

Latvian National Opera and Ballet

Technical information

updated light 2025-03-13
updated video 2019-10-10
updated sound 2019-10-08

Please refer to attachments:

- | | |
|------------------|----------------------------|
| 1. Stage Plan | 2. Stage Cross-section |
| 3. Lighting Plot | 4. Box office Seating Plan |

Schedule of technical facilities

Auditorium Seats:

Stalls with the orchestra pit in use	365
with seats on the orchestra pit cover	435 *
stalls boxes	70
The Dress Circle	204
The First Balcony	154
The Second Balcony	174
Standing room in the Second Balcony	50 (+50 max) *
Total seats (*not including)	987
less The President's, The Government's and the Directors' boxes	
Total seats available to the public.	946

Wheelchair / Handicapped access and seats:

Wheelchair access is difficult and applicable only to the Stalls area.
 Wheelchairs are to be placed in the aisles.

Orchestra Pit Details:

Orchestra pit lift area at stage level	length 16.05m; width 5m
Orchestra pit area	80 sq. m
Orchestra pit depth below stage (variable)	2 m
The Orchestra pit lift (floor) consists of 3 independently moveable lifts which can be adjusted at varying heights. The Orchestra pit floor at stage height can be raked.	
Orchestra stands (lighted)	70
Orchestra chairs	80
Contrabass chairs	6
Timpani chair	1
Conductor's stand	1
Conductor's stand with rail	1
Musical instruments (separate list)	For an additional fee

Stage Details:

Proscenium	Height	9.90 m
	Width	12.45 m
Stage Width:		
	Wall to wall	24.70 m
	Between Flyfloors	21.71 m

Rear Stage Wall to Wall	12.46 m
Stage Depth:	
Fire curtain to back wall	25.90 m
Fire curtain to rearstage fire curtain	24.60 m
Fire curtain to flyfloor crossover	23.70 m
Stage apron from stage side of fire curtain to the edge of the orchestra pit	2.15 m
Orchestra lift forming forestage (at centre)	5 m
Stage Height	
To underside of grid	25.80 m
Batten drift	23.50 m
Under flyfloors and rearstage	10.31 m
Stage above stalls floor	1.14 m
Stage Surface	
Rake: variable	normal: 1.76°
max rearstage height from level state: 1.14 m	max: 5.43°
Material: wood planking on a metal construction.	
Trapdoors (refer attach. 1 for positions).	6
Electrically operated lifts for the trapdoors	
Stage equipment	
Revolve (speed: 0,3m/sec; 0,8m/sec; 1m/sec)	Rotates in both directions
Diameter	14 m
.	
A rigid prompters hood is available for use on the downstage centre trapdoor.	
Flying System	
Electric motor winch system - variable speed.	
House curtain - electric traverse opening	
Number of battens	48 (plus house curtain)
Batten Length	18 m
Batten spacing	18 - 25 cm
Batten payload	500 kg.
Batten drift	23.50 m

10 point lifts / winches (5 each side) can be placed anywhere. Payload: 300 kg.

The flying system is controlled from the stage right Flyfloor.

Programmable computerised AEG control system "Theapos".

Auxiliary portable on stage control panel.

Any batten can be operated at any time in any mode (i.e. speed, direction, grouping acceleration).

4 manually operated lines.

Batten drift: 17 m

Payload: 100 kg

Hanging Plot

Fire curtain

1		25	
2	House Curtain	26	
3		27	
4		28	
5		29	
6		30	
7		31	
8		32	
9		33	
10		34	
11		35	
12		36	
13		37	
14		38	
15		39	
16		40	
17		41	
18		42	
19		43	
20		44	
21		45	
22		46	
23		47	
24		48	

Stage Drapes

House curtain - tabs:

1 pair 14 m high x 11 m wide red velour with gold trim

Legs:

6 pair 12 m high x 4 m wide black velour (no fullness)

5 pair 12 m high x 4 m wide grey velour (no fullness)

Borders:

4 x 3 m high x 16 m wide black velour (no fullness)

3 x 3 m high x 16 m wide grey velour (no fullness)

Cloth:

1 x 14 m high x 16 wide black velour (no fullness)

Cycs:

1 x 14 high x 18 wide white plastic ("Opera" brand)

Floor covering (only for ballet performances):

Ballet linoleum, black, 9 rolls (15m x 1,60m) ("*Gerriets GmbH*")

Get In:

Stage access door measurement 1.2 x 3.2 m

Stage Management Control System:

General paging and programme relay to all relevant backstage areas, corridors and dressing rooms.

Talkback communication to all production areas (10 channels)

Talkback between SM and conductor + 2 cue lights
 Cue light system to all production areas (14 stationary + 2 portable).
 CCTV monitoring of stage and conductor. (2 cameras on the conductor, 1 front-on stage).
 Audience recall control:
 - Pre - performance and interval bells on compact disc
 - Vibro-bell to public areas
 - Vibro-bell to all production, corridor and dressingroom areas
 Communication to Front of House Manager:
 Telephone - outside line

Auxiliary relay system

Stage mechanist to all relevant production areas.

Stage Lighting Systems:

Lighting Control System:

grandMA3 full-size

General information:

Circuit power 380 / 220 Volts
 On stage 220 Volts
 Dimmers: 512 5 KW each
 Connections: 16 Amp schuko

Lighting Equipment:

		Fixed	Portable
PAR64	1000 W (CP – 61or CP – 62)	20	4 bar x 6 PAR64 20 PAR64
Profile	Robert Juliat 6.5° - 12° 2000 W RJ 710	8	
Profile	Robert Juliat 12° - 43° 2000 W RJ 714	16	
Profile	Robert Juliat 15° - 40° 2500 W RJ 714 SX2	4	2
Profile	ETC750 W CE Source Four 50°		6
	ETC750 W CE Source Four 26°	56	16
	ETC750 W CE Source Four 19°	7	4
PC	CCT 1000 W	140	
PC	CCT 2000 W	46	
PC	CCT 500 W		6
Fresnel	Robert Juliat 2000 W		10
Fresnel	ADB 5000 W		4
Cyclorama asymmetrical	CCT 1000 W	220	24
Groundrow asymmetrical	CCT 1000 W		16 (4 x 4)

Flood asymmetrical	CCT 300 W		8
PC with colour scrollers LDR 21 colours	Robert Juliat PC 1000 W	24	

PC with colour scrollers LDR 21 colours	Robert Juliat PC 2000 W	24	
	Thomas PAR 16 Batten 24° 10 lamps 24V 50W 1circuit		6
LED	NA QuatroStar M3 HO RGBW		20
Followspots	Robert Juliat VICTOR 1800 HMI	4	
	ADB SVOBODA		6
Projectors	PANI BP 1.2 HMI	1	
	PANI BP 4 HMI	1	
Additional lighting equipment:			
	Look Solutions Viper S		3
	JEM Glaciator Dynamic		1
	Look Solutions CRYO GATE + COBRA 3.1		1
	DF 50 Hazer		1
	MDG ATMe Haze Generator		1
	MDG Hazer Generator	1	
	High End Dataflash AF 1000 (fixed)	4	
	Martin Atomic 3000		3
	Clay Paky HY B-EYE K25/Teatro		10
	Clay Paky A.LEDA B-EYE K20		10
	Clay Paky Scenius Profile		10
	Clay Paky Arolla Profile MP	4	
	Clay Paky Arolla Profile HP		10
	Clay Paky Alpha Wash 1500		3
LED flood	ADB Klemantis AS1000 asymmetric flood		14
Ballet booms	Each equipped with ETC <u>3x750W CE Source Four 26°</u> Height – 2m		8
Scroller LDR	21 colours - 130; 119; 132; 118; 174; 117;124; 122; 128; 126; 052; 106; 019; 036; 109; 104; 101; 147; 004; 711; 201	48	

Sound Equipment

For Opera performances the LNO doesn't use any sound enhancement.

THE MAIN HALL

Equipment:

MIXING CONSOLE AND OUTBOARD EQUIPMENT:

STUDER VISTA 5 – 68 input, 30 output channels
1 LEXICON PCM 96
1 YAMAHA SPX 90
1 CD player TASCAM CD-500B

SPEAKER SYSTEMS:

Equalizers and delay units inkl. in the system.
Front of house: 2 full range d&b LS 602
Centre cluster: 2 full range d&b LS 602
Delay : 2 full range d&b LS 602
Stage monitor system: 4 channels 6 Turbosound TXD 12

INTERCOMMUNICATION:

INTERCOM SYSTEM CLEAR-COM
Inkl. RADIO WAY UNIT MOTOROLA GP 340 + 12 MOTOROLA CM 160

Stage Facilities

Microphone sockets are provided on the orchestra lift, at the front of the stage, in each wing downstage and upstage, and on the lighting bridges.

Two loudspeaker feeds for foldback or additional auditorium coverage speakers are located at several positions around the stage.

Note: maximum of 3 CCTV monitors for all purposes including Stage Management

Control Room Facilities

A mixing console is available at all times.

THE NEW HALL

Equipment:

MIXING CONSOLE:

SOUNDCRAFT M12

SPEAKER SYSTEMS:

2 TANNOY V12
2 TANNOY POWER V 12 BP (subwoofer)

INTERCOMMUNICATION:

INTERCOM SYSTEM CLEAR-COM

MICROPHONES

CONDENSER MICROPHONES:

NEUMANN KM100 – 4 omnidirektional, 2 cardioid
CROWN PCC 160 – 5 pieces

DYNAMIC MICROPHONES:

6 BEYER M 88 TG
1 EV PL-20
10 stands for microphones

BROADCAST EQUIPMENT

LOCAL BROADCAST VIDEO EQUIPMENT:

COLOUR VIDEO MONITORS 21" – 5 pcs., 14" STATIONARY (SONY; IKEGAMI) – 1 pcs.,
COLOUR VIDEO MONITORS 21" – 8 pcs., 14" MOBILE (SONY; IKEGAMI) – 2 pcs.
1 COLOUR VIDEO CAMERA – CONDUCTOR
1 COLOUR VIDEO CAMERA – STAGE FROM 1st BALKONY
1 COLOUR VIDEO CAMERA – STAGE FROM 1st LIGHT BRIDGE
1 COLOUR VIDEO CAMERA – STAGE FROM PARTERRE

Stage Video FX Systems:

VIDEO PROJECTOR LIST:

Panasonic **PT-DZ21K**, (DLP)
Native resolution : 1920x1200
Brightness: 20 000 Lumeni
Aspect: 16:10
Panasonic **PT-DS20K**, (DLP)
Native resolution : 1400x1050
Brightness: 20 000 Lumeni
Aspect: 4:3
Christie **D20WU-HS**, (1DLP, Laser diode)
Native resolution : 1920x1200
Brightness: 18 500 Lumeni
Aspect: 16:10
Sanyo **XF-47** (2pcs), (LCD)
Native resolution : 1024x768
Brightness: 15 000 Lumeni
Aspect: 4:3

LENSES LIST:

For Panasonic projectors:

Short zoom **ET-D75LE6** 0.9-1.1:1 (16:10), 1.2-1.47:1 (4:3)
Standart zoom **ET-D75LE20** 1.7-2.4:1 (16:10), 2.26-3.2 (4:3)

For Christie projectors:

Short zoom **140-115108-XX** 1.02-1.36:1
Short zoom **140-110103-XX** 1.5-2:1

For Sanyo projectors:

Short fixed **LNS-W03** 0.8:1
Short zoom **LNS-W04** 1.5-2:1
Standart zoom **LNS-S02Z** 2-2.6:1
Long zoom **LNS-T02** 4.6-6:1

PLAYBACK DEVICES LIST:

Macbook pro 15.6" (OS X 10.8)

Intel Core i7 2.6 GHz
8GB 1600 MHz DDR3 Ram
Nvidia GeForce GT650M 1024MB
Playback software: **Modul8 V2.6.5**

Media server (Windows 7) (2pcs)

INTEL Core I7-4790K 4GHz
16GB 1600MHz DDR3 Ram
Nvidia GeForce GTX970 4Gb
Blackmagic Intensity Pro video capture card
HDD, SSD drives
LTC Timecode in/out (for one PC only)
DMX in/out (for one PC only)
Playback software: **Pandoras Box Player Pro 5 and 6**

Media server (Windows 7) (1pcs)

INTEL Core I7-4790K 4GHz
32GB 1600MHz DDR3 Ram
Nvidia Quadro P4000 8Gb
Blackmagic Intensity Pro video capture card
HDD, SSD drives
Playback software: **Pandoras Box Player Pro 5 and 6**

Media server (Windows 10) (2pcs)

INTEL Core I7-4790K 3.6GHz
32GB 2400MHz DDR3 Ram
Nvidia GeForce RTX2080 8Gb
Blackmagic Intensity Pro video capture card
HDD, SSD drives
Playback software: **Pandoras Box Player Pro 5 and 6**

VIDEO CAMERA LIST:

Canon XL2 (1pcs)

20x Optical zoom

SD resolution

Coaxial Output

Canon LEGRIA HF R78 (3pcs)

32x Optical zoom

HD resolution

HDMI output

GoPro Hero 5 (1pcs)

HD resolution

HDMI output

MISC.

LAN from FOH to stage (multiple locations in both stages)

Various length of 3G-SDI cables (up to 80m)

Various length of VGA cables (up to 50m)

Various length of DVI cables (up to 70m, depending on usable video resolution)

SDI Distributors

SDI to HDMI bi-directional converters

SDI-HDMI cross converters

DVI splitter

VGA splitters,

ATEM Production Studio 4K

Soft-Box lights for video (3pcs)

Blue screen – Garriets 11m x 5m

Sharp Led TV (HD) 60"

Philips LED TV (HD-Ready) 32" (3pcs)

Philips LED TV (HD-Ready) 32" (3pcs)