

# THE MENUHIN HALL TECHNICAL SPECIFICATION

## AUDITORIUM

- The concert hall is 15.8m wide x 21m long x 11.5m high above stage.
- In cross section, the roof steps in and slopes in at 60° to the horizontal above the ceiling level of the first-floor balcony.
- Performers and audience share the same space. Seating is at two levels, the stalls at a shallow rake, and a single “wrap-around” balcony that encourages visual and acoustical intimacy.
- The side balcony fronts are 11.4m apart and 15.7m front to back.
- The total seat count is 315 at full capacity, 297 if the stage extension is up.
- The centre area of seats in the stalls holds 180 people. Seats in the stall side slips total 15.
- The side seats are also suitable for wheelchair users. There are 8 removable seats, 4 on either side, which can accommodate a wheelchair should they wish not to transfer to a seat.
- The circle consists of 68 seats facing the stage, 32 behind the stage and 20 on the sides, including 2 wheelchair places in the circle slips, 1 on either side.
- 8 chorus seats can be removed for additional musicians in the balcony.
- Curtains on Triple E E66 rails can be drawn from cupboards at either end of the downstairs slips and circle slips that go across the walls to dampen the auditorium.



## STAGE

- The permanent stage depth is 6.7m; upstage width 8m; downstage width 10m increasing to 11.4m at the front of the stage. Accommodates up to 35 players.
- The stage depth can be extended by 1.2m by two people raising 5 no. in situ scissor lift panels. Mobile steps at each side of the stage can be relocated at either side of the front row of seats. The front row of seats is not used in the extended stage configuration. The end seats of the front row can be removed.
- The extended stage depth is 7.9m; upstage width 8m; downstage width 10m, accommodating an orchestra of up to 45 musicians.
- Access for musicians to the stage is via rear central lobby with 850mm wide doors to the stage.
- Access for large instruments to the stage is through the piano stores on each side and 1800mm wide doors onto the stage.
- Height above stage upstage is 5.6m to underside of canopy for 1m upstage. Height to underside of chandelier over stage is 7.6m. Height to ceiling over stage is 11.5m.



## BACKSTAGE

- There are 2 green rooms, accessible via artist's entrance and backstage corridor. Both are connected via the artist's entrance staircase.
- Green Room 1 measures 5.55m x 6m and is 3.5m high.
- Green Room 2 measures 5.2m x 3.5m x 2.3m high.
- Green Room 1 has 2 large tables and various smaller tables that can be used for recording equipment and control room set-up.
- Both green rooms can also act as communal / individual changing rooms during concerts and events.
- Three toilets are available backstage including one disabled.
- A network of cable trays, hooks, and capped openings for temporary cabling between stage and Green Room 1 is provided.
- Ethernet internet connection is available in Green Room 1.
- Music stands on 2 trolleys are in Green Room 1, which can be used on stage.
- The large piano cupboard contains 30 orchestra chairs which can be used on stage.

- Other items that are available to use on stage include: podium, conductor's stand & chair, piano stools, double bass stools, cello T-bars & decorative tables.
- The kitchen is also available for use during sessions. Kitchen facilities include: tap, chilled & hot water dispensers, toaster, microwave, large sink, fridge, freezer, mugs, and tea & coffee strainers.

## INSTRUMENTS

- 2020 Steinway & Sons Model D grand piano (for professional recording use only)
- 2005 Steinway & Sons Model D grand piano
- Bosendorfer baby grand
- Andrew Garlick harpsichord
- Grotrian-Steinweg upright piano

## LIGHTING

- 8 chandeliers light the stage and the concert hall. Each chandelier has two levels. They measure 32mm in diameter, and are steel frame, grit-blasted and lacquered finished.
- The design load of each chandelier, lights and cable is 250kg.
- ArchPro Wireless GDS lighting system installed for wireless DMX control of lighting, via a TX1 wireless transmitter above the control room.
- Lighting control via a ChamSys MagicQ system, through a touchscreen in control room, and 2 iPads for remote control anywhere in the building.
- Front 6 chandeliers consist of 8 ETC Source Four PAR lights, 4 on each level. These are powered through 6 numbered 13-amp performance lighting circuits with Powercon connectors.
- 4 GDS Pro One-Cell Small Yoke uplighters on each of the front 6 chandeliers, and 2 on each of the rear 2 chandeliers.
- The rear 2 chandeliers consist of 3 profile lamps on the upper level.
- All 8 chandeliers are fitted with a GDS Pro Four-Cell Round Downlighter on each.
- LED lights on swivel mounts above slips & circle slips.
- Four LED Twinspot IP65 emergency lighting units.
- Front 2 chandeliers have 1 GDS Pro One-Cell Large Yoke downlighter on each for additional lighting on stage. The rear 2 chandeliers have 2 GDS Pro One-Cell Large Yoke downlighters on each for additional lighting of the circle seats.
- The timber screen above the stage has 6 openings for 12 performance lights to the stage and chorus seating.
- The circle slips have 6 15-amp circuits for additional theatrical fittings. These consist of 5 ETC Source Four Jr & 2 ETC Source Four PAR lights on either side.
- Machine room contains ETC Sensor dimming system with 72 ways, ETC unison control system with 4 outstations, and DMX patch.
- Each pair of chandeliers has one motorised winch and line shaft in each of 4 structural bays within the ceiling bulkhead on audience right.
- Each winch drives 2 Hexaflex shafts connected to a grooved drum with upper and lower limit switches. Steel wire ropes extend up from the bulkhead to the auditorium ceiling and are bridle down to each chandelier.
- One winch point is located in right circle slip curtain cupboard with a key switch for security. There is an emergency stop button and separate 3 position rotary switches for each winch motor, which correspond to the 4 chandelier pairs.

## AV SPECIFICATION

### Audio

#### *Hall*

2x KV2 EX12 12" PA system (permanent)  
2x Tannoy Loudspeakers (mobile)  
Sennheiser Infra-Red Assisted Listening System  
Ampetronic Induction Loop Assisted Listening System  
Allen & Heath DT168 stagebox with Dante

#### *Control Room*

Allen & Heath SQ-5 Digital Mixing Console (via Dante)  
2x Neumann KH 120 A G loudspeakers  
Sonifex RB-MA2 Dual Mic Preamp  
Sonifex RB-DA6 Dual 6 Way Distribution Amp  
Biamp Nexia PM Audio System Controller/Automixer  
2019 Mac Pro 12-core Intel Xeon W 32 GB RAM with Logic Pro  
Audio & CAT6 patchbays

#### *Microphones*

2x Shure SM81 (as OHs, suspended from roof)  
2x Rode TF5  
2x Sennheiser e614  
Sennheiser e865  
Audio-Technica AT8615  
3x Trantec Bodypack Transmitters with headset & lapel mics  
2x Trantec Handheld mics

### Video

#### *Hall*

4x Panasonic AW-UE150 4K PTZ Cameras  
Panasonic AG-CX350E 4K Camera (mobile)  
Sony VPL-PHZ60 Laser Projector  
Stumpfl Monoblox screen 10" x 7.5" for front & rear projection  
Drop-down screen above stage 2m x 3.6m for projection from control room, throw 21m  
Samsung 65" UHD 4K TV on wheeled stand  
Lenovo ThinkPad Laptop with HDMI & VGA ports

#### *Control Room*

Panasonic AW-RP150 remote camera control  
Blackmagic ATEM Television Studio Pro  
Eiki LC-X70 5000 Lumen Projector with long throw lens  
Samsung 43" 4K TV screen  
AJA Kumo 3232-12G video patchbay  
AJA Helo H.264 for streaming  
CAT5E & CAT6 Patchbays  
Netgear GS516UP PoE switch

### Other Items

5x K&M Mic Stands  
15x LED stand lights  
Various stereo bars, universal mic clips and windshields