Technical Specifications

Street/Delivery Address: University of Minnesota
2128 Fourth Street South
Minneapolis, MN 55455
Mailing Address:
University of Minnesota
100 Ferguson Hall
2106 Fourth Street South
Minneapolis, MN 55455

Phone (612) 626-1892
Fax (612) 626-4845
Ticket Office (612) 626-2345

PERSONNEL

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Phone</th>
<th>E-mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations Coordinator</td>
<td>Brad Momsen</td>
<td>(612)626-2030</td>
<td><a href="mailto:bmomsen@umn.edu">bmomsen@umn.edu</a></td>
</tr>
<tr>
<td>Technical Coordinator</td>
<td>Sari Baker</td>
<td>(612)626-9256</td>
<td><a href="mailto:mille149@umn.edu">mille149@umn.edu</a></td>
</tr>
<tr>
<td>Audience Services and</td>
<td>Valerie Stedman</td>
<td>(612)626-9269</td>
<td><a href="mailto:tmchhm@umn.edu">tmchhm@umn.edu</a></td>
</tr>
<tr>
<td>Special Events Coordinator</td>
<td>Phillip O’Toole</td>
<td>(612)626-1842</td>
<td><a href="mailto:otoole@umn.edu">otoole@umn.edu</a></td>
</tr>
<tr>
<td>Technical Coordinator/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio Engineer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asst. Technical Coordinator</td>
<td>Jessica Solinsky</td>
<td>(612)626-9256</td>
<td><a href="mailto:grimm061@umn.edu">grimm061@umn.edu</a></td>
</tr>
<tr>
<td>House Manager</td>
<td>scottie hall</td>
<td>(612)625-7102</td>
<td><a href="mailto:scottie@umn.edu">scottie@umn.edu</a></td>
</tr>
<tr>
<td>Asst. Audio Engineer/</td>
<td>John Marks</td>
<td>(612)625-6369</td>
<td><a href="mailto:marks@umn.edu">marks@umn.edu</a></td>
</tr>
<tr>
<td>Technical Services Specialist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ticket Office Manager</td>
<td>Holly Radis-McCluskey</td>
<td>(612)625-0509</td>
<td><a href="mailto:radis001@umn.edu">radis001@umn.edu</a></td>
</tr>
</tbody>
</table>

SEATING CAPACITY

- Main floor: 704#
- First Tier: 208
- Second Tier: 208

Total (w/out extra seating): 1120
--Extra Seating: 93*
Total (w/ extra seating): 1213

*Use of the House sound-mixing position for amplified events changes 56 regular Mezzanine seats to partial view seats.

*Use of the complete house sound system will eliminate 14 additional seats in the front row. Please contact and Audio Engineer or Technical Coordinator for details.

*These seats are available only when the adjustable stage lifts are at auditorium level.

(Total house capacity without extra seating: 1126)

Accessible seating for patrons using wheelchairs is located on Main Floor and Tier One.
STAGE DIMENSIONS

Adjustable Proscenium opening

- **Width:** 36’-0” to 53’-4”
- **Height:** 25’-0” to 37’-0”

Plaster Line to:

- **US Wall:** 37’-6”
- **House Curtain:** 2’-6”
- **Front of stage:** 3’-10”
- **Front of US lift:** 13’-10”
- **Front of DS lift:** 23’-3”
- **Back of house:** 99’-7”

Side Walls to Proscenium

- **From:** 13’-6” to 21’-10”

Overall width of stage: 80’

Distance of Stage Floor to

- **House Floor:** -3’-6”
- **Canopy:** 39’
- **Catwalk Level:** 41’
- **Grid:** 76’
- **Orchestra Pit:** -9’

ACOUSTICAL ELEMENTS

The Ted Mann Concert Hall is equipped with a flexible acoustical system to accommodate different performance requirements. This system consists primarily of three elements:

- **Independent, Movable Concert Towers:**
  - **Height:** 25’-6”
  - **Width:** 8’-0”

- **Concert Ceilings**
  Four Concert Ceiling units effectively close off the stage fly-loft. The reflective surface of the ceilings has the effect of creating a “reverberation chamber” upstage of the concert towers that increases the liveliness of the hall.

- **Adjustable Dampening Curtains**
  Provided to reproduce the “audience” effect during rehearsals. Can be adjusted to simulate audiences from 100 to 1220. Deployed during a concert, these curtains have the effect of increasing clarity while decreasing reverberation.

More information is available from the Technical Coordinator.

STAGE FLOOR

- **Hardwood sprung floor - dark matte finish (No lagging allowed)**
- **6 removable trap doors**

PIANOS/INSTRUMENTS

- **Steinway - 9’ Concert Grand (2 available)**
- **Yamaha - 9’ Concert Grand (CF3) (limited availability - please call)**
- **Dowd Harpsichord** (limited availability - please call)
- **Hubbard Harpsichord** (limited availability - please call)
SOUND REINFORCEMENT SYSTEM

Speaker System: Left, center, right multiple cabinet professionally tuned and balanced convential PA system

Center Cluster (mono, hung over DS edge of stage, custom EAW cabinets):
- 2 - EAW MH660E
- 2 - EAW MH690E
- 2 - EAW TD412

Delay Speaker System
- 2 – Martin WT2 (mono; hung off back of first catwalk)
- 2 - EAW AS592 (mono; hung off back of second catwalk)

Front Fill Speaker System (mono, removable; hung off front of main stage)
- 6 – Martin AQ8
  (Eliminates 14 seats in first row)

Stereo Main Floor Speaker System (moveable, depending on stage set-up)
- 2 – Martin WT2 (bi-amped)

Subs
- 2 – EAW SB250PD2

Side Fill Speaker System (mono; Main Stage, Tier 1, & Tier 2)
- 2 - EAW UB82
- 4 - EAW JF60

Stage Monitor Speaker (Control from Mix Position)
- 6 - EAW SM122
- 4 - EAW SM200
- 2 – Martin WT2

Signal Processing:
- 1 - EV Netmax N8000

Power Amplifiers:
- 1 - Crest CKS 1600
- 3 - Crest CKS 400
- 5 - Crest CKS 800
- 2 – Lab Gruppen C-Series

House Mix Position: Sound Console
- 48 channel Yamaha M7CL Digital mixing Console

Outboard Equipment:
- 1 - Denon Dual CD w/ Remote
- 1 - Focusrite Octopre LE w/ ADA conversion
- 1 - Apogee Big Ben Master Word Clock

Microphones:
- 4 - AKG 414C-EB
- 2 - Audio Technica Unipoint Gooseneck (on lecterns)
- 3 - Beyer M88
- 4 - Neumann KM 184
- 9 - Sennheisher 421
- 5 - Shure Beta 87
- 4 - Shure Beta 57A
- 10 - Shure Beta 58
- 2 - Shure KSM 44
- 2 - Sennheisher K6 shotgun
RECORDING EQUIPMENT

4 - DPA (Brüel & Kjær) 4006 microphones
2 - Neumann KM140 (in ORTF) microphones
48 - Channel Passive Recording Split (from Front of House)
1 - Yamaha DM 1000 Digital Mixing Console
1 - Apogee 16x 192 kHz Analogue to Digital Converter
1 – RME OctaMic - * Channel Microphone Preamp
1 - Grace 802 8-Channel Pre-amp
1 - Apogee Rosetta 96k Analogue to Digital Converter
1 - Sony PCM-2800 DAT deck
1 - Tascam CD-RW2000
1 – RME
1 - Mac Pro Tower w/ Logic Studio and RME HDSP 9652 ADAT PCI Card

LIGHTING SYSTEM

Control Console: ETC Gio 2K
Software Version: 2.0.0
Non-dedicated Dimmers: ETC L86 Dimmers
336 - 2.4KW
9 - 6.0KW

Circuit positions:
Catwalks: 62 - 20A circ., 2 - 50A circ.  Rosco 2P&G receptacles
Tiers: 55 - 20A circ., 2 - 50A circ.  Rosco 2P&G receptacles
Gallery/Fly Loft: 175 - 20A circ., 1 - 50A circ.  Socapex 6-circ multi-cables
Stage Floor: 33 - 20A circ., 4 - 50A circ.  Rosco 2P&G receptacles
Orchestra Pit: 12 - 20A circ., 1 - 50A circ.  Rosco 2P&G receptacles

Note: Circuits in the Orchestra Pit are paralleled with those on the downstage Stage Floor.

Lighting instruments:

Designated Concert Lighting (available in concert hall configuration)

FOH  26  19 deg. ETC Source Four 575W
     8  19 deg. Strand SL 575W
    12  6x12  Altman 360Q 575W
     16  6x22  Altman 360Q 575W
Tier Rails  6  10 deg. ETC Source Four 575W
             4  19 deg. Strand SL 575W
             8  19 deg ETC Source Four 575W
Box Boom  12  19 deg  ETC Source Four 575W
          12  26 deg  ETC Source Four 575W
          12  36 deg  ETC Source Four 575W
Down  56  500W fixed Canopy lights
          18  8', 4-circuit R40 striplights (2KW/circuit)

Additional Rep Plot (available only in opera/theatre configuration)

Pipe Ends  12  19 deg  ETC Source Four 575W
            12  26 deg  ETC Source Four 575W
            12  36 deg  ETC Source Four 575W
Backs  54  ETC Source Four PAR EA 575W
Specials  15  26 deg ETC Source Four 575W
Note: Lighting Rep Plot drawing and paperwork are available upon request. Paperwork is done in Lightwright 5. Drawing is done in VectorWorks 2012 but can export to a pdf or dwg file.

Remaining Inventory (sans Concert Wash & Rep Plot)

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Strong Xenon Super Trouper Spotlights (1KW)</td>
</tr>
<tr>
<td>4</td>
<td>6&quot; Fresnel Colortran 213-515 750W</td>
</tr>
<tr>
<td>20</td>
<td>8&quot; Fresnel Altman 175Q 1KW</td>
</tr>
<tr>
<td>3</td>
<td>19 deg ETC Source Four 575W</td>
</tr>
<tr>
<td>1</td>
<td>10 deg ETC Source Four LENS TUBE ONLY</td>
</tr>
<tr>
<td>1</td>
<td>90 deg ETC Source Four LENS TUBE ONLY</td>
</tr>
<tr>
<td>15</td>
<td>6 X 16 Altman 360Q 750W</td>
</tr>
<tr>
<td>20</td>
<td>6 X 12 Altman 360Q 750W</td>
</tr>
<tr>
<td>40</td>
<td>6 X 9 Altman 360Q 750W</td>
</tr>
<tr>
<td>18</td>
<td>PAR 64 MFL 1KW (other lamps available)</td>
</tr>
<tr>
<td>16</td>
<td>L&amp;E 3 Cell Cyc Lights (w/ floor &amp; hanging hardware)</td>
</tr>
</tbody>
</table>

Additional Stage Cable:

**Stage Pin**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Length</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>5’</td>
<td>purple</td>
</tr>
<tr>
<td>20</td>
<td>10’</td>
<td>green</td>
</tr>
<tr>
<td>5</td>
<td>15’</td>
<td>blue</td>
</tr>
<tr>
<td>5</td>
<td>25’</td>
<td>yellow</td>
</tr>
<tr>
<td>5</td>
<td>50’</td>
<td>orange</td>
</tr>
</tbody>
</table>

**6 Circuit multi cable with 19-Pin Multi-Connector (Socapex)**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Length</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>25’</td>
<td>yellow</td>
</tr>
<tr>
<td>20</td>
<td>50’</td>
<td>orange</td>
</tr>
<tr>
<td>4</td>
<td>100’</td>
<td>dark green</td>
</tr>
</tbody>
</table>

**Adaptors**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Stage Pin Male to Edison Female</td>
</tr>
<tr>
<td>8</td>
<td>Stage Pin Male to Edison Female, Zip Cord</td>
</tr>
<tr>
<td>4</td>
<td>Stage Pin Female to Edison Male</td>
</tr>
<tr>
<td>1</td>
<td>Stage Pin Female to Edison Male, long</td>
</tr>
<tr>
<td>20</td>
<td>Staggered Break-outs (19 pin male multi-connectors to female Stage Pin)</td>
</tr>
<tr>
<td>6</td>
<td>Break-ins (19 pin female multi-connectors to male Stage Pin)</td>
</tr>
</tbody>
</table>

**Two-fers**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>Long Stage Pin Two-fers</td>
</tr>
<tr>
<td>5</td>
<td>Short Stage Pin Two-fers</td>
</tr>
</tbody>
</table>

**Miscellaneous**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>20’ Booms w/ bases</td>
</tr>
<tr>
<td>2</td>
<td>8’ Booms w/ bases</td>
</tr>
<tr>
<td>25</td>
<td>18” Side Arms</td>
</tr>
<tr>
<td>10</td>
<td>Floor Mount (Rovers)</td>
</tr>
<tr>
<td>15</td>
<td>10” Barndoors</td>
</tr>
<tr>
<td>30</td>
<td>Altman Gobo Holder (B sized)</td>
</tr>
<tr>
<td>12</td>
<td>Strand SL Gobo Holder (B sized)</td>
</tr>
<tr>
<td>14</td>
<td>ETC Source Four Gobo Holder (A sized)</td>
</tr>
<tr>
<td>1</td>
<td>“Upright” hydraulic lift (38”)</td>
</tr>
</tbody>
</table>
POWER TIE-INS

- Loading Dock: 200 amp, 3 phase, 4 wire
- Stage Right: 400 amp, 3 phase, 4 wire
- Up-Stage Left: 200 amp, 3 phase, 4 wire (specially grounded for sound equipment)
- Orchestra Pit: 100 amp, 3 phase, 4 wire
- Lobby: 100 amp, 3 phase, 4 wire

Stage Right, Up-Stage Left and Loading Dock have Cam-Lok Connectors with Reverse Ground.

**a university electrician may be necessary for tie-ins at renter’s expense**

ADJUSTABLE LIFTS/ORCHESTRA PIT

- Downstage lift adjustable from stage level to house level (3'-6”).
- Upstage lift adjustable from stage level to 9'-0” below stage level, providing access to orchestra pit area 60’ wide by 19’ deep. Pit closed off by removable audience rail.
- Weight limits: Static load 150 lbs. per sq/ft
- Lifting load 75 lbs. per sq/ft

FLY SYSTEM

- Counter weight system with 2 loading bridges -operation at SL stage level
  - Total Line-Set: 48 (8” centers)
  - Non-dedicated Line-sets: 39
  - Stage floor to Grid: 76’
  - Stage floor to Gallery: 40’
  - Maximum flying height: 75’
  - Length of pipes (lines 1-39): 63’ (additional 5’ extension per side)
  - Length of pipes (lines 40-48): 62’ (no extensions)
  - Diameter of pipes: 2” (2 ½” O.S. Diameter, Schedule 40)
  - Pick points per pipe: 7 (10’ spacing with pick at center)
- Capacity of line sets: 1500 lb.
- Maximum weight available: 48,700 lb.
- Monorail winch: 1500 lb. capacity

RIGGING

- Orchestra Canopy (suspended 40’ over forestage area)
  - Holes in the orchestra canopy give access to four structural T beams-- 3' and 15’ SL & SR of center, stretching 3’-6” to 20’ from the proscenium. **Riggers are required for large installs.**
- Grid
  - A steel grid spans the area upstage of the Proscenium. Single points may be hung from this grid with blocks and hemp provided for light loads. **Riggers are required for large installs.**
  - Maximum Loads
    - Dead point: 500 lb.
    - With Block: 500 lb.
    - Block with Frame: 2200 lb.
SOFT GOODS

<table>
<thead>
<tr>
<th>Item</th>
<th>Dimensions</th>
<th>Fabric</th>
</tr>
</thead>
<tbody>
<tr>
<td>House Curtain (Trvl.)</td>
<td>31'h x 69'w</td>
<td>Ruby Velour</td>
</tr>
<tr>
<td>House Valance</td>
<td>15'h x 63' w</td>
<td>Ruby Velour</td>
</tr>
<tr>
<td>Borders</td>
<td>(4) 12'h x 65' w</td>
<td>Black Velour</td>
</tr>
<tr>
<td>Legs</td>
<td>(8) 34'h x 12'w</td>
<td>Black Velour</td>
</tr>
<tr>
<td>Black Traveler</td>
<td>34'h x 66'w</td>
<td>Black Velour</td>
</tr>
<tr>
<td>Black Drop</td>
<td>(2) 34'h x 30'w</td>
<td>Black Velour</td>
</tr>
<tr>
<td>Black Scrim</td>
<td>30'h x 63' w</td>
<td>Sharkstooth</td>
</tr>
<tr>
<td>White Scrim</td>
<td>35'h x 63'w</td>
<td>Sharkstooth</td>
</tr>
<tr>
<td>Cyclorama</td>
<td>40'h x 63' w</td>
<td>Muslin</td>
</tr>
<tr>
<td>Projection Screen</td>
<td>40'h x 63' w</td>
<td>Roscoscreen</td>
</tr>
</tbody>
</table>

LOADING DOCK

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading Door</td>
<td>Dock is at stage level (no ramps or stairs, one corner)</td>
</tr>
<tr>
<td>Opening</td>
<td>8'H x 10'W</td>
</tr>
<tr>
<td>Distance above street level</td>
<td>4'-6&quot;</td>
</tr>
<tr>
<td>Dock leveler</td>
<td>Ramps to 1&quot;-4&quot; above or below dock level</td>
</tr>
<tr>
<td>Dock to Scene Shop Door</td>
<td>8'H x 10'W</td>
</tr>
<tr>
<td>Stage Doors</td>
<td>SR center to Scene Shop: 20'H x 12'W</td>
</tr>
</tbody>
</table>

BACKSTAGE

Washer, Dryer, wardrobe facilities available **limited availability—must call in advance**.
2 principle dressing rooms with sound monitors
2 ensemble dressing rooms with sound and video monitors (capacity: 25 each)
Greenroom with sound monitors, wireless internet access, microwave, coffee maker (capacity: 20)
**limited availability—must call in advance**
Additional rooms within Ferguson Hall **may** be available for additional rental cost

VIDEO

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projection Screen</td>
<td>14’x10’6” (Front or Rear Projection) 4:3</td>
</tr>
<tr>
<td>Projection Screen (Large)</td>
<td>24’x18’ (Front or Rear Projection) 4:3</td>
</tr>
<tr>
<td>Panasonic PT-D4000U Projector</td>
<td>4000 ANSI Lumens (1024x768)</td>
</tr>
<tr>
<td>Extron Video Switchers</td>
<td>Multiple Inputs – Single Output</td>
</tr>
<tr>
<td>Panasonic PT-DZ870ULK</td>
<td>8500 ANSI Lumens (1900x1200)</td>
</tr>
</tbody>
</table>

MISCELLANEOUS

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wenger Musician Chairs</td>
<td>90</td>
</tr>
<tr>
<td>Wenger Cello Chairs</td>
<td>10</td>
</tr>
<tr>
<td>Wenger Music Stands</td>
<td>100</td>
</tr>
<tr>
<td>Music Stand Lights</td>
<td>70</td>
</tr>
</tbody>
</table>
Conductors Podium
Wenger plexi-glass Conductor’s Stand
Wenger 6 foot, 3-step Choral Risers
Wenger 4th step for Choral Risers
4’x8’ Wenger Platform Risers
8 sets w/ railing **Limited Availability**
8
Wenger 4th step for Choral Risers
Available in 8”, 16” and 24” heights. Call for more detail**
31’3”x 57’ (6 rolls 5’3” wide x 57’)
2 (height adjustable)
30” round tables high for standing, low for seated
12 ** available for additional rental cost
Ethernet Internet Connection on Stage
**call for details**