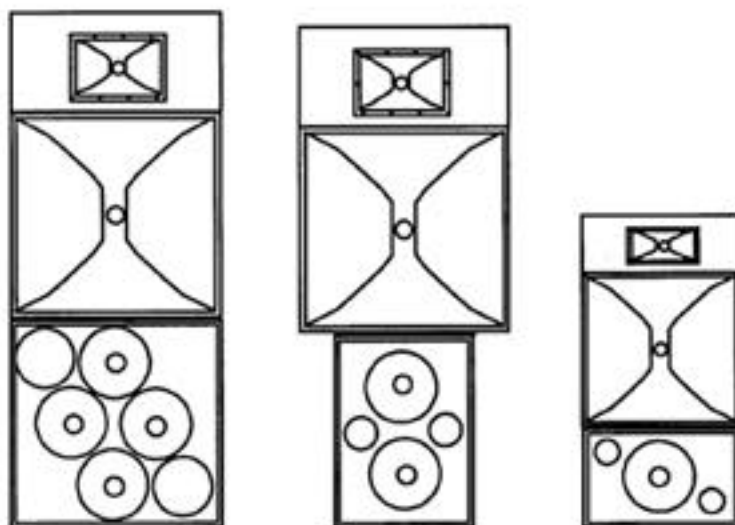


JBL 5000 Series Cinema Systems

Three-Way Screen Channel Systems User's Guide



Cinema 5000 Series Screen Channel Systems

User's Guide

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1. JBL 5000 Series

1.1 Thank you for purchasing...

The Cinema 5000 Series Screen Channel systems represent the best of JBL loudspeaker technology for cinema screen channel applications. Each 5000 Series screen channel system is a three-way, tri-amplified design, intended to provide superior sound quality over many years of reliable service.

There are three models of 5000 Series Screen Channel systems. All three use the same low frequency, mid-range, and high frequency drivers. Each system is scaled for a different room size. Therefore, they only differ in the number of low frequency transducers and physical size of the mid and high frequency horns.

Each section of the 5000 Series Screen Channel system is optimized for the frequency range over which it operates. JBL Optimized Aperture horns and drivers provide ultra-low distortion reproduction for today's demanding digital soundtracks.

Your 5000 Series screen channel system is shipped in two cartons. One carton contains the low frequency section, and the second carton contains the mid and high frequency horns, drivers, mounting bracket and hardware.

Please be sure to save this user's manual as a reference guide in the event that this system is moved, re-installed, or a change in ownership occurs.

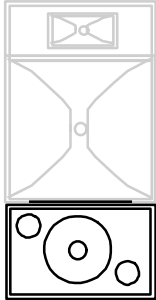
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2. System Configurations

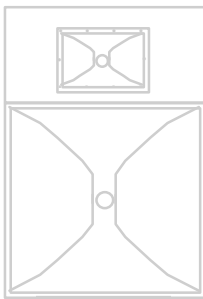
2.1 Low Frequency Section

The low frequency section of your system uses JBL 2226 Vented Gap Cooled low frequency drivers.



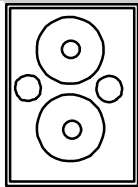
The 5671 Screen Channel system features the 5641 low frequency section, incorporating a single JBL 2226H 15" (380 mm) driver.

Connections are made to two screw type terminals located on the top of the enclosure.



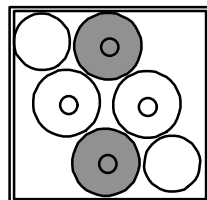
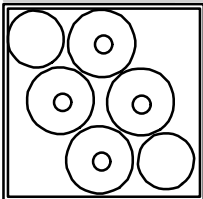
The 5672 Screen Channel system features the 4648A low frequency section, incorporating two JBL 2226H 15" (380 mm) drivers.

Connections are made to two screw type terminals located on the rear of the enclosure.

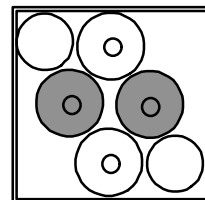


The 5674 Screen Channel system features the 5644 low frequency section, incorporating four JBL 2226H 15" (380 mm) drivers, in a unique DiamondQuad™ array. This array minimizes destructive driver interaction effects while maximizing output and pattern control.

Connections are made to four screw type terminals located on the top of the enclosure. Each driver pair is wired in parallel, resulting in two 4 ohm loads per enclosure.



VERTICAL
pair wired in
parallel



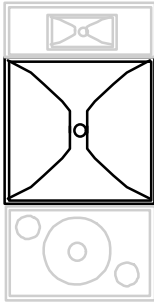
HORIZONTAL
pair wired in
parallel

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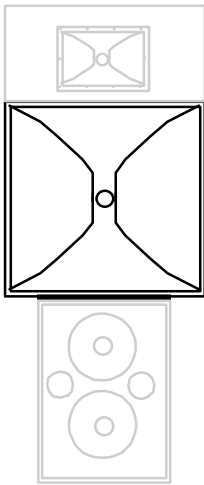
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2.2 Mid Frequency Section

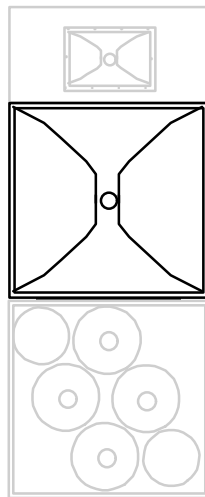
The mid frequency section on all systems feature Optimized Aperture horn/driver technology for the lowest possible distortion. The 2392 or 2392-S midrange Optimized Aperture horns provides outstanding midrange pattern control. The 2490H midrange compression driver has a 4" voice coil and titanium diaphragm with a 3" exit, and is optimized for response between 250 Hz and 4000 Hz.



The 5671 Screen Channel system features the 2392-S 30" horn, which is smaller in vertical and horizontal dimension to fit within the profile of the low frequency section, while maintaining midrange pattern control for smaller rooms.

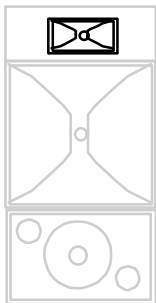


The 5672 and 5674 Screen Channel systems both feature the 2392 44" horn, which maintains midrange pattern control for the largest rooms.



2.3 High Frequency Section

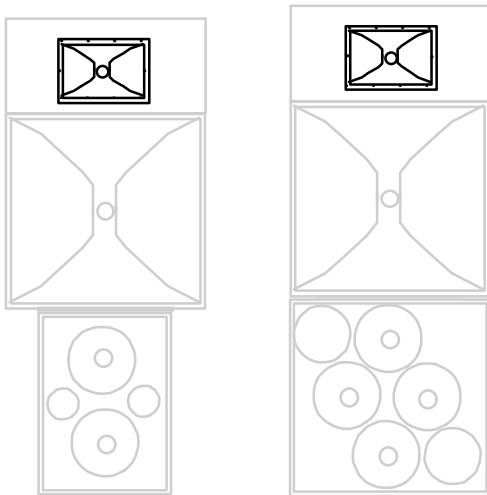
The high frequency section on all systems incorporate Optimized Aperture™ horn/driver technology for the lowest possible distortion. The HF driver is the JBL 2451H high frequency compression driver with neodymium-magnet structure. The 2451H is our most advanced compression driver, using our unique radial-ribbed 4" diaphragm and edgewound voice coil.



The 5671 Screen Channel system uses the 2332 90°x 40° horn, mounted in a 3/8" plywood baffle board. The width of the baffle matches the width of the LF section and HF horn to make baffle wall installation easier.

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The 5672 and 5674 Screen Channel systems both use the 2352 90°x 40° horn, mounted in a 3/8" plywood baffle board. The width of the baffle matches the width of the MF horn to make baffle wall installation easier.

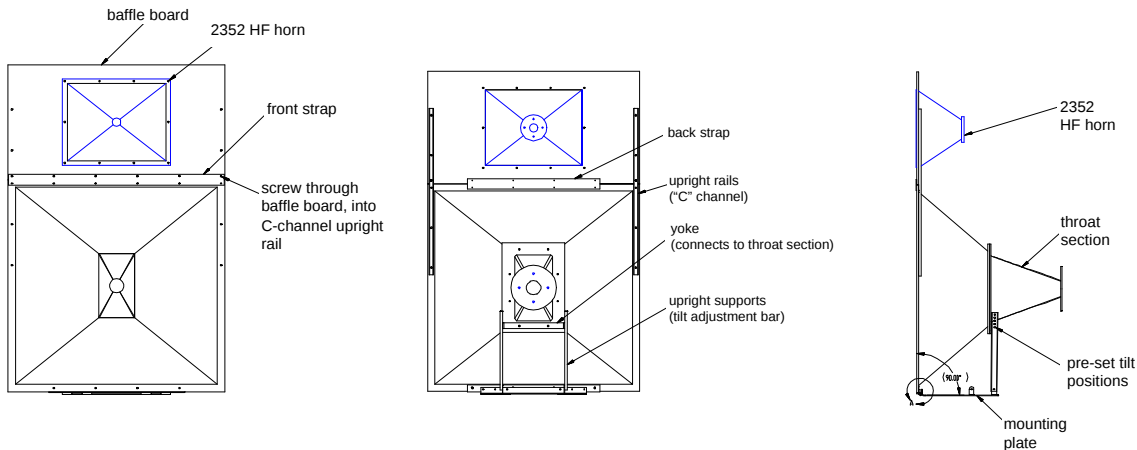
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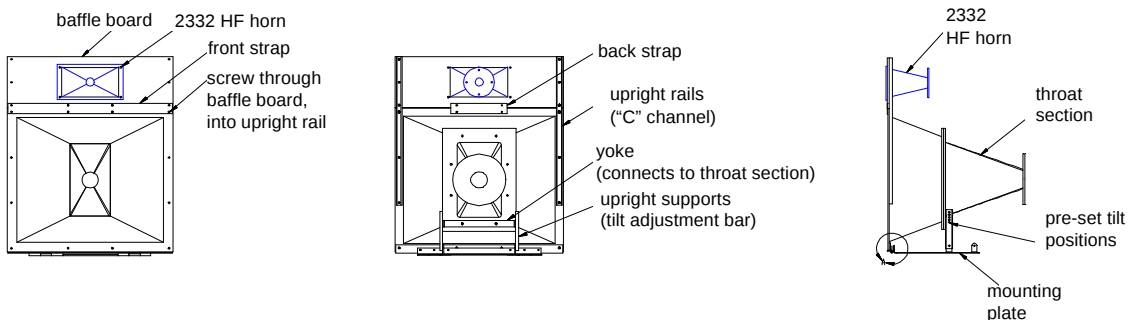
3. System Support Mechanism - Bracket Assembly

The horn array bracket supplied with your 5000 Series Screen channel systems provides a simple way to mount and install the mid and high frequency horns and drivers on top of the low frequency section.

For the 5672 and 5674 systems, the bracket assemblies are identical -- model number HB74.
The 5671 system is shipped with a smaller version bracket with identical functions and features -- model number HB71.



Front, rear, and side views of 5672/5674 bracket assembly



Front, rear, and side views of 5671 bracket assembly

Once assembled, the horn array is adjusted for proper tilt angle using one of the available tilt angle holes, which are located on the upright rail sections of the bracket assembly. Each hole represents an increment of 2.5 degrees forward tilt. A maximum of 10 degrees forward tilt can be safely achieved without risk of exceeding the array's center of gravity.

Ten degrees of tilt should be the maximum required for today's cinema designs, however the specific tilt angle depends on the room dimensions and floor slope of the seating area.

See section 7.4, "Horn Array Aiming", for more information on proper aiming once assembly is complete and ready for installation.

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In the carton containing the midrange and high frequency components, you should find the following items:

- Steel mounting plate
 - Steel L-channel with hinges
 - Upright supports for tilt adjustment (2)
 - Yoke
 - Horn baffle board
 - Upright rail C-channels (2)
 - Front strap
 - Back strap
 - Hardware for assembly
- | <u>count</u> | <u>item</u> |
|--------------|---|
| (34)* | 1/4-20 x 7/8 large button head, Philips screw, black
(*5671 kit includes 24 pcs) |
| (34)* | 1/4 spring lock washer, regular, black
(*5671 kit includes 24 pcs.) |
| (44)* | 1/4 flat washer, type A, black
(*5671 kit includes 34 pcs.) |
| (10) | 1/4-20 hex nut |
| (4) | 5/16-18 x 5/8 large button head, Philips, black |
| (4) | 5/16 spring lock washer, type A |
| (8) | 5/16 flat washer, type A |
| (4) | 5/16-18 hex nut |
| (6) | #12-24 x 5/8 large button head, Philips screw |
| (8) | #12 flat washer, type A |
| (6) | #12 spring lock washer, regular |
| (6) | #12-24 hex nut |

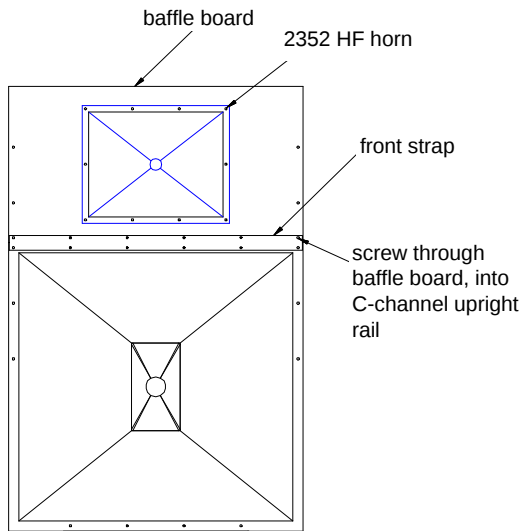
3.1 Assembly Instructions

STEP 1.

Make sure you have all of the pieces listed above. If items are missing, please contact your JBL Professional Representative immediately, or call JBL Professional at (818) 894-8850, ask for Customer Service & Parts. Outside the United States, please contact your JBL Professional Authorized Distributor.

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front view 5672/5674 horn assembly

baffle board with 1/4-20 x 7/8 Philips screws with 1/4" spring lock and flat washers into the back strap, positioned on rear side of baffle/horn. Do not overtighten. Only screw heads with washers should be visible from the front view of assembly.

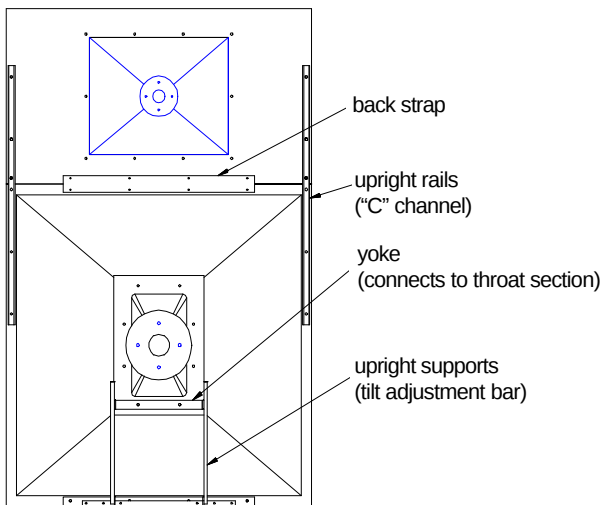
STEP 2.

Attach baffle board to large horn (2392 or 2392-S).

Using two C-channel upright rails, fasten through top TWO holes on front of baffle board with 1/4-20 x 7/8 Philips screws with 1/4" spring lock and flat washers into pemnuts in the C-channel. Flat surface of C-channel should be placed against back of baffle board and along the rear of horn flange. Fasten horn to C-channel using same type screws and washers into pemnuts through second and third holes only, being careful not to overtighten. The pair of holes at baffle board bottom and top of horn will be used to fasten front strap along the "seam", or juncture of baffle board and horn flange.

Cover the seam of the top of horn and bottom of baffle board with front strap. Fasten two ends of front strap (two holes at each end of strap) into C-channel with 1/4-20 x 7/8 Philips screws with 1/4" spring lock and flat washers into pemnuts in the C-channel as before.

Fasten screws through top horn flange and bottom of



rear view 5672/5674 horn assembly

STEP 3.

Attach HF horn to baffle board.

(See diagram above).

Front load the HF horn using 1/4-20 x 7/8 Philips screws into 1/4" spring lock and flat washers through the horn flange and baffle board, and secure on rear of board with flat washer and 1/4-20 hex nut.

2352 horn with 5672 and 5674 systems will require ten (10) sets of this hardware; 2332 horn with 5671 system will require four (4) sets of this hardware.

STEP 4.

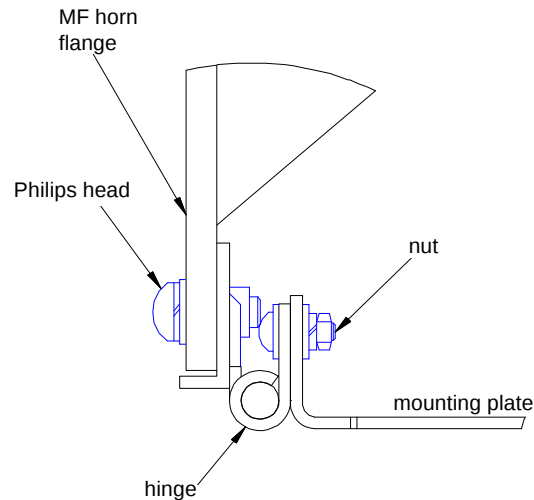
Connect Steel L-channel with hinges to bottom flange of large horn (2392 or 2392-S).

(see illustration next page)

Push four (4) 1/4-20 Philips screws with spring lock and flat washers through four holes along bottom front of horn flange and thread into pemnuts on L-channel.

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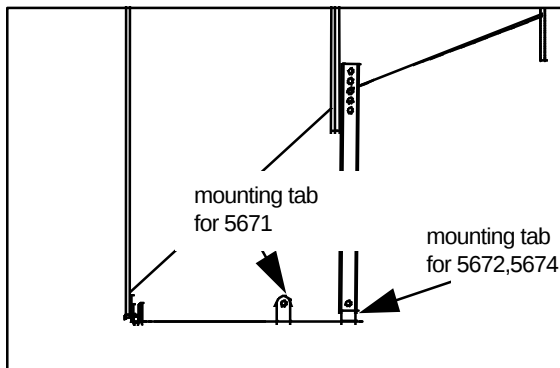


hinge assembly & connecting horn array
to mounting plate (side view)

STEP 5.

Sub-assembly of support mechanism and mounting plate.

The mounting plate used with all three 5000 Series systems (HB71 used with 5671, HB74 used with both 5672 and 5674) is the same.



close-up of mounting plate subassembly

Note, however, that there are two sets of “mounting tabs”, which are positioned for both the 2392 horn used with the 5672 and 5674 systems, and the 2392-S horn used with the 5671 system.

Select the appropriate mounting tab and fasten both upright supports to outside of tab with 5/16-18 Philips bolts, 5/16 flat washers (1 per side), lock washers, and 5/16-18 hex nut; hand tighten

only, as this is the pivot point for tilt adjustments.

Connect the yoke between the upright supports at the bottom set of pre-drill tilt adjust holes, again using 5/16 Philips screws. Final tilt adjustment can be made after completing assembly.

STEP 6.

Fasten bottom horn flange to mounting plate.

Lay horn array on flat surface, face down. Position mounting plate near L-channel with hinge and fasten using #12-24 x 5/8 Philips screws, #12 flat washers, #12 spring lock washers, and #12-24 hex nuts. (See detail in figure at STEP 4.)

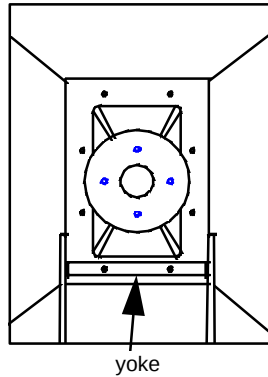
STEP 7.

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Connect large horn throat section to large horn.

Using nuts, bolts, and washers supplied with the horn, connect sections together through only the top six holes. Connect the remaining two bolts through yoke and then through throat section and horn.



STEP 8.

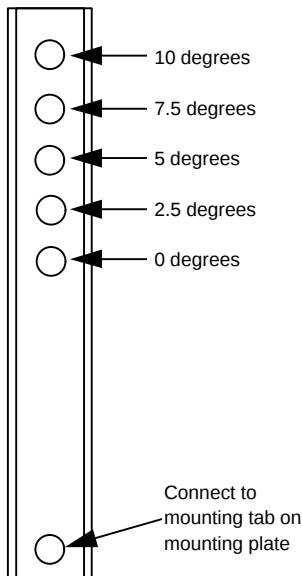
Place horn array on top of LF enclosure.

Completed horn array and bracket assembly may now be placed on top of your LF cabinet, and secured through the mounting plate to cabinet using the large screws provided with your LF section. Do not tighten completely until side-to-side ("yaw") aiming adjustments are made.

STEP 9.

Adjust tilt of horn array.

When installation of system is complete, final tilt adjustments can be made, by selecting the appropriate hole in the upright supports. When desired angle is determined, tighten nut/bolts to a torque level of 22 in/lbs.



After this step is complete, the compression drivers may be attached to the horns.

After assembly is complete, and your system is installed, check to be sure that all nuts are fully tightened to a torque level of 22 in/lbs. For mounting of bracket mounting base to LF cabinet, a torque level of 40 in/lbs should be applied.

Upright support tilt adjustment bar

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4. Digital System Control

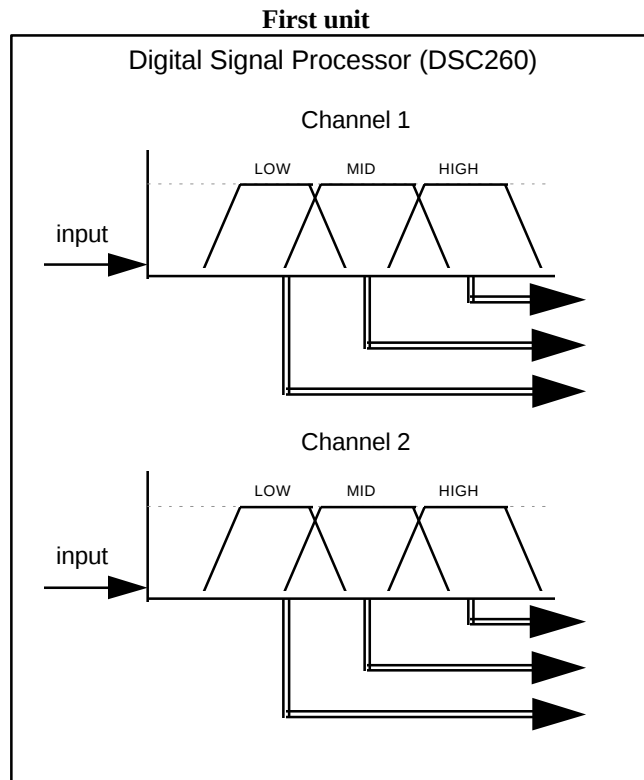
4.1 JBL DSC Controllers

The recommended controller for 5000 Series three-way screen channel systems is the JBL family of digital system controllers. For detailed operational information, please refer to the Owner's Manual supplied with your digital system controller.

In typical 3-way operation, each input is routed to three outputs, providing low, mid, and high frequency separation. The JBL DSC 260 is a 2-input, 6-output device, and is shipped with factory pre-set tunings for each of the 5000 Series screen channel systems. These tunings provide crossover, signal delay, and equalization settings which provide a good starting point for achieving optimal system performance. However, since each installation and acoustic environment is different, typically some equalization adjustments will be necessary to optimize the system for the specific acoustic conditions in which the system is installed.

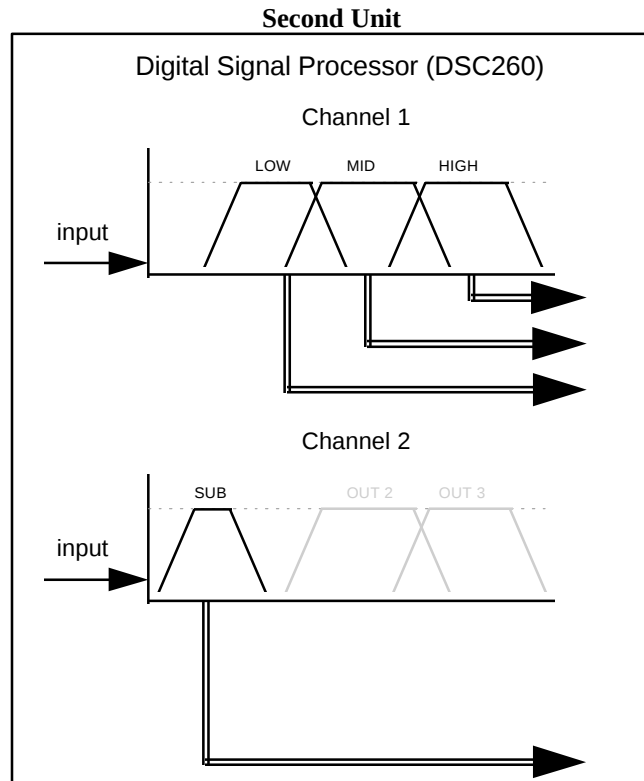
4.2 DSC Block Diagram

In a typical three channel (L,C,R) screen system, with each channel tri-amplifying a 5000 Series 3-way system, the two DSC digital controllers are configured as follows:



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4.3 Three Channel Configuration (Left, Center, Right)

For standard three screen channel cinema systems, two DSC controllers are required. This is because each device is a two input device. It is recommended that one device is used for Left and Right channels, and the second device is used for Center and Subwoofer channels.

4.4 Five Channel Configuration (Left, Left-extra, Center, Right-extra, Right)

For five channel screen systems, such as with Sony's SDDS digital process, three DSC controllers are required. This is because each device is a two input device. It is recommended that one device is used for Left and Right channels, a second device for Left-extra and Right-extra, and the third device is used for Center and Subwoofer channels.

4.5 Subwoofer Channel

The DSC controller can be used for subwoofer channel bandpass filtering, time alignment, and equalization.

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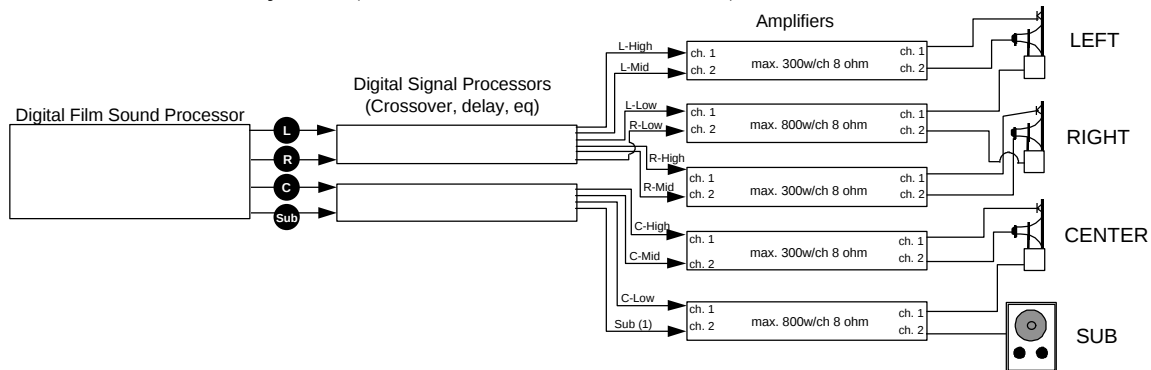
5. System Connections

5.1 System block diagrams

The following are suggested system block diagrams for configuring the 5000 Series 3-way screen channels systems. In each case, the crossover is assumed to be a 2-input, 6-output digital controller, such as the JBL DSC 260.

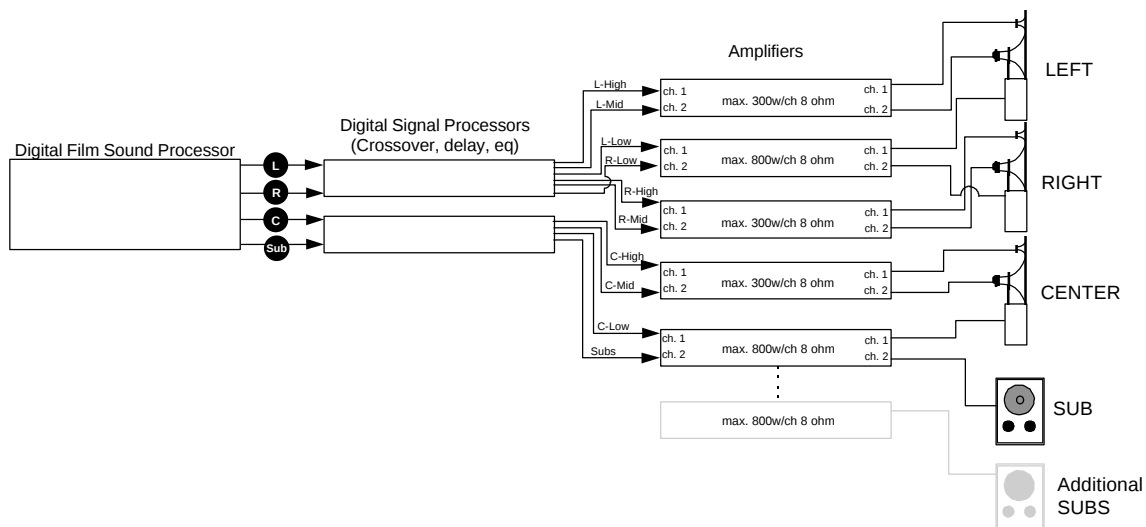
Each diagram illustrates the use of the remaining channel on the second DSC unit for subwoofer signal processing. The number of subwoofer speakers is determined by the room volume. For the purposes of this manual, the block diagram shows how to use remaining channels of power amplifiers after 3-way tri-amplification is accomplished.

5671 Screen Channel Systems (for small rooms, under 250 seats)



Typical system block diagram for 5671 3-way screen channel system with subwoofers

5672 Screen Channel Systems (for medium-large rooms, under 500 seats)

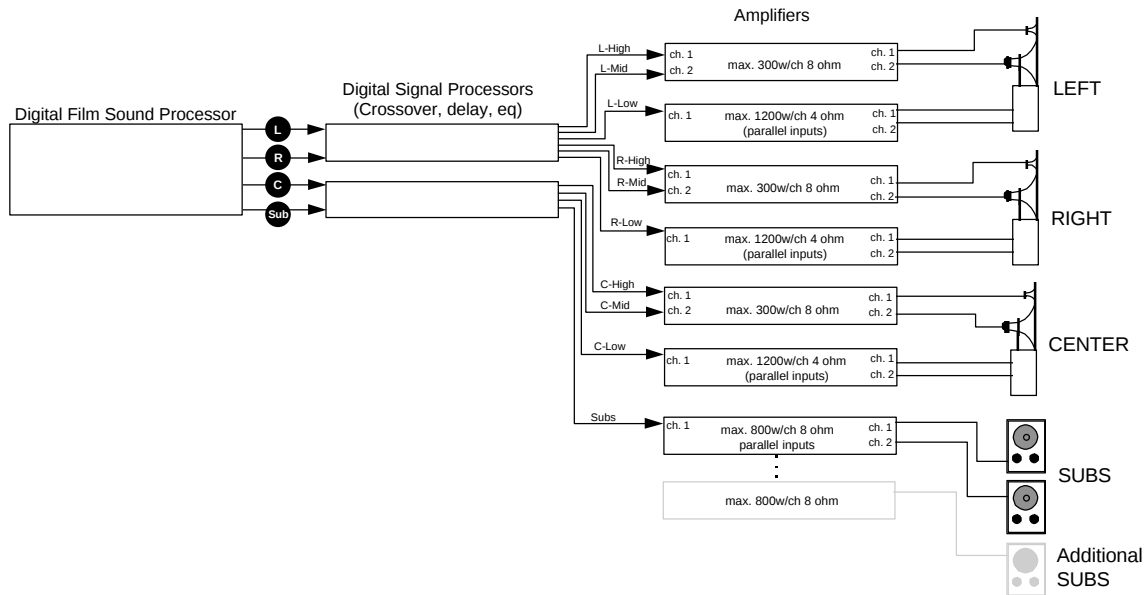


Typical system block diagram for 5672 3-way screen channel system with subwoofers

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5674 Screen Channel Systems (for large rooms, over 500 seats)

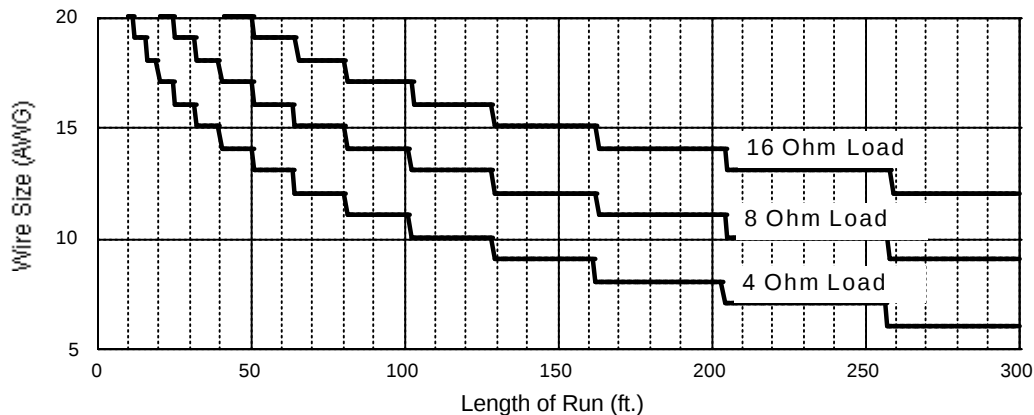


Typical system block diagram for 5674 3-way screen channel system with subwoofers

5.2 Wire recommendations

All speaker connections from the amplifier to the speakers should be made with appropriate gauge cable to minimize insertion loss. Insertion loss is signal attenuation resulting from the insertion of a device or circuit into the signal path. It is measured in decibels, increases proportionally to length of cable, and is inversely proportional to the impedance of the load (speaker). Use this chart to determine the size wire necessary for the length of the speaker cable run. Estimate the length of your cable run and locate along the horizontal axis. Then trace the vertical line up until it intersects the solid line equal to your total load impedance. Then find the appropriate wire size along the vertical axis. The object is to minimize insertion loss, and a level not to exceed -0.5 dB is considered acceptable. Greater insertion loss will result in frequency response anomalies in the cinema.

Wire Gauge Chart for 0.5 dB Loss



5.3 Speaker Connections

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For connecting speaker cables to LF sections, spade lug connections are recommended. The proper size spade lug should be crimped to the bare wire end of the cable and securely fastened beneath the screw terminals on the LF cabinet, carefully noting correct polarity.

JBL HF compression drivers use push spring-type posts, and again, polarity should be maintained throughout the systems.

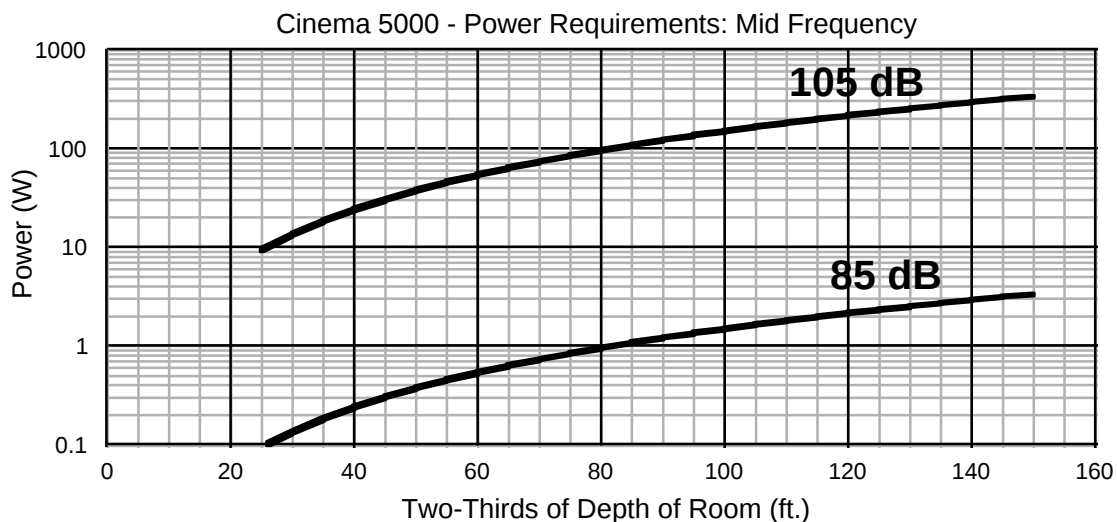
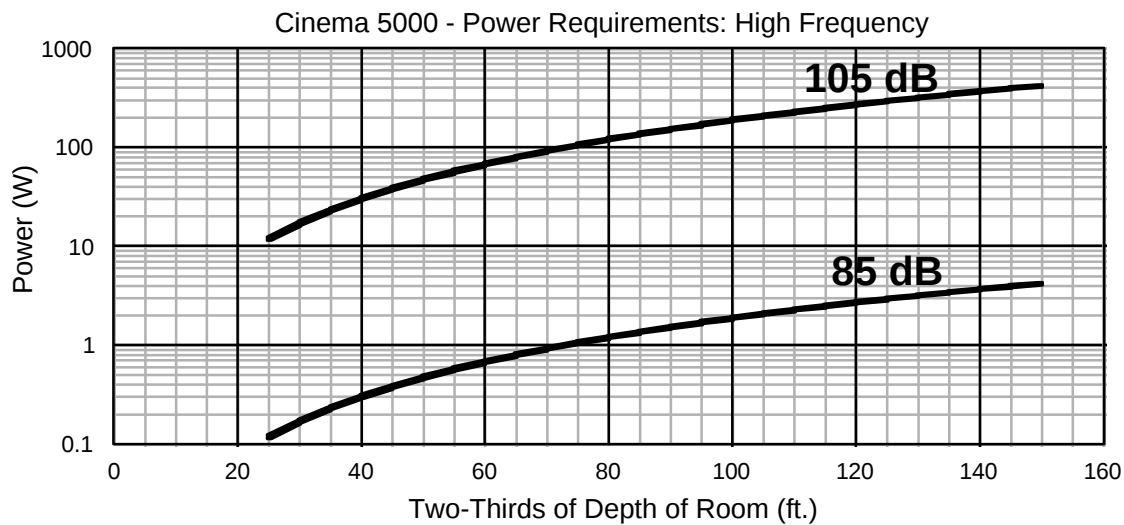
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6. Power Amplifier Requirements

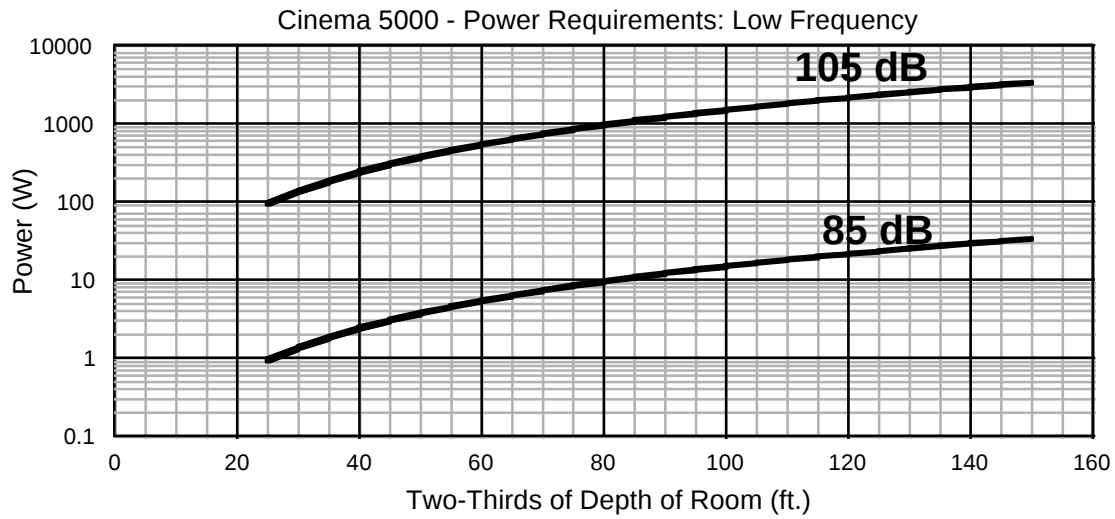
The following series of graphs provide a quick method for determining the power needed to reach 85 dB and 105 dB at the 2/3 distance in a typical theatre. Each section (HF, MF, and LF) is individually graphed.

85 dB is the typical nominal level for dialog, and 105 dB is considered peak level for today's digital film sound sources. To use the graphs, find the 2/3 room distance for the room in question along the X-axis (horizontal). Then move up the Y-axis to the 85 and 105 dB curves. The power requirement can then be read along the Y-axis. To ensure adequate headroom, the power levels for 105 dB should be considered minimum power requirements. These figures do not take into account any room reflections, thus these figures are conservative.



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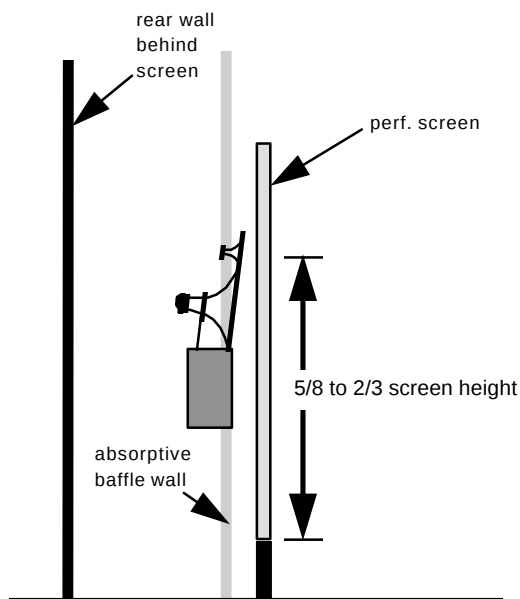
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7. Speaker Placement

The following guidelines will help in providing optimal aiming and placement to best match the perceived location of the sound to the picture on the screen.

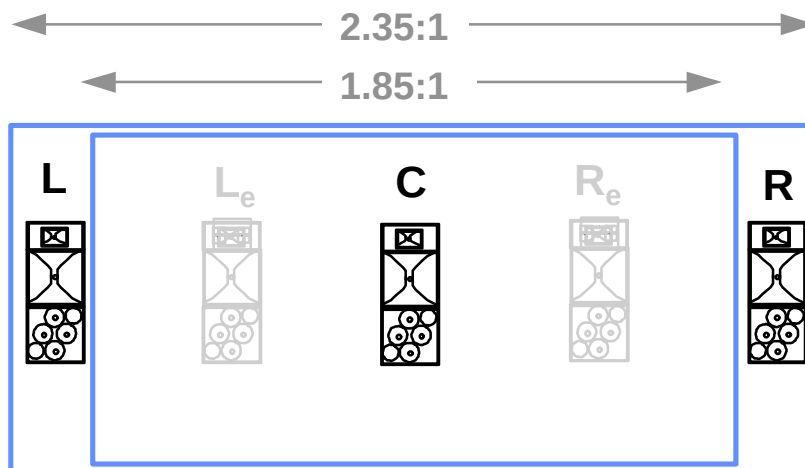
7.1 Vertical Placement



The “seam” (front strap of bracket) where the HF baffle board meets the MF horn should be located between 2/3 to 5/8 the total screen height when screen is masked for the tallest film format.

7.2 Horizontal Spacing

For a 3-channel (L,C,R) system, L and R speaker channels should be placed equidistant from center of screen image area, so that they are just inside the screen area when screen is masked for the widest format (typically 2.35:1). Acoustically transparent side masking should be used to prevent blocking of HF when side masking is moved in for “flat” picture format. For 5-channel systems, Left-extra and right-extra should be placed equidistant between Left and Center, and Right and Center.



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7.3 Distance from speaker to screen

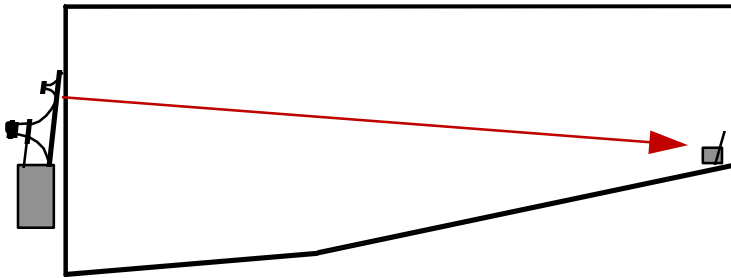
After finalizing the tilt aim adjustment the HF/MF horn array should be placed as close to the screen as possible. There are two reasons for this:

- 1) JBL has found that reflections behind the screen between the horn and the rear of the screen can cause room response anomalies.
- 2) The perforations actually cause the dispersion pattern in the room to widen at certain frequencies, and this effect is made worse as the distance between the speaker and screen increases.

7.4 Horn Array Aiming

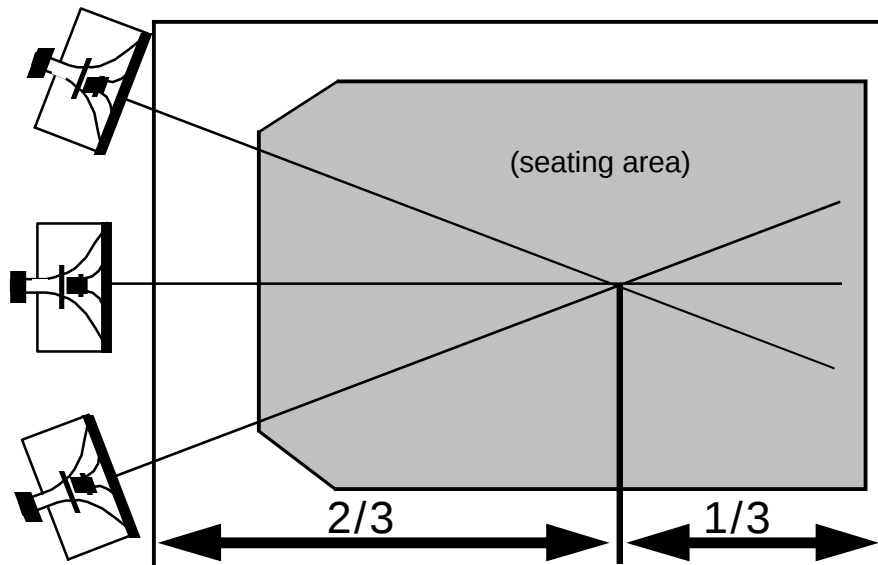
7.4.1 Vertical Plane

In typical cinemas, best coverage is usually attained by aiming the high frequency horns at the last row of seating. In more steeply raked "stadium" style houses, the horns may not require any tilt at all; in these cases, care should be taken to minimize acoustically reflective surfaces in the rear wall and ceiling surfaces.



7.4.2 Horizontal Plane

All screen speakers should be aimed to converge at a point about 2/3 of the length of the room.



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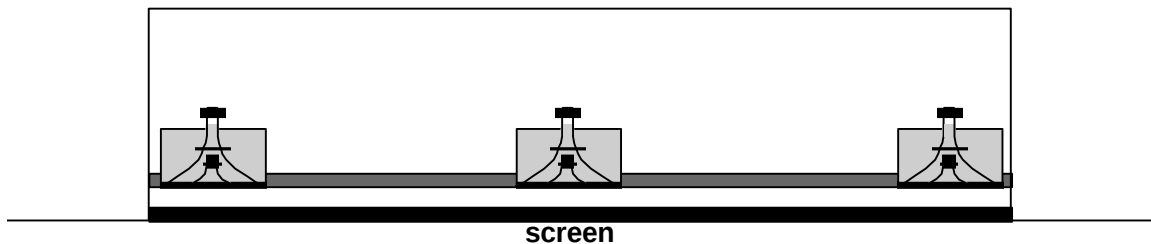
7.5 Baffle loading

For optimal results, JBL Professional recommends the installation of screen channel speakers in a full baffle wall, such as recommended by Lucasfilm/THX[®] and others. Good results can also be achieved using reinforced baffle “wings” on either side of the speaker system stacks, as long as they are constructed using high quality materials and are free of resonances and vibrations.

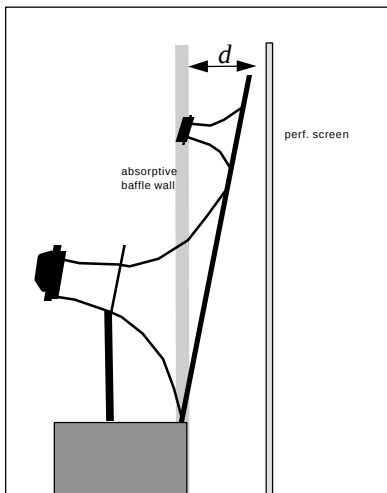
The preferred baffle wall design extends from interior theatre wall-to-wall, and floor to ceiling, essentially creating a room behind the screen, into which the speakers are flush mounted, firing into the auditorium. For practical and budgetary reasons, this concept can be modified, still yielding good results, but optimal performance is typically achieved in a full baffle wall condition.

7.6 Full Baffle Wall

The speakers should be located in the baffle wall so that the front of the LF cabinet is flush with the front of the baffle wall acoustical treatment material (typically black faced duct-liner).



The distance from the screen to the baffle wall needs to allow for tilt adjustments of the HF/MF horn array. Remember that as the tilt angle increases, the top horn gets closer to the rear of the screen. For example, at maximum tilt (10°) the 5674 or 5672 horn array will require approximately 11.2 inches of clearance between the baffle wall and the screen.



For 5672 or 5674 system

Tilt angle	<u>d (Distance that top of horn array protrudes from baffle wall)</u>
0°	0 inches (0 cm)
2.5°	3 inches (7 cm)
5°	6 inches (14 cm)
7.5°	8.4 inches (21.2 cm)
10°	11.2 inches (28.3 cm)

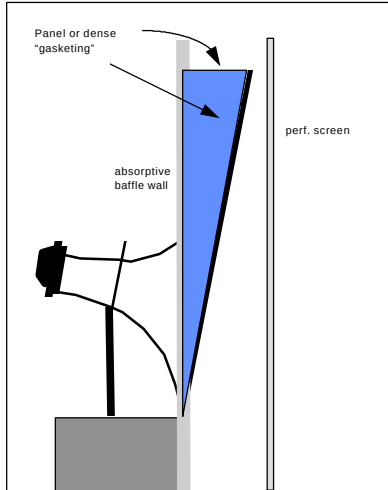
For 5671 system

Tilt angle	<u>d (Distance that top of horn array protrudes from baffle wall)</u>
0°	0 inches (0 cm)
2.5°	1.75 inches (4.5 cm)
5°	3.5 inches (8.9 cm)
7.5°	5.25 inches (13.3 cm)
10°	7 inches (17.7 cm)

NOTE: THX is a registered trademark of Lucasfilm, Ltd.

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Once final tilt and aiming adjustments have been made, the sides and top of each screen channel should be sealed to the baffle wall. This can be done with a solid plywood triangular section on each side of the mid/high horn array, and a rectangular section across the top. It should be made as stiff as possible, and treated on the front face with the same HF sound absorptive material (1.5" ductliner or "Sonex" type material) as used on the front face of the baffle wall.

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8. Specifications

8.1 5671 Screen Channel System

Frequency Range (-10 dB): 40 Hz - 16 kHz
Frequency Response (+/- 3 dB): 50 Hz - 12.5 kHz
Hor. Coverage Angle (-6 dB): 80°, averaged 300 Hz to 16 kHz
Vert. Coverage Angle (-6 dB): 50°, averaged 300 Hz to 16 kHz
Directivity Factor (Q): 11
Directivity Index (DI): 10.4
Calculated Maximum Output: 131 dB-SPL @ 1m
111 dB-SPL @ 10 m
Recommended Crossover Freq. LF/MF: 320 Hz, MF/HF: 2.3 kHz
Recommended Controller: JBL DSC family of digital controllers; tunings available in memory
Dimensions (HxWxD): 1483 mm x 774.7 mm x 736.6 mm (58.375 in. x 30.5 in. x 29 in.)
Net Weight: 80.2 kg (177 lbs.)
Shipping Weight: 89.4 kg (197 lbs.)

Transducers:

Low Frequency: 5641 LF section: One 2226H 380 mm (15 in.) dia., 100 mm (4 in.) edgewound ribbon voice coil in 5501 LF enclosure

Nominal impedance: 8 ohms
Input Power Rating: 600 W, AES; 2400 W into 8 ohms Max. Recommended Amplifier
Sensitivity: 97 dB, 1 W @ 1 m (3.3 ft.)
Input Connectors: Barrier Strip
Dimensions (HxWxD): 546 mm x 775 mm x 448 mm (21.5 in. x 30.5 in. x 17.625 in.)
Net Weight: 28.6 kg (63 lbs.)
Shipping Weight: 32.7 kg (72 lbs.)

Mid Frequency: 2392-S midrange horn
2490H midrange driver; 100 mm (4 in.) edgewound ribbon voice coil
Nominal impedance: 8 Ohms
Input Power Rating: 100 W, AES; 400 W Max. Recommended Amplifier
Sensitivity: 115 dB, 1 W @ 1 m (3.3 ft.)
Net Weight: 26.3 kg (58 lbs.)

High Frequency: 2332 horn
2451H driver; 100 mm (4 in.) edgewound ribbon voice coil
Nominal impedance: 8 Ohms
Input Power Rating: 75 W, AES; 300 W Max. Recommended Amplifier
Sensitivity: 112 dB, 1 W @ 1 m (3.3 ft.)
Net Weight: 7.26 kg (16 lbs.)

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8.2 5672 Screen Channel System

Frequency Range (-10 dB): 35 Hz - 16 kHz
Frequency Response (+/- 3 dB): 45 Hz - 12.5 kHz
Hor. Coverage Angle (-6 dB): 80°, averaged 300 Hz to 16 kHz
Vert. Coverage Angle (-6 dB): 45°, averaged 300 Hz to 16 kHz
Directivity Factor (Q): 11
Directivity Index (DI): 10.4
Calculated Maximum Output: 137 dB-SPL @ 1 m
117 dB-SPL @ 10 m
Recommended Crossover Freq. LF/MF: 297 Hz, MF/HF: 2.5 kHz
Recommended Controller: JBL DSC family of digital controllers; settings available in memory
Dimensions (HxWxD): 2768.6 mm x 1118 mm x 812.8 mm (109 in. x 44 in. x 32 in.)
Net Weight: 87.3 kg (192.5 lbs.)
Shipping Weight: 96.4 kg (212.5 lbs.)

Transducers:

Low Frequency: 4648A LF Section: Two 2226H 380 mm (15 in.) dia., 100 mm (4 in.) edgewound ribbon voice coil, in 4508A LF enclosure
Nominal impedance: 4 ohms
Input Power Rating: 1200 W, AES; 4800 W into 4Ω Max. Recommended Amplifier
Sensitivity: 100 dB, 1 W @ 1 m (3.3 ft.)
Input Connectors: Barrier Strip
Dimensions (HxWxD): 991 mm x 648 mm x 451 mm (39 in. x 25.5 in. x 17.75 in.)
Net Weight: 61.2 kg (135 lbs.)
Shipping Weight: 68 kg (150 lbs.)

Mid Frequency: 2392 midrange horn
2490H midrange driver; 100 mm (4 in.) edgewound ribbon voice coil
Nominal impedance: 8 Ohms
Input Power Rating: 100 W, AES; 400 W Max. Recommended Amplifier
Sensitivity: 115 dB, 1 W @ 1 m (3.3 ft.)
Net Weight: 28.35 kg (62.5 lbs.)

High Frequency: 2352 horn
2451H driver; 100 mm (4 in.) edgewound ribbon voice coil
Nominal impedance: 8 Ohms
Input Power Rating: 75 W, AES; 300 W Max. Recommended Amplifier
Sensitivity: 112 dB, 1 W @ 1 m (3.3 ft.)
Net Weight: 7.26 kg (16 lbs.)

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8.3 5674 Screen Channel System

Frequency Range (-10 dB): 35 Hz - 16 kHz
Frequency Response (+/- 3 dB): 45 Hz - 12.5 kHz
Hor. Coverage Angle (-6 dB): 80°, averaged 300 Hz to 16 kHz
Vert. Coverage Angle (-6 dB): 45°, averaged 300 Hz to 16 kHz
Directivity Factor (Q): 11
Directivity Index (DI): 10.4
Calculated Maximum Output: 137 dB-SPL @ 1m
117 dB-SPL @ 10 m
Recommended Crossover Freq. LF/MF: 297 Hz, MF/HF: 2.5 kHz
Recommended Controller: JBL DSC family of digital controllers; tunings available in memory
Dimensions (HxWxD): 2895.6 mm x 1118 mm x 812.8 mm (114 in. x 44 in. x 32 in.)
Net Weight: 171.69 kg (378.5 lbs.)
Shipping Weight: 190.5 kg (420 lbs.)

Transducers:

Low Frequency: 5644 LF Section: Four 2226H 380 mm (15 in.) dia., 100 mm (4 in.) edgewound ribbon voice coil, in 5504 LF enclosure with DiamondQuad driver array

Nominal impedance: Each pair in parallel; 4Ω load per driver pair
Input Power Rating: Per driver pair: 1200 W, AES; 4800 W into 4Ω Max. Recommended Amplifier
Sensitivity: 103 dB, 1 W @ 1 m (3.3 ft.)
Input Connectors: Two sets of "+" and "-" Barrier Strips
Dimensions (HxWxD): 1118 mm x 1118 mm x 623 mm (44 in. x 44 in. x 24.5 in.)
Net Weight: 136 kg (300 lbs.)
Shipping Weight: 145.2 kg (320 lbs.)

Mid Frequency: 2392 midrange horn
2490H midrange driver; 100 mm (4 in.) edgewound ribbon voice coil
Nominal impedance: 8 Ohms
Input Power Rating: 100 W, AES; 400 W Max. Recommended Amplifier
Sensitivity: 115 dB, 1 W @ 1 m (3.3 ft.)
Net Weight: 28.35 kg (62.5 lbs.)

High Frequency: 2352 midrange horn
2451H midrange driver; 100 mm (4 in.) edgewound ribbon voice coil
Nominal impedance: 8 Ohms
Input Power Rating: 75 W, AES; 300 W Max. Recommended Amplifier
Sensitivity: 112 dB, 1 W @ 1 m (3.3 ft.)
Net Weight: 7.26 kg (16 lbs.)

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9. Warranty Information

All JBL Cinema 5000 Series screen channel systems are backed by a 5-year limited warranty. For complete warranty information, within the continental United States, Hawaii, and Alaska, please refer to the warranty card enclosed with your product. In other areas of the world, please contact your local JBL distributor.