MONASH University Academy of Performing Arts

ROBERT BLACKWOOD HALL

Technical Specifications

Updated February 2018
STAGE:

Stage Description:

The Robert Blackwood Hall is a 1598 seat Concert Hall, consisting of 1256 seats in the raked auditorium and seating for a further 342 patrons in the balcony. The stage is an open stage with 4 fixed risers built in. Primarily built for large orchestral performances, the acoustics are fantastic for any live entertainment. There is no proscenium or flown scenery capabilities.

The stage floor is Queensland Spotted Gum T&G hardwood flooring. Please note there is no nailing or screwing to the floor permitted.

Stage Dimensions:

<table>
<thead>
<tr>
<th>Setting Line</th>
<th>290mm (from D/S edge of cable trap)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre Line</td>
<td>9380mm</td>
</tr>
<tr>
<td>Stage drop to Auditorium</td>
<td>1180mm</td>
</tr>
</tbody>
</table>

Distance From: (SL = Setting Line, CL = Centre Line)

- SL to 1st Rise in floor: 5170mm (0.5m height of riser)
- SL to Organ Barrier: 11400mm
- SL to Back Wall: 13300mm
- CL to PS/OP wall ds: 9380mm
- CL to PS/OP wall up/s: 8400mm

Auditorium:

- Seating capacity: 1598
- Stalls: 1256
- Balcony: 342
- 12 Removable Seats to accommodate wheelchairs.
- 10 Removable Seats to accommodate alternate operating position.

Orchestra Pit:

NO.

A stage extension is available at an extra charge*.
This increases the Stage Surface area by 2.4m in depth (total of 7.5m from SL to DS edge).
*Please contact Technical Services Manager for further information.
Flying Facilities:

Fly System:

**Fly System Details:** 5 x winches.

1 x Box Truss (3 Chain motors) above auditorium.

- Operating Position: HME controller on PS.
- LX Lines: 6
- Scenery Lines: No.
- Panorama Lines: No.
- Batten Type: HME Pro Batten
- LX bars can not be swung. Total WLL = 550kg

Drapery:

- 8 x 2.5m x 11m black 450GSM wool.
- 2 x 13.5m x 1.5m black 450GSM wool.

Access Equipment:

- **Ladders:** 2 x Extension Ladder 4m.

Staging Units:

<table>
<thead>
<tr>
<th>Item</th>
<th>Length</th>
<th>Width</th>
<th>Height</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Riser</td>
<td>2100</td>
<td>600</td>
<td>185</td>
<td>4</td>
</tr>
<tr>
<td>Medium Riser</td>
<td>1500</td>
<td>300</td>
<td>185</td>
<td>14</td>
</tr>
<tr>
<td>Small Riser</td>
<td>600</td>
<td>300</td>
<td>185</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectern</td>
<td>2</td>
</tr>
<tr>
<td>Conductors Podium</td>
<td>2</td>
</tr>
<tr>
<td>Presentation Chairs</td>
<td>120</td>
</tr>
<tr>
<td>Music Stands</td>
<td>60</td>
</tr>
<tr>
<td>Musician Chairs</td>
<td>70</td>
</tr>
</tbody>
</table>

Loading Dock:

**Access:** Via Carpark behind Robert Blackwood Hall.*

- Truck Dock height: **1800 (H) x 3300mm (W).**
- Door: **2200 (H) X 1800 (W) at Stage level.**
- Diagonal: **2600 (W).**

*Robert Blackwood Hall does not have a tail gate to level onto trucks, vans or Utes.*
LIGHTING:

Control:
- Lighting desk: ETC GIO (2 x monitor + 1 x ELO touch screen)
- House Rig: 2 Universes (A & B). Dimmers run on A, LEDs run on B
- Universe License: 4 Universes – Venue only has 2x local 5pin outputs.
- Spare House Channels: 350 Channels on Universe A, 150 channels on Universe B
- Signal input:
  1 – Control Room 1 – Bio Box
  2 – Auditorium – Via Bio Box
  3 – Top of Control Room 2
  4 – Centre of Balcony Railing
- Data Output Locations:
  1x DMX 5pin TV Truss
  2x DMX 5pin Winch 1
  2x DMX 5pin Winch 2
  2x DMX 5pin Winch 3
  2x DMX 5pin Winch 4
  2x DMX 5pin Winch 5
  1x DMX 5pin Top of Control Room 2 (Data Splitter Location)
  1x DMX 5pin Center of Balcony Railing
  1x DMX 5pin Projection Room

Remote riggers available onstage: Yes.

Positions:
- **Stage Bars:** LX Bars – 49mm Pipe
  *LX Bars are FIXED and can not be swung UP/s or DS.*

<table>
<thead>
<tr>
<th>FOH BOX TRUSS</th>
<th>ROW N &amp; O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting Line to lighting bar</td>
<td>10.4m</td>
</tr>
<tr>
<td>Usable bar width</td>
<td>16.8m</td>
</tr>
<tr>
<td>Notes:</td>
<td>CLS 18” Steel Box Truss (12 dimmers with a total of 2400watt each)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LX Bar #1</th>
<th>ROW G &amp; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting Line to lighting bar</td>
<td>4m (9.3m high from auditorium level)</td>
</tr>
<tr>
<td>Usable bar width</td>
<td>16.2m</td>
</tr>
<tr>
<td>Notes:</td>
<td>Pro Batten(24 dimmers x 2400watts)</td>
</tr>
</tbody>
</table>
### LX Bar #2
#### XX ROW
- Setting Line to lighting bar: 0.6m (11.4m high from auditorium level)
- Usable bar width: 14.2m
- Notes: Pro Batten (12 x dimmers x 4500 watts)

### LX Bar #3
#### DOWN STAGE
- Setting Line to lighting bar: -3.5m
- Usable bar width: 14.2m
- Notes: Pro Batten (12 dimmers x 2400 watts)

### LX Bar #4
#### MID RISERS
- Setting Line to lighting bar: -9m
- Usable bar width: 14.2m
- Notes: Pro Batten (12 x dimmers x 2400 watts)

### LX Bar #5
#### UP/S ORGAN
- Setting Line to lighting bar: -10m
- Usable bar width: 14.2m
- Notes: Pro Batten (12 x dimmers x 2400 watts)

#### FOH Boom (PS & OP)
- Setting Line to FOH Boom 1#: 9.5m (5.1m stage level to lowest point of Boom)
- Maximum lanterns on boom: 4 outlets.

### Dimmer Channels:
- Total Dimmers: 126
- Dimmers on battens: 84
- Dimmers for Box Truss: 12
- Dimmers in projection room: 30

### House Lights:
- Independent control: Yes.
- Control positions: SM Console, Control room 1 and PS Stage.
Stage Luminaire:

Profiles

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>Angle</th>
<th>Detail / Accessories</th>
<th>Watt</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETC</td>
<td>Source 4</td>
<td>19</td>
<td>Fixed Degree</td>
<td>750</td>
<td>3</td>
</tr>
<tr>
<td>ETC</td>
<td>Source 4</td>
<td>26</td>
<td>Fixed Degree</td>
<td>750</td>
<td>31</td>
</tr>
<tr>
<td>ETC</td>
<td>Source 4</td>
<td>15/30</td>
<td>Zoom Lens</td>
<td>750</td>
<td>14</td>
</tr>
<tr>
<td>ETC</td>
<td>Source 4 Junior</td>
<td>25/50</td>
<td>Zoom Lens</td>
<td>575</td>
<td>30</td>
</tr>
</tbody>
</table>

Fresnels

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>Detail / Accessories</th>
<th>Watt</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETC</td>
<td>Desire D60’s</td>
<td>LED Fixture, With Barndoors</td>
<td>NA</td>
<td>35</td>
</tr>
<tr>
<td>ETC</td>
<td>Source 4 Fresnel</td>
<td>With Barndoors</td>
<td>750</td>
<td>8</td>
</tr>
<tr>
<td>Selecon</td>
<td>Compact Fresnel</td>
<td>With Barndoors</td>
<td>1200</td>
<td>6</td>
</tr>
<tr>
<td>Strand</td>
<td>Pattern 243</td>
<td>No Barndoors</td>
<td>2000</td>
<td>5</td>
</tr>
</tbody>
</table>

Followspots:

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>Angle</th>
<th>Detail / Accessories</th>
<th>Watt</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patt 293</td>
<td>Followspot</td>
<td></td>
<td></td>
<td>2kW</td>
<td>1</td>
</tr>
</tbody>
</table>

Additional Lighting/Effects:

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>Size</th>
<th>Detail / Accessories</th>
<th>Watt</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mirror Ball</td>
<td></td>
<td></td>
<td>20&quot; diameter ball with motor</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Smoke Machine</td>
<td>Magnum 1200</td>
<td>20inch</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Haze Machine</td>
<td>Look Solutions Unique 2.1</td>
<td></td>
<td>DMX Control</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fan</td>
<td></td>
<td></td>
<td>DMX Control</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Power:

**3 Phase Outlets:**
- 2 x 32 amps OP Stage.
- 1 x 60 amps OP External Wall (can be accessed via stage).
- 1 x 32 amps OP External Wall (can be accessed via stage).

Cabling:

240v Extension Cable:

The theatre has a good stock of extension leads and IEC leads to accommodate the venue’s standard lighting rig and minimal external equipment hire.
ROBERT BLACKWOOD HALL TECHNICAL SPECIFICATIONS

AUDIO:

Control Position: Dedicated Control Bio Box.
Or

Control & Amplification:
- DIGICO S21 – BIO BOX Position only.
  - 48 channels.
  - 8 x Sub groups.
  - 16 Pre/Post AUX.
  - Input Metering.

DIGICO SD9 with DIGICO D-RACK 32/8. For Auditorium or monitoring only.
- 48 Flexi Input channels.
- 24 x Aux / Sub Groups.
- 12 x 8 Full Processing Matrix.
- 16 x Graphic Equalisers.
- Left, Right, Mono Mains Out.
  *Available is an extra DIGICO D-RACK 32/8.

Amplifiers: NEXO NXAMP 4X1

Speakers:
FOH Speakers: NEXO System (3 clusters hung at centre, left and right plus delay and side fill).

Balcony Delay Speakers: 3 X NEXO M6.

Playback:

<table>
<thead>
<tr>
<th>Item</th>
<th>Make</th>
<th>Model</th>
<th>Detail / Accessories</th>
<th>Use</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cassette Deck</td>
<td>Denon</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>CD Player</td>
<td>Denon</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Mini Disk</td>
<td>SONY</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>MP3 &amp; USB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Microphones:

<table>
<thead>
<tr>
<th>Make</th>
<th>Model</th>
<th>Detail / Accessories</th>
<th>Use</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHURE</td>
<td>58</td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>SHURE</td>
<td>57</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>MANN</td>
<td>M11</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>AKG</td>
<td>HM1000</td>
<td>Choir Mics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>RODE</td>
<td>NT5</td>
<td>Matched Pairs</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>DPA</td>
<td>4099P</td>
<td>Internal Piano Mic</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>BEHRINGER</td>
<td>B-5</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SHURE</td>
<td>MX418</td>
<td>Lectern Microphone</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>NEUMANN</td>
<td>KM84</td>
<td>Condenser Instrument Mic</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>NEUMANN</td>
<td>U87</td>
<td></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
### Accessories:

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>Detail / Accessories</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microphone Stand Tall</td>
<td></td>
<td>Boom arms</td>
<td>12</td>
</tr>
<tr>
<td>Microphone Stand short</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Microphone Stand short</td>
<td></td>
<td>Chrome Tri-base</td>
<td>3</td>
</tr>
<tr>
<td>BSS DI</td>
<td>AR-133</td>
<td>ACTIVE</td>
<td>2</td>
</tr>
<tr>
<td>Radial Multi DI</td>
<td>PRO AU2</td>
<td>ACTIVE</td>
<td>3</td>
</tr>
</tbody>
</table>

### Audio Cable:

Various lengths of XLR Jack, mini jack, RCA leads, IEC Leads and adaptors.

### Audio Notes:

The Digico S21 mixing position is in the Bio box in the Balcony area. This mixer is unable to be moved to the auditorium. The Digico SD9 can be positioned in the auditorium, ramp and other locations when required.

Seats CC20-25 and BB20-25 must be removed to accommodate a mixer in the auditorium.

Additional audio equipment required (eg. Radio microphones, effects, reverb, graphics etc) may be available by prior arrangement with Theatre management at an extra charge.
AUDIO VISUAL:

Control Room 2:
This room is located PS stage dedicated for all AV needs. Specifically built and designed to accommodation all projection, recording and signal needs for broadcast.

Projectors:

<table>
<thead>
<tr>
<th>Type</th>
<th>Detail / Accessories</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panasonic DLP 8K</td>
<td>***Extra charge ***</td>
<td>1</td>
</tr>
<tr>
<td>SANYO 15K</td>
<td><strong>Extra Charge</strong>, HD-SDI Input Available</td>
<td>1</td>
</tr>
</tbody>
</table>

Screens:
Front projection 8m x 6m (takes 2min to be lowered, independently hung.)
Front Projection 4.5m x 3m (dead hung upstage, availability on application)
Delay Screen 4.5 x 3m (dead hung on TV box truss, availability on application)

AV Playback Equipment:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Model</th>
<th>Detail / Accessories</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD PLAYER</td>
<td>PIONEER</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>PRESENTATION SWITCHER</td>
<td>KRAMER</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>SPLITTER</td>
<td>KRAMER</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>DVD Player</td>
<td>Generic Brands</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

CCTV:
In House Stage Monitor Camera splits to:

- Prompt Corner
- OP Corner
- Foyer
- Dressing Rooms
- Audio control
- Lighting Control Room

Cabling:
The venue has a good stock of VGA, SDI, RCA and HDMI cables to accommodate the venues own equipment. It would be advisable when supplying your own vision equipment that you also supply the correct cabling.
BACKSTAGE:

Stage Managers Desk:
Stage Managers desk is located in prompt corner. Playback screen is mounted on the side of the Prompt Corner wall with Phone.

Talkback:
- Master Unit: ClearCom Head Station
- Total headsets: 6x BeyerDynamic DT108
- Total comms packs (wired): 7x ClearCom RS-601
- 2 Way Radio Units In-house: 5
- Talkback patching located at: OP. OFF STAGE. STAGE MANAGERS DESK LX CONTROL. AUDIO CONTROL. CONTROL ROOM 2. ORGAN POSITION. TOP END OF RAMP.

Paging / Show relay:
Paging to the dressing rooms is available from the stage managers desk. Show relay is distributed to all dressing rooms and green room. Each room has an individual volume control.

Q Light System:
NO.

Dressing Rooms:

<table>
<thead>
<tr>
<th>Dressing Room</th>
<th>Capacity</th>
<th>Toilets</th>
<th>Shower</th>
<th>Details:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mens</td>
<td>15</td>
<td>2</td>
<td>1</td>
<td>8 CHAIRS</td>
</tr>
<tr>
<td>Douglas menzies</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1 LOUNGE CHAIR, CHAIS &amp; HOLLYWOOD VANITY.</td>
</tr>
<tr>
<td>Ruth Alexander</td>
<td>2</td>
<td>1</td>
<td></td>
<td>2 LOUNGE CHAIRS, STOOL &amp; HOLLYWOOD VANITY.</td>
</tr>
<tr>
<td>Womens</td>
<td>15</td>
<td>2</td>
<td>1</td>
<td>4 CHAIRS &amp; 1 CHAIS.</td>
</tr>
<tr>
<td>Common Room</td>
<td>30+</td>
<td>2</td>
<td>1</td>
<td>4 LARGE TABLES, URN, 20+ CHAIRS &amp; LOUNGE.</td>
</tr>
</tbody>
</table>

Laundry / Wardrobe:
- Washing Machines: No.
- Dryers: No.
- Drying rooms: No.
- Iron / ironing board: Yes.
- Clothes racks: Yes.
Production Facilities:

**Greenroom:**
- Tea / Coffee facilities: Yes.
- Fridge / Freezer: Yes.
- Microwave: Yes.
- Running water: Yes.

**Stage Door:**
- Access
  Stage Door is located along the side of Robert Blackwood Hall between front doors and Loading Dock.
  Access during bump-in / out is controlled by production company staff and not venue staff. During performance periods access is 60 minutes prior to a performance to 20 minutes after the completion of the show.

ADDITIONAL FACILITIES & INFORMATION:

**Orchestral:**
- 1 x Steinway 9’ Concert Grand piano (2010)*
- 1 x Steinway 9’ Grand piano (1980)*
- 1 x Sir Lois Matheson PIPE ORGAN.
  - 3097 pipes, 4 keyboards (manuals), 30 pedals, 45 stops.
  - (*Tuning is included)

**Warm Up Space:**

There is 1 small space OP side of stage in the Dock area, otherwise down stairs in the large common area is the best place for musical or performance rehearsal spaces. Down stairs area can accommodate up to 40 people which does not include dressing rooms which come off the common room area.
VENUE:

Venue Address:  
Monash University Clayton Campus,  
49 Scenic Boulevard, Clayton 3800 VIC.  
Building 2.

Staff Contacts:

Technical Manager: Matthew King  
Phone number: (03) 9905 1689  
Fax number: (03) 9905 1680  
Email address: matthew.king@monash.edu

Website:  
http://monash.edu/mlive