

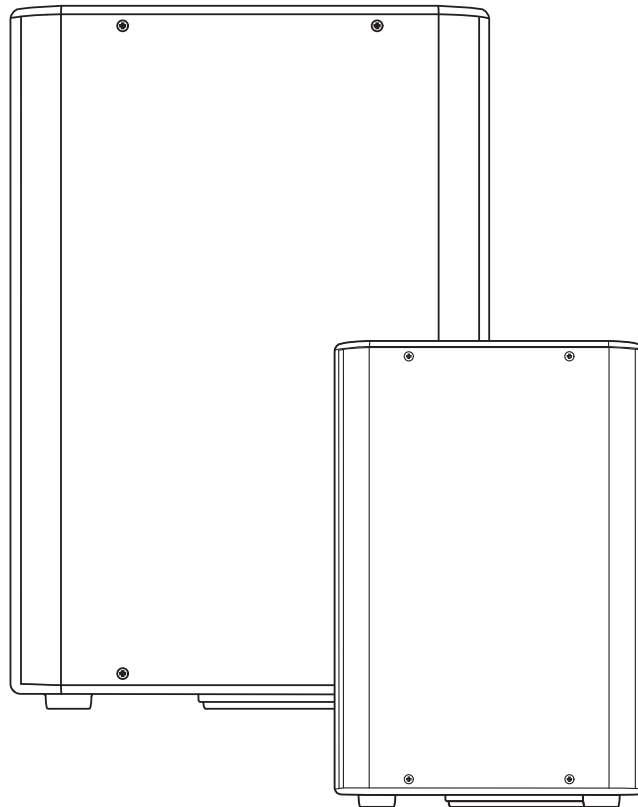
CP Series



User Manual

CP8 – 90° 1000 W active 8" (200 mm) 2-way loudspeaker system

CP12 – 75° 1000 W active 12" (300 mm) 2-way loudspeaker system



TD-001571-01-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.



NOTE: The intent of the lightning flash with arrowhead symbol in a triangle is to alert the user to the presence of un-insulated “dangerous” voltage within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.



NOTE: 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



WARNING!: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE. DO NOT USE THIS APPARATUS NEAR WATER.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation opening. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

14. The appliance coupler, or the AC Mains plug, is the AC mains disconnect device and shall remain readily operable after installation.
15. Adhere to all applicable, local codes.
16. To prevent electrical shock, the power cord shall be connected to a mains socket outlet with a protective earthing connection.
17. Consult a licensed, professional engineer when any doubt or questions arise regarding a physical equipment installation.
18. Do not use any aerosol spray, cleaner, disinfectant or fumigant on, near or into the apparatus. Clean only with a dry cloth.
19. Do not unplug the unit by pulling on the cord, use the plug.
20. Do not submerge the apparatus in water or liquids.
21. Keep ventilation opening free of dust or other matter.

Warranty

For a copy of the QSC Limited Warranty, visit the QSC website at www.qsc.com

Maintenance and Repair



WARNING! Advanced technology, e.g., the use of modern materials and powerful electronics, requires specially adapted maintenance and repair methods. To avoid a danger of subsequent damage to the apparatus, injuries to persons and/or the creation of additional safety hazards, all maintenance or repair work on the apparatus should be performed only by a QSC authorized service station or an authorized QSC International Distributor. QSC is not responsible for any injury, harm or related damages arising from any failure of the customer, owner or user of the apparatus to facilitate those repairs.

Life Cycle: 7 years, **Storage Temperature range:** -20 C to +70 C, **Relative Humidity range:** 5 - 85% RH

FCC Statement



NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RoHS Statements

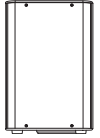
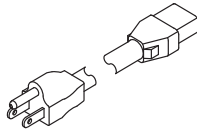




These products are in compliance with European Directive 2011/65/EU – Restriction of Hazardous Substances (RoHS).

These products are in compliance with “China RoHS” directives per GB/T26572. The following table is provided for product use in China and its territories:

These products CP12, CP8 这些产品 CP12, CP8						
部件名称 (Part Name)	有害物质 (Hazardous Substances)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(vi))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板组件 (PCB Assemblies)	X	O	O	O	O	O
机壳装配件 (Chassis Assemblies)	X	O	O	O	O	O

本表格依据 SJ/T 11364 的规定编制。(This table is prepared following the requirement of SJ/T 11364.)
 O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。
 O: Indicates that the concentration of the substance in all homogeneous materials of the part is below the relevant threshold specified in GB/T 26572.
 X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。
 X: Indicates that the concentration of the substance in at least one of all homogeneous materials of the part is above the relevant threshold specified in GB/T 26572.
 (目前由于技术或经济的原因暂时无法实现替代或减量化) (Replacement and reduction of content cannot be achieved currently because of the technical or economic reason.)

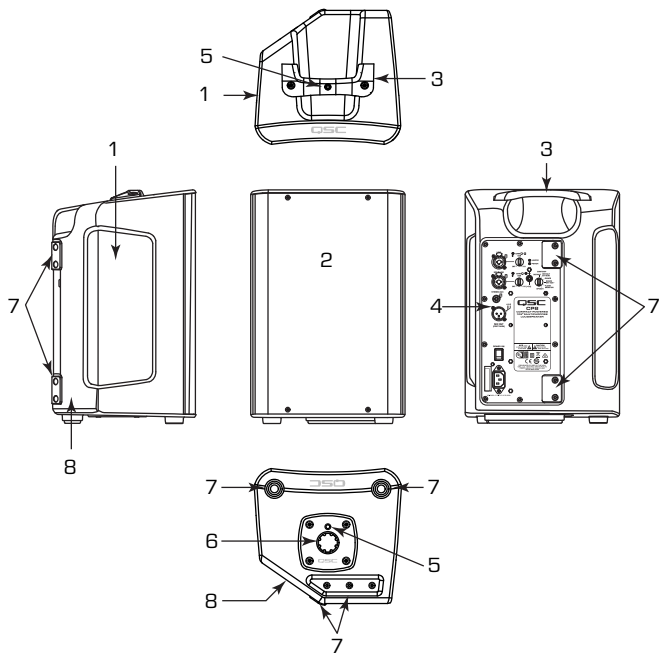
What's in the Box

	1 CP Series Loudspeaker		1 AC Power cord		1 White QSC Logo
	1 QSC Limited Warranty TD-000453-01		1 CP Series Quick Start Guide TD-001529		1 Powered Loudspeaker Safety Sheet TD-000337

Features

CP8

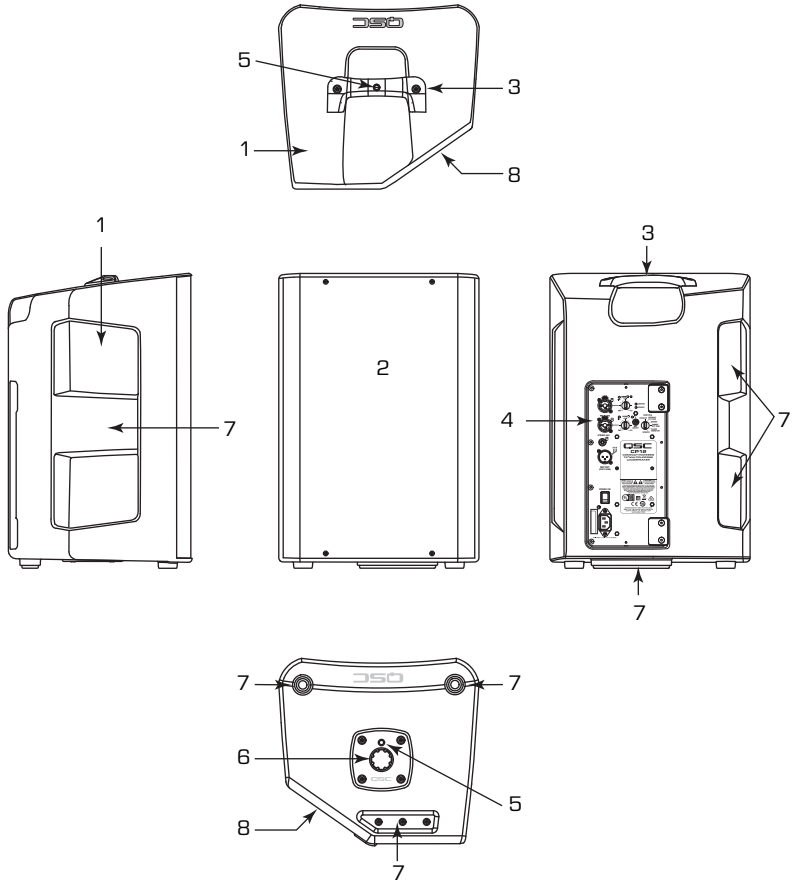
1. Polypropylene enclosure
2. Steel grille
3. Cast aluminum handle
4. Power module
5. M8 yoke-attachment points
6. Vertical pole socket
7. Slip-resistant feet for floor monitor applications
8. Angled back for use as a stage monitor



— Figure 1 —

CP12

1. Polypropylene enclosure
2. Steel grille
3. Cast aluminum handle
4. Power module
5. M8 Yoke attachment points
6. Vertical pole socket
7. Slip-resistant feet
8. Angled back for use as a stage monitor



— Figure 2 —

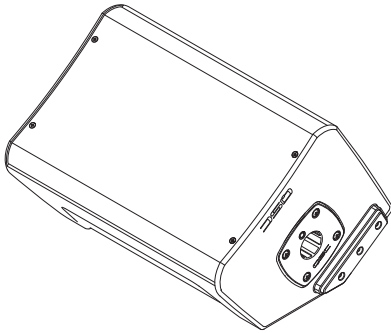
Applications

The CP Series has been primarily designed for portable audio reinforcement. This includes a variety of uses in reinforcement for entertainers and presenters. All are designed to perform well on their own in full-range audio. They can be used singly, in stereo pairs or in distributed or delayed systems. They perform extraordinarily well as both main reinforcement systems and as floor monitors as shown in Figure 3.

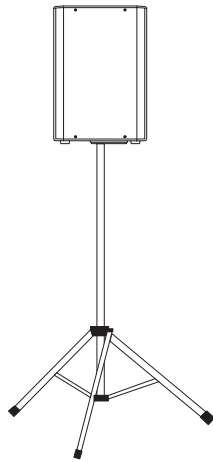
All three models are equipped with a 35 mm pole socket that allows use on a loudspeaker stand or on a pole over a subwoofer. (The subwoofer must have a 35 mm pole socket capable of supporting the loudspeakers.) (Refer to Figure 4)

In addition, the CP Series have yoke accessories for each model that mount to the top and bottom. These yokes allow for rigid mounting to structures and rotation of the loudspeaker system. (model numbers: CP8 YOKE and CP12 YOKE)

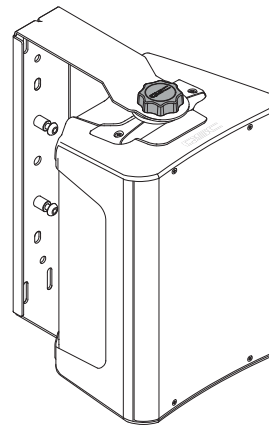
For portable installations, you can use the yoke knob to quickly and easily mount the loudspeakers on the yoke, or you can use the yoke mounting bolt for more permanent installations. Each yoke has threaded inserts to store either the yoke knob or the yoke mounting bolt. Refer to the CP Series Yoke Mounting Quick Start Guide TD-001570 for details.



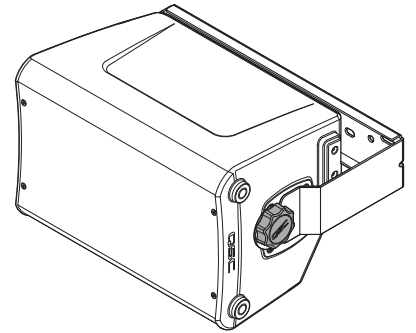
— Figure 3 —



— Figure 4 —



— Figure 5 —



— Figure 6 —

Installation



WARNING! Before placing, installing, rigging, or suspending any loudspeaker product, inspect all hardware, suspension, cabinets, transducers, brackets and associated equipment for damage. Any missing, corroded, deformed, or non-load rated component could significantly reduce the strength of the installation or placement. Any such condition severely reduces the safety of the installation and should be immediately corrected. Use only hardware which is rated for the loading conditions of the installation and any possible short-term, unexpected overloading.

Never exceed the rating of the hardware or equipment.

Consult a licensed, professional engineer regarding physical equipment installation. Ensure that all local, state and national regulations regarding the safety and operation of loudspeakers and related equipment are understood and adhered to.

Deployment

The **CP Series** loudspeakers were designed to sit on the floor, stage, a subwoofer enclosure, be yoke mounted, or be pole mounted on a 35 mm diameter loudspeaker support pole. If you are going to pole-mount on a subwoofer, refer to the chart below for specifics.



WARNING!: Do not use a loudspeaker support pole longer than the lengths specified in the table below when supported by a subwoofer.

CP Series	Subwoofers	
	KS212C	KS112
CP8	36 in (914 mm)	36 in (914 mm)
CP12	36 in (914 mm)	36 in (914 mm)

Suspension

The CP Series loudspeakers are not designed to be suspended from eyebolts. However, the optional Yoke bracket can be mounted to a suspended fixture.

Cooling

This is a powered loudspeaker containing an internal power amplifier that produces heat. Allow a minimum of 6" (152 mm) clearance at cabinet back for convection cooling. Keep anything that might restrict airflow away from the rear of the enclosure (i.e draperies, walls, etc.)



CAUTION!: Do not install enclosures with their rear panels exposed to direct sunlight. Direct sunlight will heat the amplifier module and reduce its ability to produce full output. Install sunshades if needed. Maximum ambient temperature for full performance to specification is 50° C (122° F). Do not install enclosures in locations that are exposed to rain or other water sources. The enclosure is not weatherproof. Outdoor installations must provide protection from the elements.

AC Mains

Refer to Figure 8)

Connect the AC power cord to the socket on the back of the amplifier. Make sure the plug is fully inserted into the socket on the power amplifier module.



NOTE: Make sure that the AC power switch is in the OFF position before connecting AC power cord to the AC source.

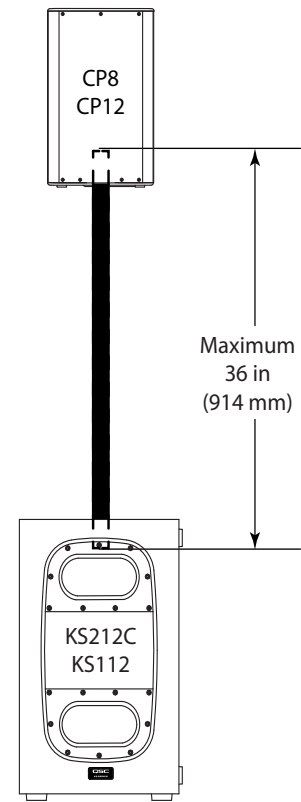
Connect the AC Power cord to the facility's AC outlet.

If the QSC-supplied cord is lost or damaged, a standard 18-gauge IEC power cord may be used. Available from QSC.

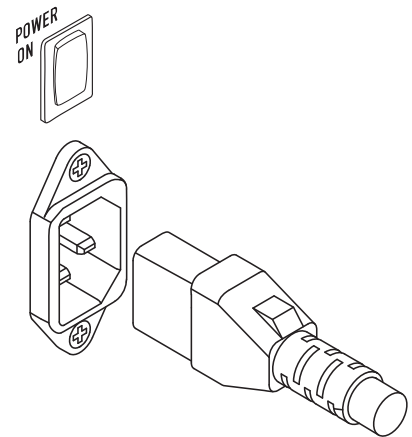
The CP Series loudspeakers are equipped with a universal power supply that can use input AC power voltages ranging from 100 – 240 VAC at 50 – 60 Hz.



WARNING!: Use only the power cable that is correct for your location.



— Figure 7 —



— Figure 8 —

AC Mains Disconnection

Push in on the bottom of the rocker switch to turn the powered loudspeaker off. Unplug the AC cable from the power source. Unplug the cable from the amplifier.

Power Switch

Push in on the top of the rocker switch to apply AC mains power to the amplifier.

Rear LED POWER Indicator

The green LED POWER indicator on the rear panel will illuminate when the AC Power is applied (AC cord connected, power switch on). The rear LED POWER indicator will extinguish when the AC Power has been removed.

If the rear LED POWER indicator does not illuminate within the first 15 seconds after power is applied, verify the AC mains line cord is properly attached to the loudspeaker and plugged into the AC outlet. Verify the AC outlet is functioning properly.



NOTE: If the AC mains cord is usable and the AC mains outlet is operating properly, but the unit fails to operate, the loudspeaker may require servicing. Contact QSC's Technical Services department.

System Power Sequencing

Proper power turn on/turn off sequencing can help to prevent unexpected sounds from being produced by the system (pops, clicks, thumps). Always follow the rule that loudspeakers are "last on, first off".

Power On Sequence:

1. Bring the output level control of the mixer (or other audio source) feeding your loudspeakers to its minimum position.
2. Turn on all source devices (CD players, mixers, instruments)
3. Turn on subwoofer
4. Turn on the "top-boxes" (**CP8 / CP12**).
5. The level controls on your mixer may now be brought up.

Power Off Sequence:

1. Turn off "top boxes,"
2. Turn off subwoofer,
3. Turn off all source devices.

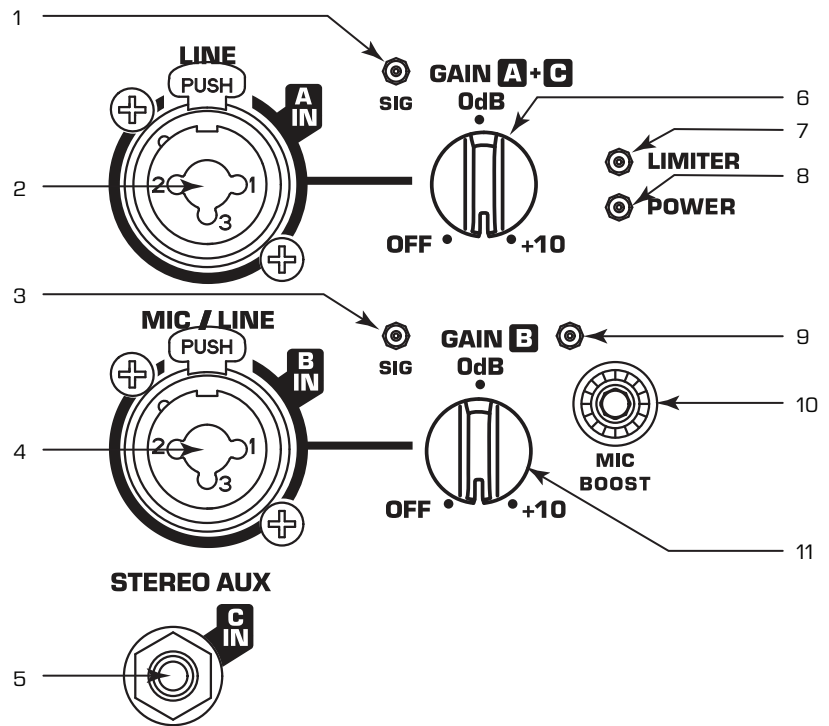
If a CP Series loudspeaker is being driven from the output of another CP Series unit, it should be turned on after the unit feeding it signal, and turned off before the unit feeding it signal.

Inputs

The CP Series amplifier has three separate inputs; two combination XLR / 1/4" Phone Jack (Inputs A and B) and one 1/8" (3.5 mm) TRS jack (Input C).

Refer to Figure 9

1. **Input A SIG** LED – When illuminated (green), it indicates a signal is present. If this LED is not illuminated, the input signal is missing or too low to detect.
2. **Input A** – Combination XLR – 1/4" Phone Jack connector. Balanced XLR and 1/4" input. Accepts line-level inputs.
3. **Input B SIG** LED – When illuminated (green), it indicates a signal is present. If this LED is not illuminated, the input signal is missing or too low to detect.
4. **Input B** – Combination XLR – 1/4" Phone Jack connector. Balanced XLR and 1/4" input. Accepts line-level and high Impedance inputs. Select line level or high impedance through the Menu.



— Figure 9 —

5. **Input C** Stereo 1/8" (3.5 mm) TRS connector – Accepts line-level stereo input. Stereo input received at Input C is summed to mono.
6. **Input A + C GAIN** knob – Sets the sensitivity of Input A and Input C which controls the signal level sent to the amplifier and the MIX OUT (POST GAIN) output.
7. **LIMITER** LED – Illuminates (red) when the built-in limiter is activated to protect and avoid damage to the amplifier or loudspeaker. If the signal level at any frequency is too high, or the amplifier is too hot, the limiter is activated and the LED is illuminated.
8. **POWER** LED – Illuminates (blue) when power is applied to the unit and the ON/OFF switch is in the ON position.
9. **MIC BOOST** LED – When illuminated (yellow) it indicates the input is configured to accept a microphone input. When not illuminated, it indicates the input is configured for a line-level input. The MIC setting should only be used if a microphone is connected directly to the MIC/LINE input.



NOTE: The input does not provide phantom power.

10. **MIC BOOST** button – When engaged, this selects MIC level (+25 dB) for Input B.



CAUTION! The MIC setting should only be used if a microphone is connected directly to the MIC/LINE input. Using the MIC setting for line-level may introduce distortion. Use caution when changing to the MIC selection as the output level increases significantly when MIC is selected.

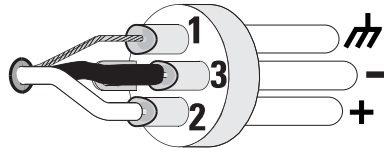


NOTE: Unless the gain controls of all active inputs are set to 0 dB, the output signal from the MIX OUT (POST GAIN) will not be at the same level as the input signal. If a "slave" loudspeaker is intended to playback at the same level as the "master" loudspeaker, the gain control on the "slave" loudspeaker should be set to 0 dB.

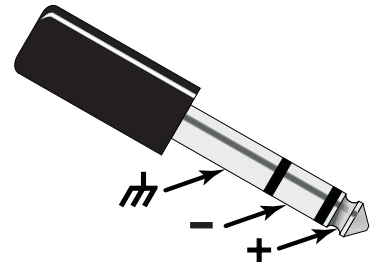
Balanced Inputs

Connect the XLR plug as shown in Figure 10.

1.  Shield (ground)
2.  Positive
3.  Negative



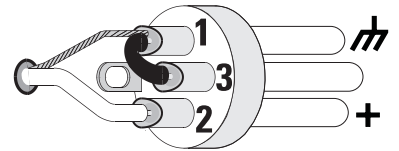
— Figure 10 —



— Figure 11 —

Connect the TRS plug as shown in Figure 11. Do not use a TS 1/4" jack for balanced input.


1.  Shield (ground)
2.  Negative
3.  Positive



— Figure 12 —

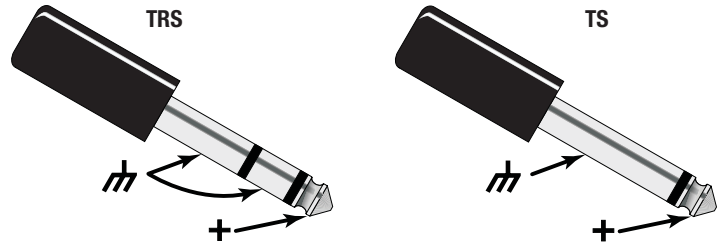
Unbalanced Inputs

Connect the XLR plug as shown in Figure 12. (Jumper pins 1 and 3.)

1.  Shield (ground)
2.  Positive
3.  Negative

Connect the TRS or TS plug as shown in Figure 13.

1.  Shield (ground)
2.  Negative
3.  Positive



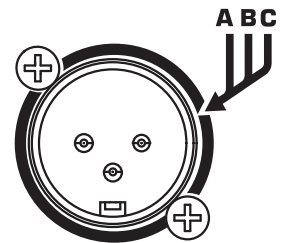
— Figure 13 —

Outputs

1. **MIX OUT (Post Gain)** output XLR is a mix of Channels A, B, and C. Produces a line-level output signal that is Post Gain. Any adjustments made to the gain of any of the three channels affects this output signal. This output does not contain any DSP processing.



CAUTION! Do not connect the MIX OUT (Post Gain) of a CP Series loudspeaker to any INPUT of the **same unit**. This output is designed to send the mixed signal to OTHER CP Series units or to other audio equipment.



**MIX OUT
(POST GAIN)**

— Figure 14 —

CP Series Contour Selections

The CP Series loudspeakers offer six different voicing contours to use with specific applications. Below is a list of these contours and a description of each. The contour settings affect both inputs.

- **Default** – The standard, factory voicing of the loudspeaker for use with live music, program music, or instruments.
- **Default Ext Sub** – The standard, factory voicing of the loudspeaker with an 80 Hz high-pass filter for use with live music, program music, or instruments, and an external subwoofer, for example, the KS112.
- **Dance** – A voicing with low frequency enhancement and mid/high clarity more suitable for program material playback like pop or electronic music. (When Mic Boost is selected, input B contour changes to “Speech” while input A remains as “Dance.”)

- **Dance Ext Sub** - A voicing with low frequency enhancement and mid/high clarity more suitable for program material playback like pop or electronic music, with an 80 Hz high-pass filter for use with an external subwoofer, for example, the KS112. (When Mic Boost is selected, input B contour changes to “Speech” while input A remains as “Dance.”)
- **Floor Monitor** – A voicing for a full, balanced sound when used as a wedge monitor, giving added stability when live microphones are nearby.
- **Speech** – A voicing (Input B only) that gives clarity and stability when used with either a hand-held dynamic microphone or headset microphone. Input A/C remains on the Default voicing so that music or audio can pass through the speaker simultaneously without the Speech voicing being applied to it.

MIC BOOST



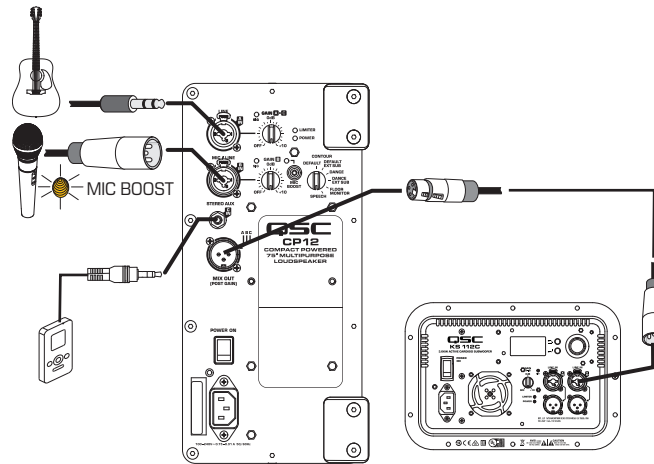
CAUTION!: The MIC BOOST setting should only be used if a microphone is connected directly to the MIC/LINE input. Using the MIC setting for line-level may introduce distortion. Use caution when changing to the MIC selection as the output level increases significantly when MIC is selected.

MIC BOOST adds +25 dB to Input B when the MIC BOOST button is engaged. Some of the voicings for Input B change when MIC BOOST is on. The table below shows the differences on Input B when MIC BOOST is on or off.

Input A, Input B Comparison With MIC BOOST On and Off			
Contour	Input A	Input B	Input B (mic boost on)
Default	Default	Default	Default (+25 dB)
Default w/sub	Default w/sub	Default w/sub	Default w/sub (+25 dB)
Dance	Dance	Dance	Speech (+25 dB)
Dance w/sub	Dance w/sub	Dance w/sub	Speech (+25 dB)
Floor Monitor	Floor Monitor	Floor Monitor	Floor Monitor (+25 dB)
Speech	Default	Speech	Speech (+25 dB)

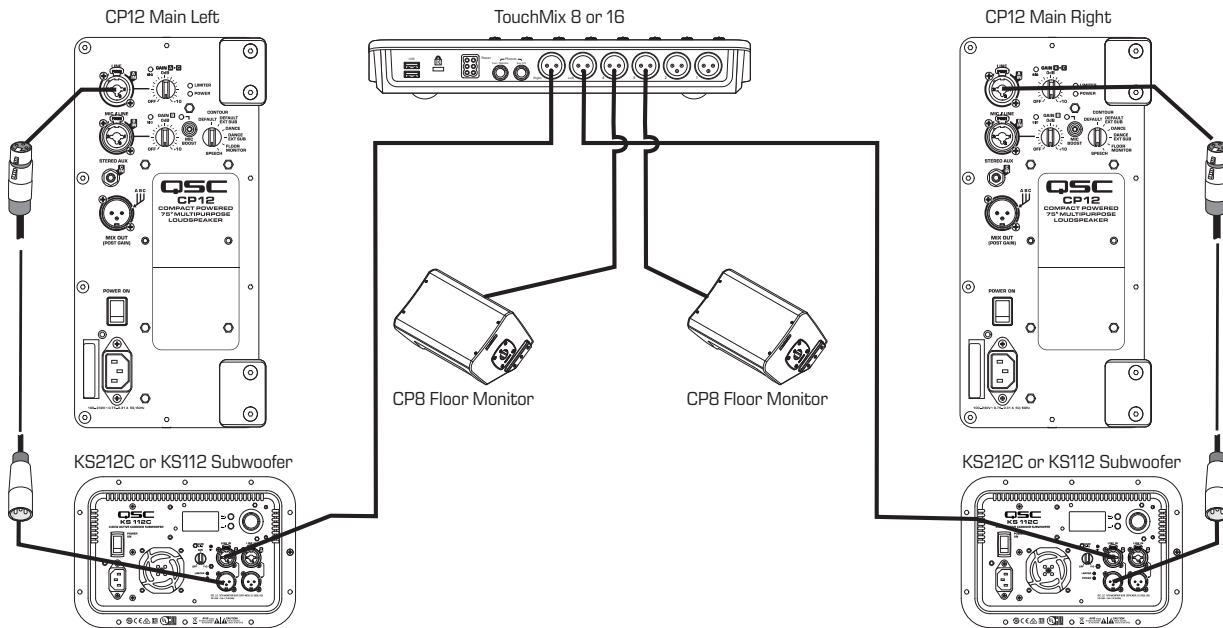
Hookup Diagrams

All-In-One PA System with Subwoofer



— Figure 15 —

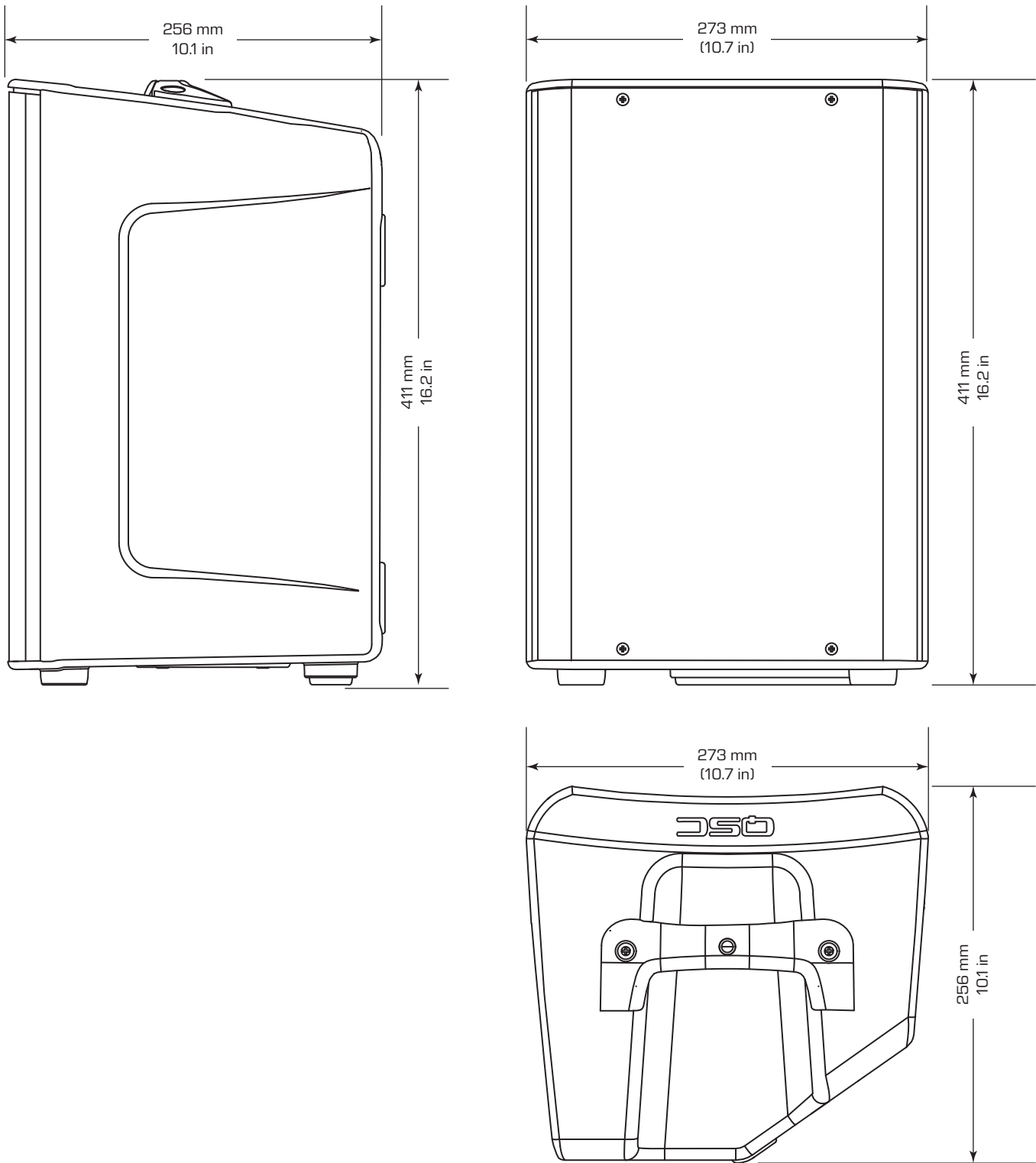
Typical Stereo System



— Figure 16 —

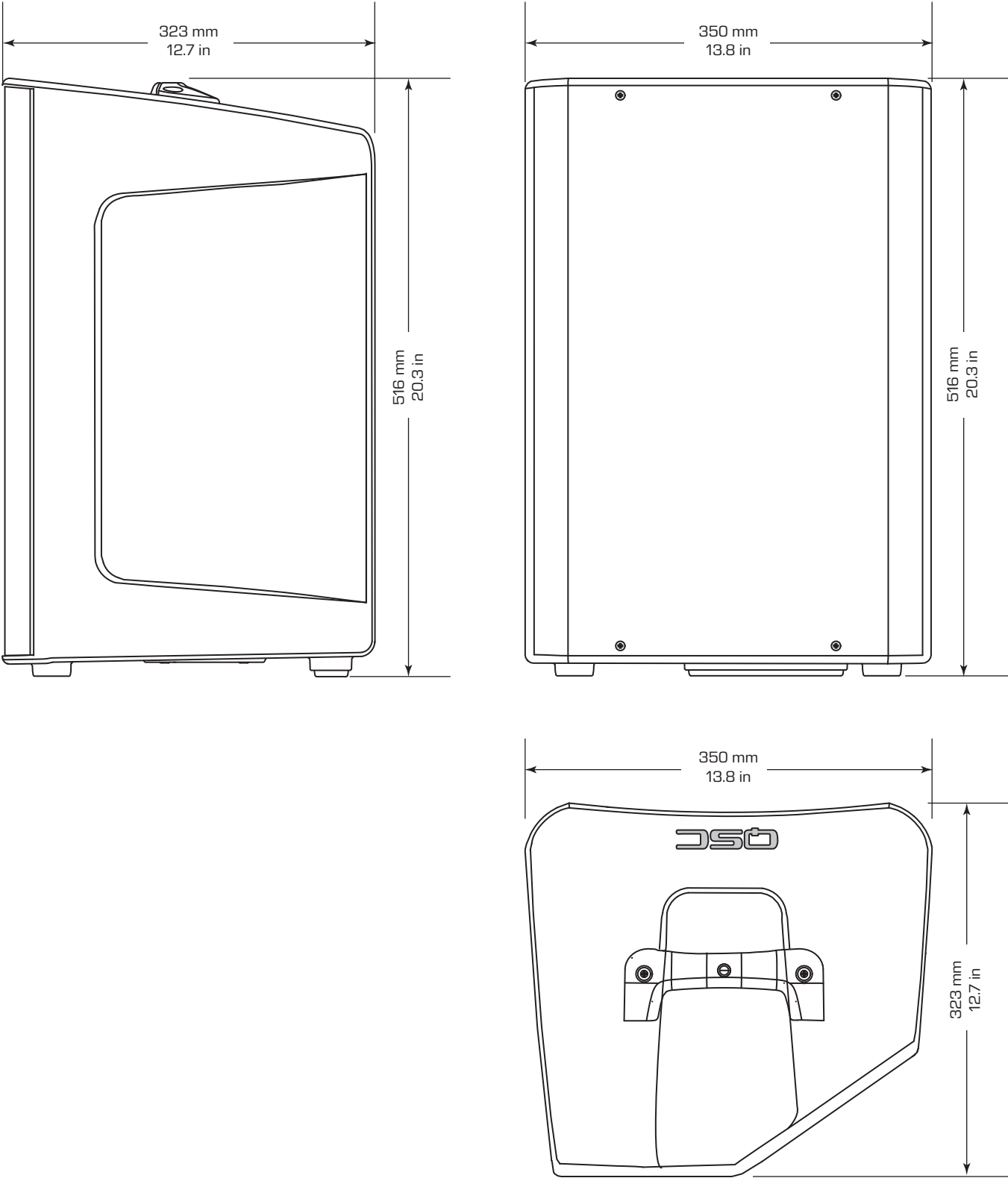
Dimensions

CP8 Loudspeaker



— Figure 17 —

CP12 Loudspeaker



— Figure 18 —

Specifications

	CP8	CP12
Configuration:	Two-way active loudspeaker	Two-way active loudspeaker
LF Transducer:	8 in (203 mm), cone	12 in (305 mm), cone
HF Transducer:	1.4 in (35.6 mm) compression driver	1.4 in (35.6 mm) compression driver
Frequency Response (-6 dB):	56 - 20 kHz	49 - 20 kHz
Frequency Range (-10 dB):	53 - 20 kHz	47 - 20 kHz
Nominal Coverage Angle:	90° Axisymmetric	75° Axisymmetric
Maximum Rated SPL ¹ :	124 dB	126 dB
Amplifier:	Class D Peak: 800 W (LF), 200 W (HF)	Class D Peak: 800 W (LF), 200 W (HF)
Controls:	Power 2 x Gain MIC Boost Push Switch 6-way Contour Selection Switch	Power 2 x Gain MIC Boost Push Switch 6-way Contour Selection Switch
Indicators:	Power LED 2 x Input Signal LED Input B MIC selected LED Limiter active LED	Power LED 2 x Input Signal LED Input B MIC selected LED Limiter active LED
Connectors:	2 x locking XLR/F ¼" combo (Line Input and MIC/Line input) 1 x 3.5 mm TRS (Stereo Input) 1 x XLR/M (Mix Output) 1 x IEC power connector	2 x locking XLR/F ¼" combo (Line Input and MIC/Line input) 1 x 3.5 mm TRS (Stereo Input) 1 x XLR/M (Mix Output) 1 x IEC power connector
AC Power Input:	Universal power supply 100 – 240 VAC, 50 – 60 Hz	Universal power supply 100 – 240 VAC, 50 – 60 Hz
AC Power Consumption 1/8th Power:	100 VAC, 0.75 A / 120 VAC, 1.0 A / 240 VAC 0.31 A	100 VAC, 0.75 A / 120 VAC, 1.0 A / 240 VAC 0.31 A
Enclosure Material:	Polypropylene	Polypropylene
Attachment Points:	M8 threaded insert	M8 threaded insert
Color:	Black (RAL 9011)	Black (RAL 9011)
Grille:	18 Gauge powder-coated steel	18 Gauge powder-coated steel
Dimensions (HxWxD):	16.2 x 10.7 x 10.1 in 411 x 273 x 256 mm	20.3 x 13.8 x 12.7 in 516 x 350 x 323 mm
Net Weight:	21.0 lb (9.5 kg)	30.3 lb (13.7 kg)
Shipping Weight:	25.5 lb (11.4 kg)	36.3 (16.5 kg)
Regulatory:	EMC, UL, CB, EAC	EMC, UL, CB, EAC
Optional Accessories:	CP8 Tote, CP8 Outdoor Cover CP8 Yoke	CP12 Tote, CP12 Outdoor Cover CP12 Yoke

¹ Peak SPL is measured on-axis at 1 m, with dynamic pink noise



NOTE: Specifications subject to change without notice.



Mailing Address:

QSC, LLC
1675 MacArthur Boulevard
Costa Mesa, CA 92626-1468 USA

Telephone Numbers:

Main Number: 714-754-6175
Sales & Marketing: 714-957-7100 or toll free (USA only)
800-854-4079
Customer Service: 714-957-7150 or toll free (USA only)
800-772-2834

Facsimile Numbers:

Sales & Marketing FAX: 714-754-6174
Customer Service FAX: 714-754-6173

World Wide Web:

qsc.com

E-mail:

info@qsc.com
service@qsc.com