

AUDIO**SOUND SYSTEM – INFORMATION AND INVENTORY*****Sound Mixing Console and Lines Available from FOH and Mid-House***

New in the summer of 2009, the house mix console is a Yamaha M7CL48 digital audio console configured with 48 mono mic/line inputs (link capable for stereo applications) and 4 Stereo line level inputs for a total of 56 channels. The console has 16 omni outputs (currently configured in 8 BUSS outs, 4 AUX outs and 4 sends to the internal effects rack. There is currently a 40 input snake running from the FOH position to the sound equipment room and an 20 channel output snake. A twenty seven (27) line snake runs from the sound room patch bay directly to the stage. There are a total of 38 lines available on and around the stage, plus the 27 channel stage box. A smaller 16 channel stage box is also available. Mid-House lines available total 50 (27 input and 23 return).

The house mix console is located in the audience at the back of the theatre on centerline, and it is not under any balcony or near any obstructions. (Refer to illustration of the house sound positions).

There are also two other audio consoles available for stage use:

- Yamaha DM2000 digital console (can cascade to M7CL or used as monitor desk)
- Soundcraft Spirit Powerstation 1200 (Powered Mixer)
- A Midas EZ Tilt is also available.

Audio Equipment Location

Audio equipment is located in the equipment rack at the house mix position and in the sound electronics room. All equipment inputs and outputs are accessible through patch panels and can easily accommodate road show interface with the house system.

Peripheral Audio Processing/Amplification Equipment

With the digital consoles available at the Civic Center, we have a limited amount of peripheral processing equipment. The following is available:

- 4 DBX 231 Dual Channel EQs*
- 1 DBX 223XL Crossover
- 2 JBL Two Way Crossovers
- 2 Crown MacroTech 1602 Amplifiers*
- 2 Crown MacroTech 2402 Amplifiers*
- 1 QSC RMX1450 Amplifier

The DBX 231 EQs and Crown MacroTech amplifiers are in separate racks for stage monitors.

Tape and Disc Machines

The following player/recording equipment is available:

- 1 Microboards Copywriter Live CD Recorder/Player
- 1 Denon DN2600F Dual Bay Compact Disc Player
- 1 JVC Dual Cassette Recorder/Player
- 1 Sony Minidisk Recorder/Player

House Loudspeakers Systems and Associated Electronics

Installed in the summer of 2004, the house sound system consists of a Left/Right speaker tower and a Center cluster. The system also has four subwoofers enclosures (2 - 18" and 2 - 15" cabinets) as well as a bank of 6 delay speakers in the ceiling of the auditorium. Also, a series of 8 front-fill speakers and 4 side-fill speakers aid in providing uniform SPL and clarity throughout the house. Two speakers located in the proscenium can be used as a simple public address speaker system. Finally, a four-speaker system is available at the mix position as a monitoring/cueing system. These speakers can be independent of the other speakers or can work in tandem. Eastern Acoustic Works (EAW) manufactured all our speaker enclosures.

Left/Right Speaker Towers:

These towers consist of four EAW speakers and ATM Flyware custom-made mounting hardware suspended from chain motors mounted above the proscenium. The system has been tuned specifically to the hall with the bottom of the lowest speaker at 9 feet above the stage floor. The system has been designed to be removable if necessary. Each speaker tower contains the following EAW speaker cabinets:

- 1 EAW Model MQM1343
- 1 EAW Model MQM1364e
- 1 EAW Model MQM1410
- 1 EAW Model MQM1394e

Center Cluster Array:

The center cluster consists of 6 EAW SLAM (small linear array module) speakers. The top 3 boxes are Model KF737s and the bottom 3 boxes are KF730s. This center cluster is also mounted on chain motors above the proscenium and can be removed.

Subwoofers:

The subs for the system are 2 EAW Model SB250Ps and 2 EAW Model SB528zPs. The speakers are stacked on stage against the stage left and stage right proscenium walls and can be removed.

Delay Speakers:

These speakers are permanently mounted in the ceiling approximately 2/3 of the way back in the house. These 6 speakers are EAW Model 2164e enclosures.

Front Fills:

The front-fill speakers consist of 8 EAW Model UB12Se speakers mounted on the pit wall and equally spaced across the front of the stage. These have been designed to be removable.

Side Fills:

Four EAW Model JF80s are mounted on the sidewalls of the house at the widest section of the house to provide fill for seating in those areas. These are permanently mounted.

Public Address Speakers:

These speakers are permanently mounted in the proscenium. They are 2 EAW Model 2166e speakers.

Mix Position Monitoring:

Three speakers comprise this system and can work in tandem with or separately from the main house system. The speakers for this system are 3 EAW Model UB12Se speakers.

Speaker Systems Processing:

XTA Model 224 and 226 Digital Processors digitally control all speakers systems. The amplifiers are Crown CT 600, 1200, 2000 and 4200 series amplifiers. The system also has an Oxmoor Model 4x4T and MDA-16T distribution amplifiers. The entire system can be turned on and off via a power sequencing panel and all preset delay settings can be operated at the house mix position. System delay settings can be overridden if the guest performer wishes to enter his own settings.

Stage Monitor Loudspeakers and Associated Electronics

There are 16 monitor loudspeaker cabinets available: 8 "wedge stage monitors", and 8 "overhead monitors."

Stage Monitor Loudspeaker Cabinets:

The stage monitor inventory consists of 4 EAW SM84 high output two-way stage monitors, and 4 EAW VRM12 two-way stage monitors. The EAW SM84 monitors are bi-amped and incorporate a 4x8" low frequency driver configuration in a split baffle design for the low end and employ a 1.4" exit neodymium compression driver coupled to a 40 degree horizontal by 90 degree vertical horn for highs. The EAW VRM12 monitors are 2-way passive micro-wedges and are a coaxial design with a 12" subwoofer and a 1 x 1" driver, horn loaded.

Overhead Stage Monitors:

These monitors are EAW JF80s mounted to a hanger that can be hung from any batten above the stage. These are two-way full range speakers with 2x6.5" woofers and a 1" exit compression driver containing passive LF/HF crossovers.

Stage Monitor Loudspeaker System Electronics:

Four Crown CT1200 amplifiers located in the sound equipment room power the EAW SM84 monitors system. Two Drive Rack PAs provide the crossover and other processing systems for these amplifiers and monitors. There is also a portable rack of amplifiers available to power the EAW VRM12 stage monitors when all 8 stage monitors are in use. The electronics for this includes 2 Crown Macro-Tech 1202 amplifiers, 2 Crown Macro-Tech 2402 amplifier and 4 DBX 231 dual-channel EQs.

Required Lengths for Snake runs to FOH kill, Mid-House kill, cross-stage and pit

The following lengths are recommended to reach the various locations of sound kills and locations in the main hall (from stage left):

House Sound Kill	325 feet
House Broadway Show Kill	250 feet
Mid-House Sound Kill	200 feet
Cross-Stage Runs	100 feet
Pit	100 feet

Isolated Sound Power Available

A 200 amp company disconnect panel is located downstage left approximately 12 feet up on the wall. A steel platform and ladder is built around it for easy access. Cam or bare wire connections are available as well as turn-arounds for the ground and neutral cams.

Infra-Red Assisted Listening System

The theater is equipped with the Sound Associates Infrared System for use by the hearing impaired. There are six emitters located in the hall and 120 headsets are available for use by the public. The transmitter can be fed from a monitoring mike hung over the stage. The preferred and much more effective method is to receive a direct feed from the console in use to supply the signal for this system.

Microphone Inventory:

In addition to the microphone inventory listed below, there are mic stands, clips, cabling and other accessories available as well.

<u>Microphones</u>	<u>Quantity</u>
Countryman IsoMax E6	2
Neumann KM84	12
Neumann KM83	4
AKG451EB	2
Shure SM18B	3
AKG CK22 Omni Capsule	1
Stereo C-Ducer	1
Mono C-Ducer	1
Crown PCC160	5
Shure SM81	2
Beyer dynamic M500	2
Sennheiser HD-421U	4
Sennheiser MKE-803U	2
Shure SM58	6
Shure SM57	5
Shure SM58 Beta	2
Shure SM57 Beta	2
EV N/D 757B	2
Sony EMC-33F	6
EV RE16	6
EV RE20	3
AKG 414B	2
EV RE55	2
Shure 545SD-LC Microphones	2
Shure MX418SE/C Microphones	2

Wireless Microphone Inventory:

The Civic Center also has two wireless microphone systems available for use.

<i>Shure Wireless Mic System 1 (6 channels)</i>	<i>Quantity</i>
Shure UD4-J4 2 Channel Wireless Receivers	3
Shure U2-J4 Wireless Handheld Microphones	6
Shure U1-J4 Wireless Lavalier Transmitters	6
DPA Lavalier Microphones	6
Shure Handheld Mic Clips	6
Assorted Tie Clips/Accessories	
ATC600 IsoTransformers on each channel	
Shure UA888 Networking System	
 <i>Shure Wireless Mic System 2 (6 channels)</i>	
Shure ULXP4 2 Channel Wireless Receivers	3
Shure ULX1-M1 Transmitter	6
Shure Wireless Handheld SM58 capsules	6
Sennheiser MKE2 Lavalier Microphones	6
Sennheiser Cardioid Lavalier Microphones	6
Shure UA844 Antenna Distribution System	
Shure Active Directional Antennas	
Assorted Mic Clips/Accessories	
Spare Antennas	