8.50	Empty
35	Double Purchase	75mm	8.75	Not available - rear projectors restrict use of this bar
36	Double Purchase	75mm	9.00	Not available - rear projectors restrict use of this bar
37	Double Purchase	75mm	9.25	Not available - rear projectors restrict use of this bar

STAGE EQUIPMENT

Soft Goods:

3 pairs of black wool serge legs:	3.0m x 7.5m drop	(rigged on bars 6, 12 and 21)
3 black wool serge borders:	17.0m x 4.5m drop	(rigged on bars 11, 19, 25)
1 black wool serge rear black:	17.0m x 7.5m drop	(rigged on bar 30)
5 white silk legs	1.2m x 7.5m drop	(rigged on bar 29)

Access:

- 1 x Tallescope (1.0m>4.0m)
- 1 x 3-Section Combination Ladder – maximum extended height 4.0m
- 1 x 3-Section Combination Ladder – maximum extended height 8.0m
- 1 x Folding platform steps with work platform – platform height 2.0m

DRESSING ROOMS & PRODUCTION OFFICE

Dressing Rooms:

All dressing rooms are located directly below stage.

Room	Capacity
1	6
2	4
3	4
4	15-20

Each dressing room is equipped with 13A power, mirrors, dressing tables and wash basin.

WiFi available by prior arrangement.

2 x WC also available below stage.

Production Office:

Production Office with capacity for 2 people located on 2nd floor of the fly tower office stack with phone & internet connections available by prior arrangement.

Please note: due to the layout and age of the building, there is no wheelchair access available to the stage to/from any of the dressing rooms or to the production office.

PRODUCTION LIGHTING

Lighting Console:

[Avolites Tiger Touch Pro](#) (running Titan software version 8.0)

ETC Sensor3 Dimmers:

80 x 15A DMX dimmed circuits: 56no to production lighting boxes, 23no to patch panel.

15 x 15A DMX controllable switched circuits: 8no to production lighting boxes, 7no to patch panel.

Dimmer and mains patch:

34 x 15A uncontrolled manually switched circuits: 23no to production lighting boxes, 11no to mains patch

From patch panel: 82 ways of 15A patching running to all production lighting boxes.

Patch panel can also accept 36 ways of incoming 15A dimming/mains from 6 x temporary Socapex inputs located in SL wings.

HOUSE LIGHTING FIXTURES

FOH Projection Box:

7 x ETC Source 4 (14°)

FOH Truss:

4 x Vari-Lite [VL1100](#) TSD Moving Profile ERS Luminaire (1000w Tungsten Halogen) fitted with five Vari-Lite stock gobos.

6 x Vari-Lite [VL2000](#) Moving Wash Luminaire (700w short arc lamp)

4 x 2-cell 'Molefay' audience blinders (2 x 650w)

4 x Auditorium Wall Side Perches (each rigged with):

4 x PAR 64 Long Nose 1000w

2 x 2-cell 'Molefay' audience blinders (2 x 650w)

LX1 (Counterweight set no. 5):

6 x Chauvet [COLORado II](#) Zoom Tour RGBW LED Wash (7.7 - 35 degree zoom)

LX2 (Counterweight set no. 8):

4 x Martin [MAC III](#) Moving Profile Luminaire (1500w short arc lamp)

LX3 (Counterweight set no. 13):

5 x Chauvet [COLORado II](#) Zoom Tour RGBW LED Wash (7.7 - 35 degree zoom)

4 x Elation [Platinum Beam 5R](#) Moving Beam Effect

LX4 (Counterweight set no. 23):

5 x Chauvet [COLORado II](#) Zoom Tour RGBW LED Wash (7.7 - 35 degree zoom)

4 x Martin [MAC III](#) Moving Profile Luminaire (1500w short arc lamp)

LX5 (Counterweight set no. 26):

8 x Chauvet [PixPar 24](#) RGB LED Wash (Fixed 20 degree beam angle/34 degree field angle)

6 x Elation [Platinum Beam 5R](#) Moving Beam Effect

Additional Loose Lighting Stock in store available to hirers by prior arrangement:

6 x Elation [Platinum Beam 5R](#) Moving Beam Effect (floor standing only – no hanging brackets)

3 x Chauvet [PixPar 24](#) LED Wash

16 x PAR64 Long Nose fitted with 15A plug

10 x ETC Source 4 Junior fitted with 15A plug

8 x Philips Selecon RAMA 1200w High Performance Fresnel Lantern fitted with 15A plug

3 x ETC Source 4 Zoom (15°-30°)

2 x JEM [Compact Hazer Pro](#) (see 'Effects' on page 10).

TEMPORARY POWER SUPPLIES

DSL Wings:

4 x 125A 3PN CEE Form
1 x 32A 3PN CEE Form
4 x 13A Sockets

USR Wings:

1 x 125A 3PN CEE Form
1 x 63A 1PN CEE Form (designated for temporary sound)
4 x 13A Sockets

Projection Room:

1 x 63A 3PN CEE Form
2 x 32A 3PN CEE Form
2 x 16A 1PN CEE Form

IMPORTANT NOTE: The incoming stage supply (MCCB TH3 board) is fed via 160A fuses. This represents the total available electrical supply across all temporary outlets on stage and total load must not exceed this.

Auditorium (Ground Floor):

4 x 13A double sockets positioned around the perimeter of the ground floor auditorium
3 x floor boxes each containing 2 x 13A double sockets.

Auditorium (Balcony):

2 x 13A double sockets in cupboard at front of balcony seating area.

Control Booth:

8 x 13A Sockets

LOOSE POWER DISTRIBUTION

1 x 63A 1ph Input > 6 x 16A Outputs Portable Distribution Unit
1 x 63A 1ph Cable (5m)
Numerous 16A cables / 4 way splitters
Numerous 13A cables / 4 way splitters

AUDIO

Main FOH System:

EM Acoustics HALO Compact Line Array - <http://www.emacoustics.co.uk/halo-compact>

Main L&R hangs flown from FOH Truss - each hang comprises:

1 x EM Acoustics HALO-CS Flyable Subwoofer (600w RMS, 1200w Program)

12 x EM Acoustic HALO-Compact Line Array Element (325w RMS, 650w Program)

Centre Fill (flown from centre of FOH Truss):

1 x EM Acoustics MSE-159 Wide Dispersion (750w RMS, 1500w Program)

1 x EM Acoustics MSE-159 Narrow Dispersion (750w RMS, 1500w Program)

Front Fills (mounted on front lip of stage apron):

4 x EM Acoustics i2 (200w RMS, 400w Program)

Sub Bass (deployed on-stage if desired):

4 x EM Acoustics EMS-215 (800w RMS, 1600w Program)

FOH Amplification & Processing:

3 x EM Acoustics/MC2 Audio AQ-10 4-channel power amplifier

1 x EM Acoustics/MC2 Audio AQ-3 4-channel power amplifier

1 x EM Acoustics/MC2 Audio AD-9 2-channel power amplifier (sub bass)

1 x XTA DC1048 System Processor

Foldback:

4 x EM Acoustics EMS 81X full range quasi-trapezoid enclosure (250w RMS, 500w Program)

1 x EM Acoustics/MC2 Audio AQ-3 4-channel power amplifier

4 x RCF TT 08-A active multi-purpose powered speaker (750w) c/w tripod speaker stands

FOH Mixing:

DiGiCo SD9 Digital Mixing Console - <http://www.digico.biz/docs/products/SD9.shtml>

(located at control position at rear of balcony)

- Running software v634.
- 48 Flexi Channels, (mono or stereo) (Equivalent to 96 channels of DSP).
- 16 Flexi Busses, (mono or stereo) & Stereo or LCR Master plus 8 Matrix and Dual Solo Busses.
- 12 x 8 Output Matrix.
- Up to 8 Stereo on-board effects and 16 graphic EQ's.

2 x DiGiCo D-Rack remote I/O racks each with 32 inputs and up to 16 outputs connected to the console via Ethercon CAT5E bus patchable to facility panels on stage or in the orchestra pit.

2 x 16in/4out XLR Stagebox Multicore with 15m loom.

FOH Playback/Recording:

2 x Denon DN-501C CD Player

1 x Denon DN-650R Solid State Playback and Recorder (USB / SD Card) with AES digital I/O connections to console.

1 x DiGiCo UB MADI USB 2.0 audio interface (48 channels of I/O)

Audio Tie-Lines:

As well as the DiGiCo D-Rack provision, the venue is equipped with 1 x 24 way analogue audio bus (BUS A) and 1 x 16 way analogue audio bus (BUS B) all 3pin XLR. Note BUS B is used for house audio system patch to amplifier room which limits available capacity when using the house audio system.

Venue cable infrastructure also includes (all patchable):

Speaker (NL4 Speakon), Video (BNC), DMX (5pin XLR), CAT5E Ethernet (Ethercon)

Please contact Venue Management for tie line schematics – capacity is limited by existing house systems.

MICROPHONES

Radio Microphones:

4 x Lavalier (clip on) Radio Microphones: Sennheiser EW 312 Evolution Wireless G3 system with SK 300 G3 bodypack transmitter fitted with ME 2 clip-on microphone.

4 x Handheld Radio Microphones: Sennheiser EW 335 Evolution Wireless G3 system with SKM 300-835 G3 handheld transmitter (cardioid, dynamic).

Microphone	Channel	Frequency
Handheld 1	40	622.500
Handheld 2	40	622.875
Handheld 3	40	623.375
Handheld 4	40	624.000
Lavalier 1	40	624.400
Lavalier 2	40	624.925
Lavalier 3	40	625.625
Lavalier 4	40	626.075

Wired Microphones/DI/Stand:

5 x Shure SM58 Dynamic Vocal Microphone

4 x Shure SM57 Instrument Microphone

4 x BSS AR-133 DI Box

10 x Microphone Stands (mixture of short boom, tall boom and straight)

Numerous XLR microphone cables to suit above in 5m, 10m and 20m lengths.

COMMUNICATIONS

Intercom:

Single channel wired ring intercom circuit with connection points at control booth, numerous on-stage locations, FOH foyer locations, orchestra pit, projection room, dimmer/amp room and left/right auditorium boxes.

4 x Tecpro single channel belt packs

4 x Tecpro single muff headsets

Show relay to all dressing rooms, dimmer/amp room and projection room.

Paging from DSR prompt corner, control booth and box office to two zones; FOH foyer/bar area and backstage.

Infrared:

3 x Sennheiser IR Transmitters mounted on FOH truss with coverage to all seating areas – broadcasts show relay audio feed.

10 x Sennheiser Stethoset IR receivers available from box office for patrons to use.

EFFECTS

2 x JEM Compact Hazer Pro

Haze/smoke effects may be used by prior arrangement with the Venue Management. Note that use of such effects requires the isolation of the Fire Alarm system and this may only be undertaken with the appropriate number of venue stewards/duty management in place during performances.

Use of other special effects (e.g. pyrotechnics, naked flame, etc) is subject to agreement and this should be discussed with the Venue Management well in advance, so that suitable risk management procedures can be in place and the appropriate local authority or fire authority permissions can be sought.

NO SPECIAL EFFECTS ARE TO BE USED WITHOUT PRIOR WRITTEN APPROVAL FROM THE VENUE MANAGEMENT.

PROJECTION AND AUDIO VISUAL

12190mm x 9120mm rear projection screen flown from bar 2 counterweight set.

NOTE: Projection screen fills the entire proscenium opening which means usable stage area is restricted to 4.0m x 14.0m apron downstage of the screen. The projectors are mounted at the very rear of the stage, so a large zone upstage of the screen must be kept clear of props/drapes to maintain rear projection throw.

2 x Christie DS+10K-M SXGA DLP Projector (10500 lumens) fitted on rear wall of stage.

Presenter console can be positioned on stage apron and is fitted with:

2 x Beyerdynamic 'Revolutio' Desktop Microphone
1 x Pioneer BDP-LX55 Blu Ray Player
1 x PC with 24" Smart Podium interactive preview monitor
1 x Wolf Vision VZ-8 Light Visualiser
1 x Extron 7" Touch Screen Control Panel
HDMI, VGA and 3.5mm audio input connections for laptop

The production control booth at the rear of the balcony is fitted with:

1 x Pioneer BDP-LX55 Blu Ray Player
HDMI, VGA and 3.5mm audio input connections for laptop
1 x Extron 10" Touch Screen Control Panel

Projection system can be operated to offer two separate 4:3 images, or a single combined edge-blended 16:9 image to fill the entire screen area.