

Benjamin and Marian Schuster Performing Arts Center Mead Theatre

Technical Summary

This summary is informational and updated as of June 28, 2009. It lists the critical dimensions of the stage and technical equipment for the Mead Theatre opened March 1, 2003. This is intended for general information and any critical dimensions or details should be confirmed.

THEATRE ADDRESS:

Benjamin and Marian Schuster Performing Arts Center
One West Second Street
Mead Theatre
110 North Ludlow (stage door)
Dayton OH 45402-1705

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1.0 SUMMARY

TYPE OF THEATRE: Proscenium Theatre resembles European style Opera House. Seating is in sectioned orchestra and loge with continental seating in lower and upper balconies with side galleries and one box per side, per level. Maximum seating is 2,325 all seating levels are handicap accessible.

1.1 SEATING DETAILS

Orchestra main floor lift seating and galleries:	940 seats
Loge, galleries, boxes (1st tier)	388 seats
Lower Balcony, galleries, boxes (2nd tier)	509 seats
Upper Balcony, galleries, boxes (3rd tier)	488 seats
TOTAL:	2,325 seats

Pit/Lift Seating:

Lift #1 Broadway pit (nearest to stage) (one tracked wagon, stores below pit floor level)	17 seats
Lift #2 Opera pit (center of three lifts) (three tracked wagons, stores below lift three floor level)	85 seats
Lift #3 Orchestra stage lift only (five universal caster wagons, store onstage)	64 seats

1.2 STAGE DIMENSIONS

Proscenium width, maximum opening	56'-0"
Proscenium height, maximum opening	34'-0"
Adjustable proscenium tormenters, minimum opening	42'-0"
Adjustable proscenium teaser, minimum opening	27'-0"
Stage depth from plaster line	50'-0"
Plaster line to last working lineset	46'-8" (measured from true PL no smoke pocket)

2.0 DRESSING ROOMS

Stage level: 2-star dressing rooms (2-person occupancy), 1 conductor's room (2 person occupancy)
Lower level: 3-4 person rooms, 1-10 person room, 1-12 person room, 2-19 person rooms, 1-22 person room

All dressing rooms have hot and cold running water, costume racks (fixed or rolling), makeup lights and mirrors, showers and ADA compliant restroom facilities.

3.0 STAGE RIGGING

87 - Single purchase counterweight sets on 6" centers, 1,800lb capacity above pipe weight, (see attached line schedule)
4 - 3,500lb dead haul winch battens for 3 onstage orchestra reflectors. (3-playing positions, 1 storage position)

NOTE: Winch battens can be used when reflectors are stored, but they are fixed speed-10'/min

Fly rail locations: Stage Left at floor level (opposite load-in door)
Stage Left fly gallery (+45'-0" above stage floor)

Line-sets on 6" centers start 1'-8" US of true plaster line. Stage has no smoke pocket, deluge type fire suppression curtain on DS side of proscenium arch.

Length of battens 66'-0"
Minimum trim above stage 4'-0"
Pipe travel 85'-4"
Maximum trim above stage 89'-4"
Arbor capacity 1,800lbs (above pipe weight)
Dedicated electric battens none
Main drape lattice track 1'-0" upstage of plaster line (guillotine - operates from SL)

NOTE: Lattice track minimum trim above stage is 31'-0"

3.1 MISCELLANEOUS EQUIPMENT

Spot blocks - Nylon for 5/8" rope, single groove	50
5/8" Spot line	6,000'
5-line clew/trim blocks	9
Wood belaying pins	60
Purchase line snubbers	3
Cable cradle supports	12
1 ton chain hoists (16 fpm, 100' lift)	10
1 ton chain hoists (32 fpm, 100' lift)	2
8-place hoist controller	1
Drapery bottom pipe (10' lengths T/C 3/4")	700'
Batten, 21'-0" length sleeve one end	6
Synthetic Heat shield borders, 2' x 20'	24
Sand bags 10lb	8
Sand bags 25lb	10
Sand bags 50lb	25
Sand bags 100lb	8

4.0 STAGE DIMENSIONS

Proscenium width (maximum)	56'-0"
Proscenium height (maximum)	34'-0"
Proscenium width (minimum with adjustable hard tormentors)	42'-0"
Proscenium height (minimum with adjustable hard teaser)	27'-0"
Apron extends DS of PL @ CL	1'-8"
Wall Thickness at proscenium	1'-6"
PL to Grand Drape	1'-0"
PL to back wall	50'-0"
PL to first working lineset	1'-8"
PL to last working lineset	46'-8"
Height of grid floor	92'-0"
Width of stage floor (load in door closed to reaction bar)	116'-8"
CL to fly galleries SL & SR	42'-0"
CL to SL obstruction on floor (working rail)	46'-6"
CL to SR load-in doors	70'-0"
Clear height under fly galleries	35'-0"

5.0 STAGE FLOOR

Sprung-wood floor: 3/4"x 2" t & g red oak over two layers of 3/4" A/C ply suspended on Robbins Bio-channel isolation system, very resilient.

Flat floor, stained ebony, can fasten into with prior permission, arrange in advance.

No pre-cut traps, no floor pockets, no metal in floor surface.

5.1 STAGE TRAP AREA (cutting and restoring stage floor for traps is a production expense)

Dimensions: 45'-0" wide x 31'-0" deep. 14'-0" floor to floor below
 Location: Centered on the stage, DS edge of trap are 7'-0" US of PL
 Stage thickness: 4"

6.0 ORCHESTRA PIT

Small pit on lift #1 with 8'-0" under-stage, estimated capacity 35 musicians
 Large pit on lifts #1, 2 with 8'-0" under-stage, estimated capacity 80 musicians
 A/C power: 10 20A 120/V circuits in pit in 13 locations

7.0 LOADING DOCK

Location: 110 N Ludlow Street at NW corner of facility
 Truck access: Back straight off one-way 4 lane street
 Capacity: Three (3) tractor trailers
 Dimensions: Exterior door to dock bumper: 65'-6"
 Overall width of truck floor: 36'-0"
 Exterior door width: 38'-0"
 Overhead clearance: 15'-0"
 Dock height: 3'-9"
 Interior dock doors: 9'-0" (w) x 10'-2" (h)
 Details: Truck floor is flat, covered, with one large exterior door and three individual interior doors.
 Docks #1 (North dock) and #2 (center dock) have hydraulic dock levelers
 Dock #3 (south dock) requires a plate or short ramp
 Staging area: 32'-6" x 34'-0"
 Stage loading door: 11'-4" (w) x 17'-6" (h) double hung acoustic door

8.0 STAGE DOOR/ARTIST ENTRANCE

Location: 100 block of N Ludlow immediately south of loading dock door between First and Second Streets. Security office is located here.
 Elevator access at this location from stage door, and loading dock floor at street level to stage, basement, and storage
 Elevator minimum interior dimensions, 9'-6" x 7'-4" x 7'6" high

9.0 STAGE CROSSOVER

At stage level 4'-6" wide corridor behind US wall

10.0 HOUSE DRAPERIES

Type	Color	Quantity	Height	Width	Fullness	
Grand Drape	Henna	1	42'	76'	100%	Guillotine only
Borders	Black	2	18'	75'	Flat	
Borders	Black	6	12'	75'	Flat	
Legs	Black	12	38'-6"	12'	Flat	
Tabs	Black	12	38'-6"	17'	Flat	
Panels	Black	4	38'-6"	24'	Flat	
Traveler panels	Black	6	38'-6"	32'	Flat	
S-tooth scrim	Black	2	38'-6"	65'	Flat	
RP Cyc	Grey	1	38'-6"	65'	Flat	
Muslin bounce	Natural	1	38'-6"	65'	Flat	

11.0 STAGE EQUIPMENT

30' JLG personnel lift 1 (must be used with outriggers in place)
 Step ladders 8

Johnson bar	1
16' ramp	1

12.0 ORCHESTRA ENCLOSURE

Wall unit towers	11	(Note: nest/store in SR alcove outside of described stage area)
Forestage reflectors	3	(Note: tip and fly to store above architectural ceiling in house)
Onstage reflectors	3	(Note: run on designated winch battens, store on winch on US wall)

12.1 ORCHESTRA ENCLOSURE LIGHTING

ETC S-4 pars	55	(Note: installed in reflectors, powered by separate concert dimming system)
Concert Dimmers	48	
Control		House console or stage manager desk

13.0 TEMPORARY ELECTRICAL SERVICE

13.1 LIGHTING, AUTOMATION, PROJECTION, MISCELLANEOUS

SWITCH #	AMPERAGE	VOLTAGE	LOCATION	SUGGESTED USE
1	400	120/208V 3Ø	DSR	Lighting/automation
2	100	120/208V 3Ø	DSR	Automation/miscellaneous
3	400	120/208V 3Ø	SR fly gallery	Lighting
4	400	120/208V 3Ø	SR fly gallery	Lighting
5	400	120/208V 3Ø	SR fly gallery	Lighting
6	100	120/208V 3Ø	SR fly gallery	Automation/miscellaneous
7	100	120/208V 3Ø	USL grid	Automation/miscellaneous
8	400	120/208V 3Ø	Trap room	Automation/miscellaneous
9	100	120/208V 3Ø	Spot booth	Projection/miscellaneous
10	100	120/208V 3Ø	SL tech gallery	Projection/followspot
11	100	120/208V 3Ø	SR tech gallery	Projection/followspot
12	200	120/208V 3Ø	Projection booth	Projectors
13	100	120/208V 3Ø	Below prod. Mix	Miscellaneous
14	400	120/208V 3Ø	Scenery dock	Miscellaneous
15	100	120/208V 3Ø	Scenery dock	Miscellaneous

13.2 ISOLATED SOUND POWER

SWITCH #	AMPERAGE	VOLTAGE	LOCATION	SUGGESTED USE
16	200	120/208V 3Ø	DSR	Sound (only)
17	200	120/208V 3Ø	DSL	Sound (only)

14.0 STAGE LIGHTING EQUIPMENT (TOTAL Inventory – INCLUDES FOH)

INSTRUMENT	FOCUS	QUANTITY
ETC Source 4	5°	21
ETC Source 4	10°	41
ETC Source 4	19°	111
ETC Source 4	26°	122
ETC Source 4	36°	74
ETC Source 4	50°	10
ETC Source 4 Pars		71
ETC Source 4	5° lens tubes	6
ETC Source 4	36° lens tubes	15
Altman 1-cell focusing cyc		108
18 sections of 6 cells each		
Lycian 2K xenon followspots		3
Half hats – S4 5 & 10 degree		39
Half hats – S4		68
Side arms 18"-24"		40
Pattern holders		144
Gel frames (per instrument)		2
50 lb boom bases		10
21'-0" 1-1/2" boom pipes		10
2'x20' Zetex borders		24

(6) Source 4 Revolution Moving Lights with accessories -Excluded in building rental-Additional cost-please inquire

14.1 FOH HOUSE HANG (11 positions front of house with equipment provided. Ethernet and DMX run to all locations)

(NOTE: ALTERING OF FOH PLOT – PRODUCER EXPENSE – MUST BE RESTORED)

Spot Booth	3	2K Xenon follow spots
Catwalk #3	3	ETC S-4 5°
Catwalk #3	28	ETC S-4 10°
Catwalk #2	8	ETC S-4 5°
U Balcony rail #3	8	ETC S-4 10°
Balcony rail #2	2	ETC S-4 10° & 8 - S4-19°
Loge rail #1	1	ETC S-4 10° & 8 – S4-19° & 4 – S4-26°
Upper Gallery	8	ETC S-4 5° & 12 – S4-19° (4 - 5° & 6 - 19° each side)
Mid Gallery	8	ETC S-4 26° & 4 – S4-19° & 2 S4-10° (4 - 26° & 2 - 19° & 2 - 10° each side)
Lower Gallery	8	ETC S-4 26° (4 each side)
Mid Box	12	ETC S-4 19° (6 each side)
Lower Box	12	ETC S-4 26° (8 each side)
Proscenium boom	8	ETC S-4 19° (4 each side)

14.2 FOH LIGHTING POSITIONS

POSITION	VERTICAL ANGLE	THROW DISTANCE (to CL @ PL)
Spot booth	38°	92'-0"
Catwalk #3	45°	88'-0"
Catwalk #2	38°	84'-0"
Catwalk #1	70°	60'-0"
U Balcony rail	25°	88'-0"
L Balcony rail	18°	80'-0"
Loge rail	10°	74'-0"
Upper Gallery (SL &SR)	45°	74'-0"
Mid Gallery (SL &SR)	18°	80'-0"
Lower Gallery (SL &SR)	10°	74'-0"
Mid Box (horizontal)	60°	46'-0"
Lower Box (proscenium)	75°	38'-0"

14.3 STAGE LIGHTING DIMMERS/CIRCUITS

Performance Dimmers: ETC Sensor dimmers, 514-2.4K dimmers, 7-6k dimmers.
Distribution configured in a dimmer per circuit design, Veam/Socapex or 2P&G connectors.
FOH circuits distributed to each position (details to follow)
Onstage circuits are primarily at fly gallery level (+45'-0" above stage floor). Majority of circuits are located SR (details to follow). There are no permanently designated electricians batters

14.4 STAGE LIGHTING CONTROL

ETC Expression - 3 800 channel, controls up to 1,536 dimmers. Complete with 2-17" monitors, 2-15" monitors, w/Net2 video node
ETC Remote Focus Unit & ETC Radio Remote Focus Unit
ETC SmartfadeML

15.0 HOUSE LIGHTING

ETC Sensor 96 2.4K dimmers
House light control

16.0 SOUND EQUIPMENT

House console Yamaha PM 4000/48 channel
Monitor console Yamaha M7CL digital console-Excluded in building rental-Additional cost-please inquire
Amplifiers QSC
Main Speakers EAW cabinets in a custom CTR, SL, SR flown cluster array
Subwoofers (2) EAW SB250R(double 15's) & (2) EAW SB250zR(double 18's) on floor
Near fill speakers EAW JF-80
Under Balcony EAW JF-80
Over Balcony EAW custom array
Galleries EAW UB12Se near field speakers
Opera Boxes EAW UB12Se near field speakers
Stage monitors (8) EAW SM200iH, (12) JF80, (2) JFX200 monitor cabinets
Signal processing (2) BSS DPR404 Compressor (4 channel)

(2) Klark/Teknik DN514B Gate (4 channel)
 (1) Yamaha SPX 990
 (1) Lexicon PCM-81 digital effects processor
 (4) XTA GQ600 2-Channel Eq's

Microphones Shure - (6) SM-58, (8) SM-57, (6) SM-81, (5) MX393/S, (3) MX202B/S
 Shure - U124D/58 2 Channel Wireless w/4ea. SM 58 and Sennheiser MKE-2 Lav's
 EV - (6) N/D468, (2) RE20, (4) M/D421 II
 Sennheiser - (4) MD-431 II
 Audio Technica - (2) AT4033/SM
 Audio Technica - (4) AT857QMLa Podium Mics

Mic Stands (1) Barcus Berry 4000XL Piano Pickup
 (10) Tall & (10) Short black boom stands
 (4) Tall & (4) Short chrome boom stands

Playback (1) Marantz PMD510 Dual deck cassette player/recorder
 (1) Marantz PMD 321 Compact disk player
 (1) Panasonic SV-3800 DAT Recorder

Mix position: Rear of Orchestra center section behind last row of fixed seats
 House amp room, 3rd floor backstage

17.0 HOUSE PROPERTIES

Stage manager's desk	1
Musician's chairs	50
Music stands	50
Stand lights	40
Conductor's Podium	1
Drum shield	1
Folding chairs	35

17.1 STAGE/CHORUS/RISERS

4' x 8' black risers variable height	60
3' x 8' black risers variable height	12

Stairs, railings, chair-stop for above

18.0 WARDROBE

Wardrobe work room	530 sq ft (IATSE local 866 wardrobe personnel must be present)
Laundry room	316 sq ft Four (4) washer connections (three (3) washers supplied) Four (4) dryer connections (three (3) dryers supplied)
Wig/makeup	528 sq ft

19.0 STORAGE Onstage, dock, basement

20.0 PROJECTION/ALTERNATE CONTROL BOOTH

Location: Rear of Loge (1st tier)
 Communication: show feed, DMX, Ethernet, Clear COM
 Power: 1-3 phase 120/208V 200 amps per leg
 Distance from Plaster line: 100'0" - Angle: 208

21.0 FORESTAGE GRID (See plan and section for details)

Downstage of the Proscenium there is a traditional ribbon steel grid structure above two (2) openings that accommodate the travel and storage of fore-stage orchestra reflectors and sound clusters.

DETAILS:

Height to working surface: 81'-0"
 US opening is rhombus shape: 2'-6" DS of PL, 6'-6" deep, 72'-0" wide at US & 75'-3" wide
 Far opening is rhombus shape: 17'-0" DS of PL, 4'-9" deep, 67'-9" wide at US & 70'-0" wide

OBSTRUCTIONS:

Fore-stage architectural arches,
 Near arch: 9'-6" DS of PL, height - 49'-6" at CL, 46'-0" at outside of Proscenium opening.
 Far arch: 22'-6" DS of PL, height - 51'-6" at CL, 48'-0" at outside of Proscenium opening.

22.0 HANGING PLOT

LINE	DISTANCE FROM PL	HOUSE HANG	LINE	SHOW HANG
0.	0'-4" (<i>note: DS of main curtain</i>)		0.	_____
1.	1'-8"		1.	_____
2.	2'-2"		2.	_____
3.	2'-8"		3.	_____
4.	3'-2"		4.	_____
5.	3'-8"	Ceiling #1 winch (3,500 lb. cap.)	5.	_____
6.	4'-2"		6.	_____
7.	4'-8"		7.	_____
8.	5'-2"		8.	_____

- 9. 5'-8"
- 10. 6'-2"
- 11. 6'-8"
- 12. 7'-2"
- 13. 7'-8"
- 14. 8'-2"
- 15. 8'-8"
- 16. 9'-2"
- 17. 9'-8"
- 18. 10'-2"
- 19. 10'-8"
- 20. 11'-2"
- 21. 11'-8"
- 22. 12'-2"
- 23. 12'-8"
- 24. 13'-2"
- 25. 13'-8"
- 26. 14'-2"
- 27. 14'-8"
- 28. 15'-2"
- 29. 15'-8"
- 30. 16'-2"
- 31. 16'-8"
- 32. 17'-2"
- 33. 17'-8"
- 34. 18'-2"
- 35. 18'-8"
- 36. 19'-2"
- 37. 19'-8"
- 38. 20'-2"
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- 41. 21'-8"
- 42. 22'-2"
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- 44. 23'-2"
- 45. 23'-8"
- 46. 24'-2"
- 47. 24'-8"
- 48. 25'-2"
- 49. 25'-8"
- 50. 26'-2"
- 51. 26'-8"
- 52. 27'-2"
- 53. 27'-8"
- 54. 28'-2"
- 55. 28'-8"
- 56. 29'-2"

Ceiling #2 winch (3,500 lb. cap.)

Ceiling #3 winch (3,500 lb. cap.)

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LINE	DISTANCE FROM PL	HOUSE HANG	LINE	SHOW HANG
57.	29'-8"	57.		
58.	30'-2"	58.		
59.	30'-8"	59.		
60.	31'-2"	60.		
61.	31'-8"	61.		
62.	32'-2"	62.		
63.	32'-8"	63.		
64.	33'-2"	64.		
65.	33'-8"	65.		
66.	34'-2"	66.		
67.	34'-8"	67.		
68.	OPEN (grid hangers block installation)	68.	empty set -	
69.	35'-2"	69.		
70.	35'-8"	70.		
71.	36'-2"	71.		
72.	36'-8"	72.		
73.	37'-2"	73.		
74.	37'-8"	74.		
75.	38'-2"	75.		
76.	38'-8"	76.		
77.	39'-2"	77.		
78.	39'-8"	78.		
79.	40'-2"	79.		
80.	40'-8"	80.		
81.	41'-2"	81.		
82.	41'-8"	82.		
83.	42'-2"	83.		
84.	42'-8"	84.		
85.	43'-2"	85.		
86.	43'-8"	86.		
87.	44'-2"	87.		
88.	44'-8"	88.		
89.	45'-2"	89.		
90.	45'-8"	90.		
91.	46'-2"	91.		
92.	46'-8" Ceiling storage winch (3,500 lb. cap.)	92.		

Soft Good locations – Legs, borders, drops, scrim, plastic, bounce TBD

No dedicated electric battens

Notes:

1. Linesets 5* 26* 48* and 92 are dead haul 3,500 lb capacity winches, for Orchestra ceilings. The ceilings do have storage positions under the US Catwalk and on lineset 91. This leaves an essentially clear stage house. These linesets can be used, however they have one speed, **SLOW!** (approximately 10 fpm)
2. Main Curtain rigged on lattice track, operated from SL