

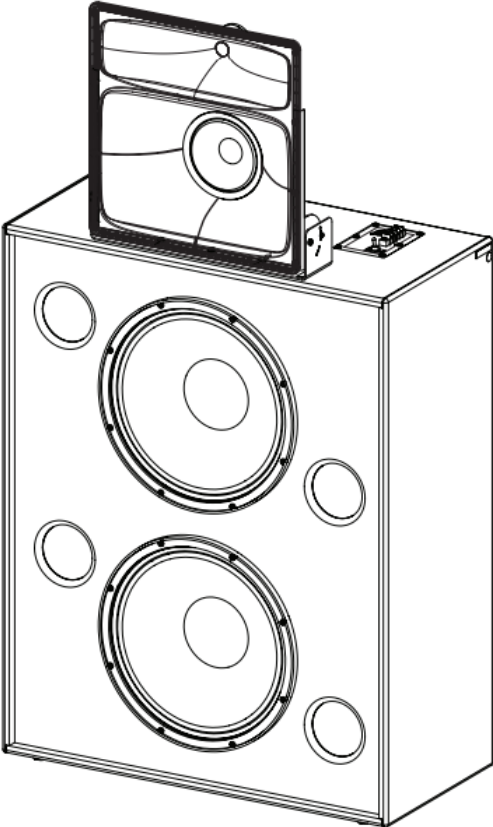
# SC-2150



## Quick Start Guide

---

### SC-2150 Screen Channel Loudspeaker System



TD-001624-01-A



# EXPLANATION OF SYMBOLS

The term “**WARNING!**” indicates instructions regarding personal safety. If the instructions are not followed the result may be bodily injury or death.

The term “**CAUTION!**” indicates instructions regarding possible damage to physical equipment. If these instructions are not followed, it may result in damage to the equipment that may not be covered under the warranty.

The term “**IMPORTANT!**” indicates instructions or information that are vital to the successful completion of the procedure.

The term “**NOTE**” is used to indicate additional useful information.



The intent of the exclamation point within an equilateral triangle is to alert the user to the presence of important safety, and operating and maintenance instructions in this manual.



## IMPORTANT SAFETY INSTRUCTIONS



Refer to TD-000142 Safety Precautions contained in the shipping carton.

## Warranty

For a copy of the QSC Limited Warranty, visit the QSC website at [www.qsc.com](http://www.qsc.com)

## Introduction

The SC-2150 is a 3-way, selectable passive full-range or bi-amplified screen channel loudspeaker system comprised of two main units. These units are shipped in separate cartons.

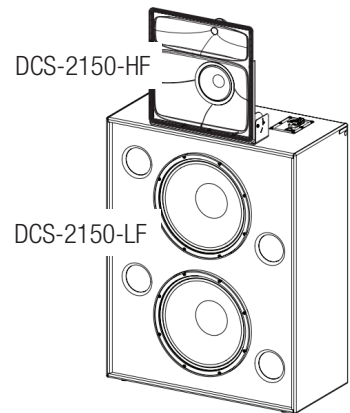
### DCS-2150-HF Mid-High Frequency Loudspeaker System

Part	Quantity
DCS-2150-HF Loudspeaker System	1
Wiring Harness	*
TD-000142 Safety Precautions	1
TD-000453 Warranty	1

\* Part of the HF Loudspeaker System

### DCS-2150-LF Low-Frequency Enclosure

Part	Quantity
DCS-2150-LF Loudspeaker Enclosure	1
Hex-head Screw	3
Flat Washer	3
Split Washer	3
TD-000142 Safety Precautions	1
TD-000453 Warranty	1



— Figure 1 —

# Assemble the SC-2150

This procedure assumes that both items and associated hardware is unpacked and the two units are placed on a solid flat surface near the installation location.

Refer to — Figure 2

1. Place the HF horn assembly (1) on top of the LF enclosure (2) with the three holes in the pan-and-tilt bracket (not visible in the illustration), aligned with the three holes (3) in the top of the LF enclosure.
2. Assemble the three bolts (4a), split washers (4b), and flat washers (4c) and install through the pan-and-tilt bracket into the LF enclosure.
3. Tighten the bolts. Be careful not to over tighten.

Refer to — Figure 3

4. Connect the Neutrik SpeakON NL4 plug (1) (end of the wiring harness coming from the HF System) to the LF Enclosure connector plate NL4 receptacle (2).



**NOTE:** The NL4 is a keyed plug/receptacle that can only go in one way.

5. After engaging the plug all the way, twist the plug clockwise until it locks.
6. Use the Mode switch (3) to select Bi Amp or Passive.

**Passive Mode** – (— Figure 4) a single amplifier channel drives the entire system. The Mode Switch (3) must be in the **PASSIVE** position and only the right-side pair of terminals are used to connect the amplifier to the loudspeaker system.

**Bi-Amp Mode** – (— Figure 5) two amplifier channels are required. One for the LF enclosure and one for the Mid-Hi system.

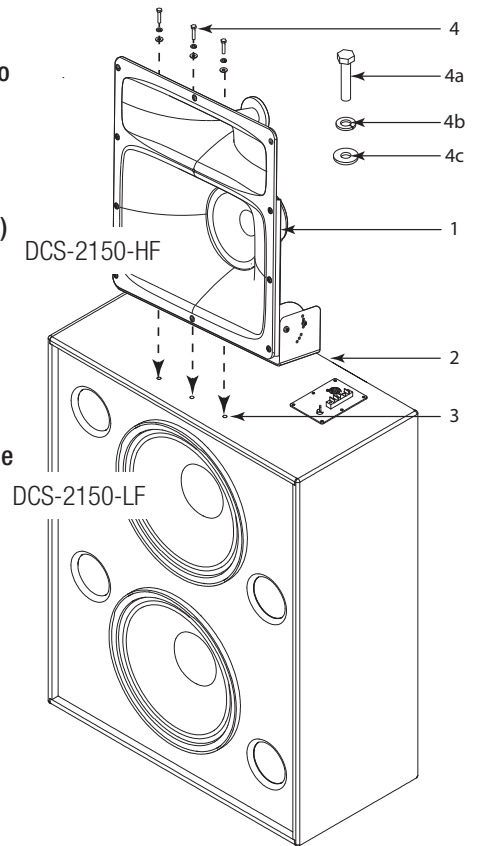


**CAUTION!** An active crossover must be used to protect the loudspeaker from damage. It is highly recommended to use a QSC processor with factory DSP presets for the SC-2150 for best results.

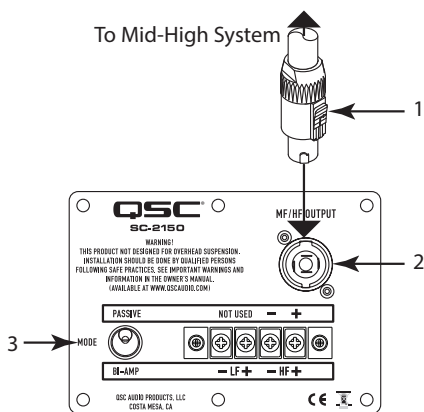
The Mode Switch must be in the **BI-AMP** position and all four terminals are used to connect the amplifier to the loudspeaker. The Low Frequency amplifier connects to the left pair of terminals and the High Frequency amplifier connects to the right pair of terminals.



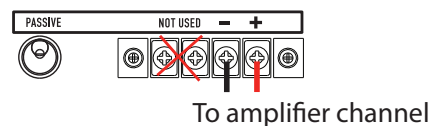
**CAUTION!** In all cases, be sure to observe proper polarity when making connections. The “+” terminal of the amplifier should connect to the “+” terminal of the loudspeaker. In Bi-Amp mode, be sure that LF and HF connections are not reversed. HF drivers can be damaged if they are connected to the low frequency amplifier.



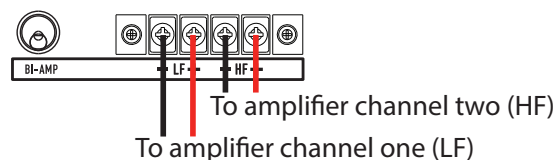
— Figure 2 —



— Figure 3 —



— Figure 4 —



— Figure 5 —

# Mounting the SC-2150



**CAUTION!** All QSC cinema loudspeakers must be installed by trained personnel familiar with mounting large, heavy loudspeakers in a safe and secure manner.

The SC-2150 is not designed for safe suspension. No part of the LF cabinet or Mid-Hi component should be used to support the weight of the system.

## Mounting Platforms

The maximum room length for the SC-2150 is 55 ft (17 m). Use in larger rooms may result in driver failures. For best performance, Bi-Amp mode should be used whenever possible and especially for rooms at the upper end of the size range.

1. Prepare three platforms, left, center, and right, sturdy enough to safely support the SC-2150, and with the capability of vertical adjustments.
2. Place the loudspeakers platforms and adjust the height so that the Mid-Hi system is at approximately 5/8 of the screen height.
3. Position the SC-2150 so that the front of the loudspeaker is about 6" (15 cm) from the perforated cinema screen.

## Aiming

Once the Left, Center and Right SC-2150's are in place, the Mid-Hi system should be aimed for best coverage of the audience. Aiming can involve moving the horns horizontally (panning) and vertically (tilting). The patented QSC Cine-Sight simplifies aiming of the horns. The correct adjustment varies with the room size, shape and seating slope. A point in the center of the room and about 2/3 of the way back from the screen is usually a good starting place to aim the loudspeakers. You should check front and rear rows for adequate high frequency coverage after the initial adjustment and re-adjust the horns as needed to achieve the most uniform coverage.

### Center Channel

The center channel is typically in the middle of the audience, so panning of the Mid-Hi system is not usually required.

1. Make sure the Mid-Hi system is pointing straight ahead
2. Confirm that the three Mid-Hi mounting bolts are securely tightened.
3. Remove the two tilt adjustment screws (one on each side of the bracket)
4. Look through the rear horn bracket aiming hole to line up the system with the desired aiming point in the room.



**NOTE:** If the screen has not been installed, this is very easy. Once the screen has been installed, dim the lights in the room and place a flashlight at the aim point and you can see the light through the perforations of the screen.

5. Re-install the two tilt adjustment screws in the correct hole when the desired tilt adjustment has been obtained.

### Left and Right Channels

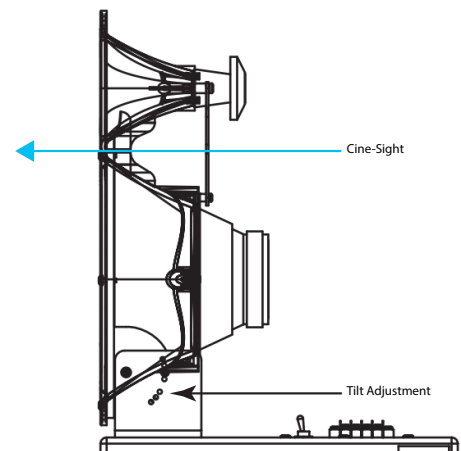
Aiming of the Left and Right channels is similar to the Center, but it is often necessary to pan (toe in) the horns toward the middle of the room.

1. Loosen the three mounting screws to allow the Mid-Hi system to rotate and tilt.
2. Aim the system with the Cine-Sight.



**TIP:** If extreme panning is required, "toe in" the LF enclosures a few degrees so the horn is not panned to extreme angles of adjustment.

3. Tighten the three mounting screws and re-install the two tilt adjustment screws in the correct adjustment hole.
4. When all adjustments are complete make sure all screws and connections are securely tightened and the Mode switch is in the correct position.



— Figure 6 —

# Specifications

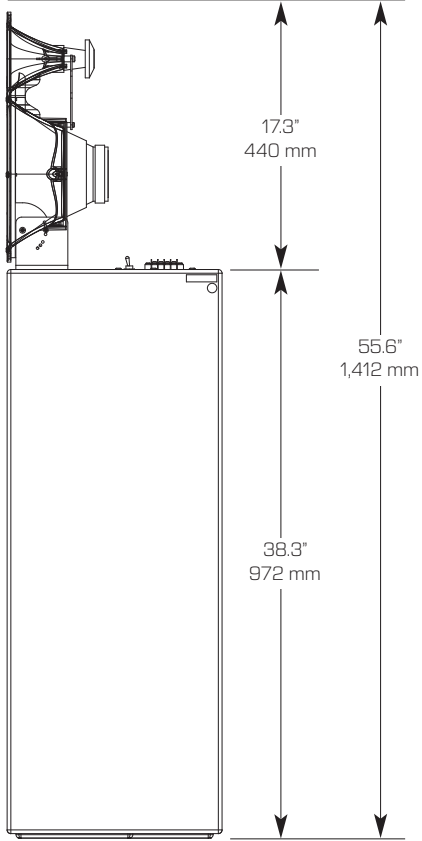
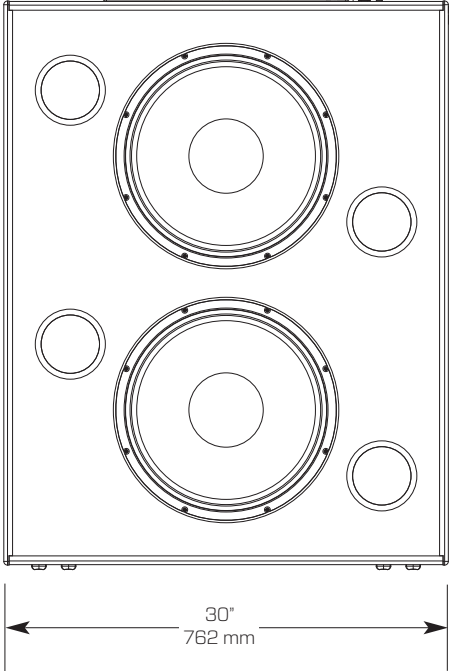
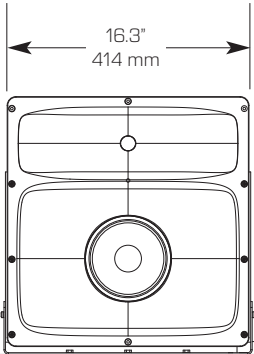
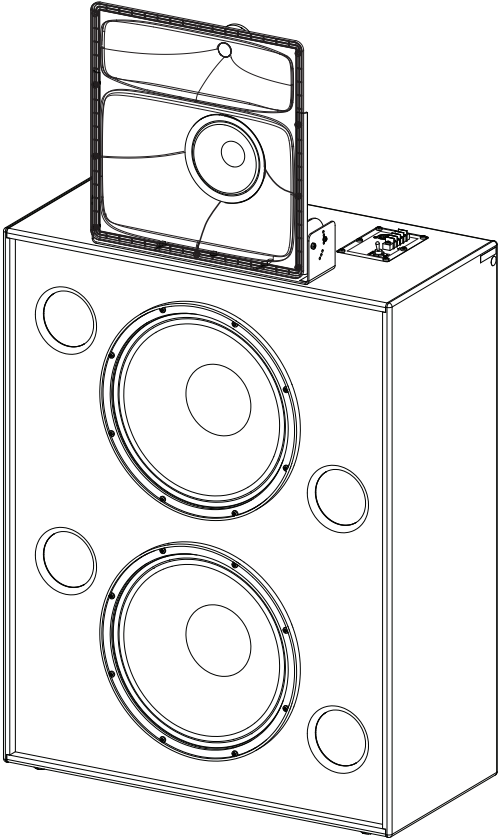
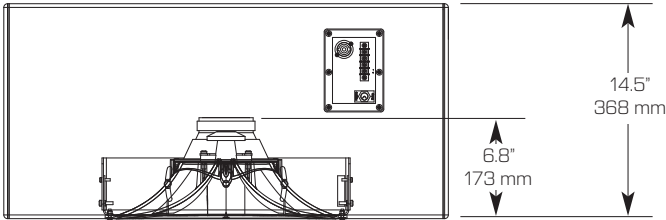
# SC-2150

Nominal Coverage (-6 dB)	90° horizontal x 40° vertical
Frequency Response <sup>1</sup> (-6 dB)	38 Hz – 20 kHz
Frequency Range <sup>1</sup> (-10 dB)	32 Hz – 20 kHz
Crossover Frequencies (passive)	500 Hz & 2200 Hz
Crossover Frequencies (bi-amp)	500 Hz active, 24 dB /octave LF to mid-high, 2200 Hz passive
Impedance (passive mode)	4Ω
Maximum Input Power <sup>2</sup> (passive mode)	500 W RMS
Sensitivity (1 watt / 1 meter, passive mode)	99 dB SPL
Calculated Maximum Output <sup>3</sup> (passive mode)	126 dB continuous, 132 dB peak SPL at 1 m

	<b>2150-LF</b>	<b>2150-HF</b>
Impedance	4Ω	8Ω
Sensitivity (1 watt / 1 meter, half space)	100 dB	102 dB
Maximum Input Power	500 W RMS <sup>4</sup>	80 W RMS <sup>5</sup>
Maximum Recommended Amplifier Power	1000 W RMS	320 W RMS
Recommended Processing	Subsonic filter below 30 Hz, >18 dB per octave	4th order LR crossover at 500 Hz via QSC processor
Connectors	Barrier strip screw terminals accept up to #10 AWG stranded wire	Factory installed NL4 plug for connection to input terminal plate
Transducers	Two 15" (381 mm) high efficiency, extended bass woofers featuring 3" voice coils	6.5" high efficiency mid range, 1" (38 mm) exit, 1.4" (35.5 mm) diaphragm compression driver
Enclosure	Ported enclosure with symmetrical port design, tuned to 40 Hz, constructed of MDF and heavily braced	Tilt/Pan Bracket -20 to +10° vertical tilt ± 15° horizontal pan
Dimensions (HWD)	38.3" x 30" x 14.5" (972 mm x 762 mm x 368 mm)	17.3" x 16.3" x 6.8" (440 mm x 414 mm x 173 mm)
Weight – Net	107 lb / 48.5 kg	10 lb / 4.5 kg
Weight – Shipping	121 lb / 54.9 kg	12 lb / 5.4 kg
System Weight – Net	117 lb / 53.1 kg	
System Weight – Shipping	133 lb / 60.3 kg	
Baffle Wall Cut-Out	30.5" x 56.1" (775 mm x 1425 mm) contoured to the perimeter of MF - HF horns	

1. Half-space with recommended QSC processing
2. IEC 60268-5, 2 hrs, Power =  $V_{rms}^2/Z_{nom}$
3. Calculated SPL at 1 m, full-space, speaker operating at rated continuous power handling, 6 dB crest factor
4. AES2-1984, 40 Hz – 400 Hz, 2 hrs, Power =  $V_{rms}^2/Z_{nom}$
5. Pink noise, 500 Hz – 20 kHz, 6 dB crest factor, 2 hrs, Power =  $V_{rms}^2/Z_{nom}$

# SC-2150 Dimensions





## Mailing Address:

QSC, LLC  
1675 MacArthur Boulevard  
Costa Mesa, CA 92626-1468 U.S.

Main Number: +1.714.754.6175

World Wide Web: [www.qsc.com](http://www.qsc.com)

## Sales & Marketing:

Voice: +1.714.957.7100 or toll free

(U.S. only) +1.800.854.4079

FAX: +1.714.754.6174

Email: [info@qsc.com](mailto:info@qsc.com)

## QSC

Technical Services  
1675 MacArthur Blvd.  
Costa Mesa, CA 92626 U.S.

Tel: +1.800.772.2834 (U.S. only)

Tel: +1.714.957.7150

FAX: +1.714.754.6173

## QSC Self Help Portal

Access our Self-Help Portal for additional information, FAQs and documents. You may also register or login to open a case with QSC Technical Services.

<https://qscprod.force.com/selfhelpportal/s/>