CINEMA solutions

2019 PRODUCT CATALOG





For over **50 years**, QSC has earned a reputation for unmatched quality, performance, and reliability. As a recognized global leader in providing innovative cinema solutions - including processing, amplification, loudspeakers, and media servers integrated into a seamless whole - QSC is the complete solution provider for all your cinema presentation needs.

6

7

5

Table of Contents

QSC Cinema Solutions

Processors	
DCP Series	6
DPM Series	8
DCM Series	10
LISE Sories	12
USE Othes	12
Q-SYS™ Ecosystem for Cinema	16
Amplifiers	
DPA Series Processing Amplifiers	22
DPA-Q Networked Amplifiers	24
DCA Series	26
ISA Series	27
Amplifier Accessories	28
Loudspeakers	
DCS Series	34
Surround Speakers	44
Subwoofers	48
Reference Monitor System	50
AcousticDesign [™] Series	52
AcousticCoverage [™] Series	54
Premium Business Music Solutions	56
Accessibility Solutions	60
Test & Measurement	61
Media Servers	62
	~~
USC Cinema Innovations	66

cinema processing

solutions



DCP Series Processors

The DCP Series Digital Cinema Processors bring together all the essential functions of cinema audio: crossovers, booth monitor, routing, EQ, and status monitoring. DCP processors tame the complexity of projection booth audio systems, replacing an assortment of separately sourced parts with a single box that handles everything.

	DCP 100	DCP 300
Digital In Channels	10	16
Analog In Channels	8	10
Screen Channel Support	3	3 or 5
Screen Channel Operation	Bi-amp or passive	Quad-, Tri-, bi-amp, passive

Audio control

- DSP presets instantly optimize for DCS speaker systems
- Master volume and 1/3-octave graphic EQ for all full-range channels
- Parametric EQ, polarity, delay, and gain for each channel
- Crossover for 3 screen channels (DCP 100)
- Crossover for 5 screen channels (DCP 300)

Networking

- SNMP for remote on- or off-site control and monitoring
- Remote access via DCPNet software and DCP Connect mobile app

Connectivity

- Digital and analog inputs
- DB-25 connection with D-Cinema server or film processor
- DataPort amp connections (no barrier strips or XLRs)
- RS-232 for serial automation control





Compatibility

- Makes existing QSC DCA amps network-ready
- Easy integration with existing film processors for dual film/digital installations
- Compatible with all 5.1 and 7.1 audio formats

Reliability

- Load-sharing dual power supplies for failure protection
- Multiple bypass modes with failure re-routing
- Full restore of settings from SD memory card

Ease of operation

- Unified environment for all booth system functions
- Front panel Touch screen control
- DCPNet enables network access to any DCP Series cinema processor
- DCPConnect is a mobile app that turns an iOS or Android mobile device into a complete cinema sound remote controller
- Easy firmware updates via DCP Manager



DPM Series

DPM Series processors are based on a whole new processing platform that builds on the legacy of QSC's DCM and DCP products to provide all signal processing and monitoring functions for Digital Cinema in a single integrated system. Designed to be used with QSC's Digital Cinema Amplifiers (DCA) and featuring advanced Intrinsic Correction[™] settings for QSC's Digital Cinema Speakers (DCS), the DPM Series features models capable of passive, bi-, tri-,or quad-amp operation, and 2 or 4 surround channels (5.1 or 7.1).

	DPM 100	DPM 100H	DPM 300	DPM 300H
Digital In Channels	10	10	10	10
Analog In Channels	8	8	8	8
DataPorts	9	9	11	11
Screen Channel Support	3	3	3	3
Screen Channel Operation	Passive, bi-amp	Passive, bi-amp	Passive, bi-, tri-, or quad-amp	Passive, bi-, tri-, or quad-amp
HDMI In/Out	no	yes	no	yes

Total System Flexibility

- Ten digital inputs for 5.1 and 7.1 soundtracks and HI/VI
- HDMI input/output for non-sync sources (DPM 100H, DPM-300H)
- Dolby Digital Plus[™] and DTS-HD[®]
- · Network control and monitoring via Ethernet including full SNMP support
- Serial automation control via RS-232
- · Analog Inputs for film processors, non-sync and Mic/Line
- Booth Monitor loudspeaker and headphone jack
- Digital Loudspeaker Crossovers
- Compatible with all existing DCA amplifiers thousands of DCA-equipped screens are ready for full network monitoring and control
- Bypass mode routes audio around failed components to ensure that the show will go on
- Intrinsic Correction™ for DCS loudspeakers for optimal "out of box" performance and reduced set-up time





DPM100 Series Processor

DPM100H Series Processor

DPM300 Series Processor

DPM300H Series Processor





DCM Series Monitors

	DCM 100	DCM 300
Analog In Channels	8	8
Screen Channel Support	3	3
Screen Channel Operation	Passive or bi-amp	Passive, bi-, tri- or quad-amp
Intrinsic Correction DSP	yes	yes
Sub Output Channels (max)	4	4 to 8



QSC Digital Cinema Monitors integrate DSP crossovers, booth monitoring, and load fault detection into a single unit that provides exceptional performance and control while interfacing seamlessly with new or existing standalone cinema processors. By combining booth monitor and crossovers, the DCM Series monitors simplify system wiring and configuration, boosting your bottom line with faster setup and increased operational efficiency.

The DCM Series Monitors take full advantage of digital technology for both processing and control. Digital Signal Processing delivers the best possible sound quality and high dynamic range to outperform traditional analog crossovers. Our software lets you easily build and deploy configurations that combine all elements of system setup into configuration files that can be saved and transferred to other DCMs. Designed for use with QSC DCA Series amplifiers, DCM is the perfect choice for legacy film-only installations or for working with an existing cinema processor.



Audio Capabilities

- Quad-, tri-, bi-amp, or passive operation (varies by model)
- Intrinsic Connection[™] to instantly optimize DCS speaker systems
- Precise adjustment of crossover frequencies, parametric EQ, polarity, and gain for each speaker in your system
- · Monitor input, output, and amplifier output via front panel speaker

Configuration Software

- Easy intuitive system setup
- Configure parameter settings, routing, crossover filters, gains, delays, diagnostics, and monitoring
- Save configurations for backup and reuse
- Real-time software control from PC via USB or Ethernet

Connections

- 8 channel analog input over DB-25 connector
- DataPort amp connections (no barrier strips or XLRs required)

Compatibility and Reliability

- Support for all current cinema sound processor formats
- Load and amplifier fault monitoring reports opens and shorts for each channel
- Emergency bypass enables routing of LCR mix to all screen channels



USL Series

USL Series Processors and Booth Monitors provide cost-efficient solutions for legacy installations with the added flexibility of optional cards for expanded functionality.

USL JSD-60



USL JSD-60 Digital Cinema Processor

The USL JSD-60 Digital Cinema Processor includes six standard formats, plus one that is completely configurable. A built-in bypass audio circuit ensures that the presentation continues.



USL JSD-100

USL JSD-100 Digital Cinema Processor

The USL JSD-100 Digital Cinema Processor is an eight channel digital audio processor with the capability of expanding up to 32 channels. Hearing impaired (HI) and visual impaired narration (VI-N) channels included.

	JSD-60D	JSD-60DX	JSD-60DN	JSD-100M
Digital In Channels	8	8	8	16
Analog In Channels	6	6	6	8
Crossovers	none	3 ch. bi-amp	3 ch. bi-amp	none
Dolby	yes	yes	yes	yes
DTS	yes	yes	yes	no
Other	-	-	BLU link	-



USL CM-8E



USL CM-8E Booth Monitor

The USL CM 8E Eight Channel Booth Monitor provides remote-level and remote-audio monitoring for digital cinemas. It features eight balanced channels with bypass with monitoring of processor or amplifier outputs in a compact 2-rack unit. A highly-visible bar graph display can be calibrated to the cinema reference level so projectionists can see the accurate auditorium levels.



CP-SYS ecosystem for cinema



Q-SYS[™] for Cinema

The Q-SYS Ecosystem

... is a software-based audio, video and control (AV&C) processing and networking architecture, built to run on standard off-theshelf IT hardware and network infrastructure. The flexible software foundation of the Q-SYS Ecosystem scales up and scales out simply and cost effectively, reducing the need for additional dedicated hardware when additional features, capabilities or performance is required.

What can Q-SYS do for you?

Audio Signal Processing

Q-SYS provides all of the signal processing for all loudspeakers and amplifiers. For QSC loudspeakers, it includes Intrinsic Correction[™], which are laboratory derived processor settings specifically created for each type and model of QSC loudspeaker. There is also a comprehensive library of standard DSP-based audio signal processing components, like equalizers, crossovers, compressors, digital delays, and more.

Signal Routing

Signal routing between devices is a simple matter of graphical interconnections on the layout created in Q-SYS Designer. Since many of the most common audio devices are software based, this minimizes the number of external boxes and interconnections, greatly simplifying physical wiring. Also, signal flow is not limited to existing audio formats. Signal routing can be easily changed as system needs change or when new formats are introduced.

Flexible System Design

Q-SYS

Q-SYS Designer Software is the tool that enables you to create designs for the Q-SYS ecosystem. The system design environment was created specifically to be intuitive and easy to use. It is laid out without clutter or complicated multi-level menus.

Control

Q-SYS allows a vast array of control options, either on the network or by GPIO and RS-232. Nearly any device that can be controlled, can be controlled on the Q-SYS network. Control interfaces range from your PC to QSC touchscreen control panels, or even tablet devices and smart phones.

Monitoring

One of the greatest advantages of Q-SYS in cinemas is its ability to monitor the status of devices on the network. Your entire system can be monitored at any point in the signal chain for operational status. Email or text alerts can be programmed to be sent automatically in the event of faults or failures of any device.

Calibration

Q-SYS includes all of the standard audio calibration tools that cinema technicians need to properly set-up and "tune" a cinema sound system.



Cores



Optional I/O cards for Core 510c



DPA-Q Network Amplifiers

DPA-Q is a series of network amplifiers specifically designed for the Q-SYS Ecosystem. There are six 4-channel models and four 8-channel models, all featuring QSC's 5th generation high-efficiency, Class-D hybrid powertrain design. **(see pages 26-27)**





Q-SYS[™]

Network I/O Peripherals

Local or remote devices that serve as I/O on-ramps to the Q-SYS network



DCIO is a cinema-specific interface that serves as the audio I/O for each screen in a Q-SYS enabled cinema complex, by duplicating the connections you would expect on a typical cinema processor

The DCIO – along with Q-SYS[™] Cores, DPA-Q amplifiers and DCS loudspeakers – provides a cost-effective way to realize the full benefits of a Q-SYS enabled cinema for every room in a multiplex, by delivering a full-system approach to cinema audio design. Using Q-SYS Designer and custom UCIs, touchpanels, and mobile apps, the user can configure, control, and monitor everything on the Q-LAN network through a seamless system view.



I/O Frame

The I/O Frame provides additional points of connection for large immersive sound applications when not using our DPA-Q network amplifiers.



I/O-22

The I/O-22 provides two mic/line inputs and two line outputs. Designed for use when audio sources and destinations are physically spread out, the I/O-22 is also useful for remote booth monitoring.

CMS-5000 Cinema Media Server



The CMS-5000 is a next-generation DCI-compliant cinema media server with a wide range of optional features and powerful capabilities. (see page 61)

CMS-5000 Cinema Media Server

Q-SYS™

Touchscreen Controllers

QSC offers a family of wall mount or table-top touchscreen controllers with fully customizable user control interfaces (UCIs).





NS Series Network Switches

Pre-configured for Q-SYS, these 8, 24, and 48 port managed switches eliminate the need for time consuming network configuration and troubleshooting on site, reducing labor costs, minimizing system commissioning time, and reducing the need for network support specialists.

Network Video Endpoint

The NV-32-H is a network video endpoint native to the Q-SYS Ecosystem, serving as a multi-stream, software-configurable HDMI encoder/decoder that enables network-based video distribution.



NV-32-H

If it can be controlled, it can be controlled by Q-SYS

The power of the Q-SYS Ecosystem goes far beyond its ability to serve as your cinema processor. With custom APIs and plug-ins, the unparalleled flexibility of Q-SYS allows it to include many other important functions and subsystems within the modern cinema complex.





cinema amplifiers



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DPA Series

The QSC DPA Series represents a revolutionary advancement in amplifier technology and innovation. Each model provides efficient, robust and extraordinarily high fidelity power to drive multiple channels and configurations of loudspeakers while simultaneously deploying sophisticated digital processing – all with optimal energy and rack space efficiency. The DPA Series consists of three powerful, four-channel amplifiers, each with onboard DSP, and the capability to configure and combine channels in various ways to drive a wide range of loudspeaker systems. These amplifiers not only provide the power and processing to make your cinema sound system perform better, they offer outstanding efficiency ensuring that energy costs will be kept to a minimum over the life of the installation.

- Flexible Amplifier Summing Technology[™] (FAST) drives most any loudspeaker system or configuration by distributing total amplifier power across one, two, three or all four channels.
- Full function onboard loudspeaker processing DSP with Crossover and Parametric EQ Filters, Limiting and Alignment Delay eliminates the need for outboard loudspeaker processors.
- Universal switchmode power supply with Power Factor Correction for highest efficiency, improved audio performance, and low heat dissipation.
- Preset Wizard simplifies amplifier setup, providing system design tools and loudspeaker selection from a list of speakers.
- Powerful digital processing maximizes the sonic performance of QSC loudspeakers, minimizing or eliminating the need for in-room equalization.
- 20 Factory Preset configurations that can be modified and stored in the 50 User Presets.
- Integrated front panel with channel Select and Mute buttons, Input and Output LED Metering, 400x240 LCD, intuitive navigation buttons, LED power button and indicator, and cast aluminum handles.
- GPIO for additional functionality including a heartbeat output for Life-Safety supervision.
- Four input Euroblock connectors, and four Euroblock touch-proof speaker output connectors.
- Each model occupies only two rack spaces (3.5in/89mm).





DPA Series Processing Amplifiers

		DPA4.2	DPA4.3	DPA4.5
		Max. Power	Max. Power	Max. Power
4 Independent Channels A, B, C, D"	8Ω	500 W	900 W	1200 W
	4Ω	700 W	1400 W	2000 W
	2Ω	625 W	1200 W	1600 W
2 Channel BTL Bridged A+B or C+D Doubles Voltage	8Ω	1200 W	2400 W	4000 W
	4Ω	1500 W	NR*	NR*
	2Ω	NR*	NR*	NR*
2 Channel Parallel AB or CD Doubles Current"	8Ω	500 W	1300 W	1250 W
	4Ω	950 W	2000 W	2400 W
	2Ω	1200 W	2500 W	4000 W
1 Channel 3CH Parallel ABC Triples Current	8Ω	500 W	1400 W	1400 W
	4Ω	950 W	2400 W	2500 W
	2Ω	1800 W	3500 W	4500 W
1 Channel Bridged/Parallel AB+CD Doubles Current and Voltage	8Ω	1600 W	3500 W	4500 W
	4Ω	2500 W	5000 W	7500 W
	2Ω	NR*	NR*	NR*
1 Channel 4CH Parallel ABCD Quadruples Current	8Ω	500 W	1400 W	1600 W
	4Ω	1000 W	3000 W	3000 W
	2Ω	1700 W	5000 W	5300 W
Weight		18.5 lb (8.4 kg)	21 lb (9.5 kg)	22 lb (10 kg)

Max. Power: 20 ms 1 kHz sine burst, all channels driven $NR^{\star}=Not$ Recommended due to excessive current draw

BOLD = Optimal configuration for the load and channel count

DPA-Q Network Amplifiers

The new DPA-Q Series network amplifiers are the culmination of QSC's legacy of robust power amplifiers, advancements in high-efficiency output devices to provide dozens of channel configuration options, and the state-of-the-art network transport, control and monitoring of the Q-SYS Ecosystem for cinema applications.

The DPA-Q line includes six 4-channel models and four 8-channel models, each capable of delivering robust, high-fidelity power to drive a wide range of loudspeaker configurations. By simply connecting the amplifiers via standard layer 3 Ethernet, the Q-SYS Core can route digital audio to/from the amps, as well as provide total control and monitoring of all amplifier functions.

DPA-Q Network Amplifiers **(new)**





DPA-Q Series



DPA-Qn Series

- Seamless Q-SYS integration with audio transport and control via standard gigabit Ethernet protocols and hardware
- Capable of providing up to 8,000 W of power
- Hybrid circuit topology mixing the robustness of the legendary PL380 with new high efficiency output devices
- Flexible Amplifier Summing Technology™ (FAST) permits
- channels to be combined for higher output power
- FlexAmp[™] allows for asymmetric power distribution across all amplifier channels

- PowerLight universal switchmode power supply with PFC for highest efficiency, improved audio performance, and low weight
- "Q" models offer mic/line inputs into the Q-SYS Ecosystem;
 "Qn" models are "network input only" to reduce system cost
- Touch-proof Euroblock loudspeaker connections
- Eight bi-directional GPIO connections and one relay
- Automatic energy saving modes ensure that the amplifier will draw the minimum amount of AC power while still providing outstanding audio quality

4 Channel Models

		DPA 2K4Q /	DPA 2K4Q / DPA 2K4Qn		DPA 4K4Q / DPA 4K4Qn		DPA 8K4Q / DPA 8K4Qn	
		FlexAmp	Max. Power	FlexAmp	Max. Power	FlexAmp	Max. Power	
4 Independent Channels	8Ω	800 W	600 W	1000 W	900 W	1250 W	1250 W	
	4Ω	800 W	600 W	1500 W	1200 W	2400 W	2000 W	
	2Ω	700 W	600 W	1000 W	900 W	2750 W	2000 W	
Weight		18.5 lb	(8.4 kg)	21 lb	(9.5 kg)	22 lb	(10 kg)	

Max. Power: 20 ms 1 kHz sine burst, all channels driven FlexAmp: 20 ms 1 kHz sine burst, single channel driven.

8 Channel Models

		DPA 4K8Q / DPA 4K8Qn		DPA 8K8Q / DPA 8K8Qn	
		FlexAmp	Max. Power	FlexAmp	Max. Power
8 Independent Channels	8Ω	1000 W	500 W	1250 W	850 W
	4Ω	1000 W	500 W	1500 W	1000 W
	2Ω	1000 W	500 W	1200 W	600 W
Weight		25 lb (11.3 kg)		26 lb (*	11.8 kg)

Max. Power: 20 ms 1 kHz sine burst, all channels driven FlexAmp: 20 ms 1 kHz sine burst, single channel driven.

DCA Series



Watts per channel, 1 kHz, 1% THD

Impedance	Number of Channels	8Ω	4Ω	2Ω
DCA 1222	2	215	375	600
DCA 1622	2	350	600	800
DCA 2422	2	475	825	1200
DCA 3022	2	625	1050	1500
DCA 3422	2	800	1250	1700
DCA 1644	4	2501	400 ³	-
DCA 1824	4	170 ¹	250 ²	450

¹ 20 Hz to 20 kHz, 0.05% THD

 $^{\rm 2}$ 20 Hz to 20 kHz, 0.1% THD

³ 1 kHz, 0.1% THD

Built on a rugged tour-grade chassis, DCA 2-channel and 4-channel amps deliver heavyweight power in a light 2RU package. All models are equipped with our innovative DataPort interface, which makes hook-up fast, enables control and monitoring via QSC processors, and supports a range of useful accessories. All are safeguarded by protective circuitry that keeps them going strong over the long haul.

Using a standard VGA-style connector that simplifies wiring and speeds installation, the DCA DataPort interface provides single-cable integration with DCP, DPM, DCM and Q-SYS processors. Creating a smart, centrally controlled system that goes beyond simple audio connections, DataPort enables DSP crossovers, speaker-specific EQ, and monitoring and control of amplifier and loudspeaker functions. DataPort also accepts and powers analog accessory devices (XC-3 and SF-3) that expand the capabilities of both DCA and ISA 2-channel amplifiers.

A single QSC DataPort connection includes two channels of audio, output voltage monitoring (VMON), current monitoring (IMON), clip/protect monitoring, and thermal monitoring. DataPort also enables AC standby control and provides a 15 volt DC power supply for rear-panel accessories.

- QSC PowerLight[™] boosts reliability by cutting waste heat. Ultra-fast charging of supply rails results in tighter bass and clean, transparent highs.
- Extensive protection circuitry guards against failures such as DC, infrasonic, thermal overload, and short circuits.
- Active Inrush Limiting lets you turn amps on and off safely without expensive AC power sequencers.

ISA Series

Built to the same quality and reliability standards as the DCA Series, QSC's ISA Series amplifiers are ideal for cinema installations where the budget is tighter but audio performance can't be compromised. Available in a range of two-channel 3RU models that handle 2Ω loads with ease, ISA Series amps offer solid QSC performance and features at a very attractive price point.

- Selectable high-pass filters protect against driver over-excursion.
- Independent, defeatable clip limiters reduce distortion and protect speakers.
- Extensive internal protection guards against damage from DC, infrasonic, thermal overload, and short circuits.
- Audio monitoring via DataPort V2 lets you hear each channel's in and out. (DataPort V2 does not support AC standby or the amplifier and loudspeaker status and control features of DCP, or DCM products.)
- Analog accessory devices (XC-3 and SF-3) via DataPort to expand amplifier capabilities.
- Rear-panel gain controls with 2 dB detents enable repeatable settings.
- Connectors: XLR and 3-pin Euroblock for input; barrier strip for output.





ISA Series Amplifiers

Watts per channel

Impedance	8Ω (50 Hz to 16 kHz, 0.5% THD)	4Ω (20 Hz to 20 kHz, 0.1% THD)	2Ω (1 kHz, 1% THD)
ISA 280	185	280	430
ISA 450	260	425	700
ISA 750	450	650	1200
<u>I</u> SA 1350	800	1300	2000
ISA 300Ti	185	280	430
ISA 500Ti	260	425	700
ISA 800Ti	450	650	1200

Amplifier Accessories

QSC amplifier accessories easily mount to the rear panel of two-channel DCA and ISA amps to expand amplifier capabilities for specific applications while conserving cost and rack space.

XC-3 2-way Crossover



XC-3 2-way Crossover — An active, 2-way crossover module that mounts via DataPort, the XC-3 features 4th-order filters with low frequencies routed to amp channel 1 and highs to channel 2.

SF-3 Subwoofer Filter



SF-3 Subwoofer Filter — The SF-3 is a subwoofer signal processor that mounts via DataPort and extends the response of QSC subwoofer enclosures, including the SB-5118, SB-5218, SB-7118, SB-7218 and SB-15121.

amplifiers

29







cinema loudspeakers



The World's Most Complete Cinema Loudspeaker Line

SC-223



QSC offers the industry's most varied and comprehensive line of cinema loudspeakers. While each of our loudspeakers is designed to handle a specific customer need, all are conceived and constructed to the same high standards. Not every room can justify a top-end system, but every audience deserves loudspeakers that fully and accurately reproduce the soundtrack crafted by the filmmakers. And that's the only kind of loudspeakers we make.

The Digital Cinema Series (DCS) includes 2-, 3-, and 4-way screen channel loudspeakers as well as surrounds and subwoofers. It's a diverse collection, but every model embodies QSC attention to detail in design and construction. The result is the smartest loudspeaker line in cinema, starting with a host of innovations built into our screen channel lines:

- Easy pan-tilt assembly The pan-tilt mechanism for mid-high components makes quick work of assembling and aligning screen channel systems. The assembly is labeled for repeatability and features a notched tilt adjustment to maintain vertical alignment.
- CineSight[™] speaker aiming An exclusive integrated sight that works even after the screen has been installed, CineSight allows fast, accurate aiming without having to remove the driver.
- Maximum-intelligibility midrange The broad-range mid-frequency driver in 3- and 4-way DCS systems keeps key speech frequencies together for superb dialog intelligibility.
- Convergent mid-high coverage A built-in tilt to the high-frequency horns on 3- and 4-way systems provides more even convergence with the midrange pattern, ensuring optimum seating-area coverage.
- Speaker-optimized EQ presets Model-specific DSP presets in our DCP, DPM, DCM, and Q-SYS[™] processors optimize our loudspeakers for great performance right out of the box.
- Driver protection and equalization The driver protection and equalization network in our screen channel systems improves reliability by protecting HF drivers against damaging DC or low frequency signals.

QSC design innovations aren't limited to our screen channel loudspeakers. We also offer industry-leading subwoofers and surround loudspeakers:

- Extended low-frequency response Most DCS subwoofers use B6 alignment for improved performance in the critical 20 to 40 Hz region. With boxes tuned to a lower frequency and filtering applied by QSC processors, our subs deliver the high-impact lows that today's audiences love.
- Big speaker, huge sound When 18-inch woofers aren't quite enough, QSC has the ultra bottom-end covered with the awe-inspiring 21-inch SB-15121.
- Versatile surround line From the smallest to the largest rooms, QSC has you covered. Choosing the right surround speaker is easy with QSC.
- Hands-free mounting A trapezoidal bracket design holds surround speakers in place during lock-screw insertion, allowing surround mounting by a single installer. Down-angles of both 15° and 23° are supported.



SR-1030



SB-7218



Screen Channel Loudspeakers

DCS Screen Channel 2-way Systems Available in both passive and bi-amplified models, QSC 2-way DCS screen channel loudspeaker systems prove that limited budgets need not mean limited quality. With solid cabinet construction and smart horn design, our 2-way systems deliver exceptional clarity and coverage coupled with extended low-frequency response. Our six models vary by power handling and number of LF drivers, so you can select the 2-way system that's just right for your small to mid-size room.



2-Way Passive







	SC-1120	SC-1150	SC-322XC
Low Component	LF: 12" (305 mm) woofer, 2.5" voice coil	LF: 15 in. (380 mm) woofer	LF-3215
High Component	HF: Compression driver with 1.75" (44 mm) voice coil	HF: Compression driver with 1.75" (44 mm) voice coil	HF-75Cx2
Frequency Range (-6dB)	48 Hz to 19 kHz	43 Hz to 19 kHz	32 Hz - 16 kHz
Nominal Coverage	90 degrees Axisymmetric	90 degrees Axisymmetric	90° horizontal x +15° to -35° vertical
Impedance	8Ω	8Ω	4Ω
Rated Noise Power ¹	300 W RMS	400 W RMS	300 W RMS
Sensitivity ²	95.5 dB	96 dB	97.5 dB
System Dimensions (HWD) inches	27.2 x 19.5 x 11.7	27.2 x 30 x 11.7	51.71 x 30 x 20.25
System Dimensions (HWD) mm	690 x 497 x 297	690 x 762 x 297	1313.5 x 762 x 514.4

¹ 8 hours of 6 dB crest factor IEC 268 noise spectrum / 2 hours of 6 dB crest factor pink noise, AES method.
² Based on nominal impedance, measured in half space 1 W @ 1 m







2-Way Bi-amp

	SC-412C	SC-322C	SC-422C
Low Component	LF-4115	LF-3215	LF-4215
High Component	HF-75C	HF-75C	HF-75C
Frequency Range (-6dB)	32 Hz - 16 kHz	32 Hz - 16 kHz	32 Hz - 16 kHz
Nominal Coverage	90° horizontal x +20° to -35° vertical	90° horizontal x +20° to -35° vertical	90° horizontal x +20° to -35° vertical
Crossover Frequency (Hz) 24 dB/octave	700	700	700
System Dimensions (HWD) inches	34.59 x 30 x 20.25	51.71 x 30 x 20.25	51.71 x 30 x 20.25
System Dimensions (HWD) mm	876.6 x 762 x 514.4	1313.5 x 762 x 514.4	1313.5 x 762 x 514.4



DCS Screen Channel 3-way Systems

DCS 3-way screen channel systems are designed for impressive power and fidelity in bi- or tri-amp operation. A short vertical profile provides excellent stereo imaging and dialog localization. The SC-423C-F provides the same acoustical performance as the SC-423C screen channel loudspeaker in a safe and easy to suspend "flying" version, ideal for rigging above the screen or as a point source surround speaker. With eight models, our 3-way systems offers high performance for the full spectrum of auditorium sizes.



3-Way Bi- or Tri-amp^{1,2}

	SC-21501	SC-413C	SC-223 ²	SC-323C	SC-423C
Low Component	2150-LF	LF-4115	LF-2215	LF-3215	LF-4215
High Component	2150-HF	MH-1075C	MH-1060	MH-1075C	MH-1075C
Frequency Range (-6dB)	38 Hz - 20 kHz	37 Hz - 16 kHz	35 Hz – 16 kHz	32 Hz - 16 kHz	32 Hz - 16 kHz
Nominal Coverage	90° horizontal x 40° vertical	90° horizontal x +20° to -30° vertical			
Crossover Frequency (Hz) 24 dB/octave	500/2200	250/1700	300	250/1700	250/1700
System Dimensions (HWD) inches	55.6 x 30 x 14.5	57.43 x 30 x 20.25	74.55 x 30 x 20.25	74.55 x 30 x 20.25	74.55 x 30 x 20.25
System Dimensions (HWD) mm	1412 x 762 x 368	1458.7 x 762 x 514.4	1893.6 x 762 x 514.4	1893.6 x 762 x 514.4	1893.6 x 762 x 514.4

¹ SC-2150 is passive or bi-amp only; not designed for tri-amp operation.

² SC-223 is bi-amp only.
37



3-Way Bi- or Tri-amp

Suspension hardware not included. Can be oriented vertically or horizontally.

	SC-423C-F	SC-433C	SC-443C
Low Component	LF-4215-F	LF-4315	LF-4215 x 2
High Component	MH-1075C-F	MH-1075C	MH-1075C
Frequency Range (-6dB)	32 Hz - 16 kHz	32 Hz - 16 kHz	32 Hz - 16 kHz
Nominal Coverage	90° horizontal x +20° to -30° vertical	90° horizontal x +20° to -30° vertical	90° horizontal x +20° to -30° vertical
Crossover Frequency (Hz) 24 dB/octave	250/1700	250/1700	250/1700
System Dimensions (HWD) inches	V: 80 x 31.5 x 19 H: 40 x 63 x 19	92 x 30 x 20.25	110.3 x 30 x 20.25
System Dimensions (HWD) mm	V: 2032 x 800 x 483 H: 1016 x 1600 x 483	2337 x 762 x 514.4	2801.7 x 762 x 514.4



DCS Screen Channel 4-way Systems

When only a peak cinema experience will do, QSC 4-way screen channel systems provide the depth, brilliance, and intelligibility that will bring a great soundtrack to life. Designed for tri- or quad-amp operation, our 4-way systems feature the MHV-1090 HF/VHF driver, a unique 2-way design with concentric low-mass diaphragms that are acoustically centered for maximum wavefront coherence. With the VHF driver handling 6 kHz and above, the HF driver is optimized for the 1.7 to 6 kHz range - critical for dialog intelligibility. The SC-424-8F provides the same acoustical performance as the SC-424-8 screen channel loudspeaker in a safe and easy to suspend "flying" version, ideal for rigging above the screen or as a point source surround speaker.





4-Way Tri-or Quad-amp

	SC-414	SC-324	SC-424
Low Component	LF-4115	LF-3215	LF-4215
High Component	MHV-1090	MHV-1090	MHV-1090
Frequency Range at -6dB (Hz)	33 Hz - 20 kHz	33 Hz - 20 kHz	33 Hz - 20 kHz
Crossover Frequencies (Hz), 24 dB/octave	250, 1700, 6K	250, 1700, 6K	250, 1700, 6K
Nominal Coverage	90° H x +20° to -30° V	90° H x +20° to -30° V	$90^{\circ}\text{H}x$ +20° to -30° V
System Dimensions (HWD) inches	57.43 x 30 x 20.25	74.55 x 30 x 20.25	74.55 x 30 x 20.25
System Dimensions (HWD) mm	1458.7 x 762 x 514.4	1893.6 x 762 x 514.4	1893.6 x 762 x 514.4





4-Way Tri-or Quad-amp

Suspension hardware not included. Can be oriented vertically or horizontally.

	SC-424-8F1	SC-434	SC-444
Low Component	LF-4215-8F	LF-4315	LF-4215 x 2
High Component	MHV-1090F	MHV-1090	MHV-1090
Frequency Range at -6dB (Hz)	33 Hz - 22 kHz	33 Hz - 20 kHz	33 Hz - 20 kHz
Crossover Frequencies (Hz), 24 dB/octave	250, 1700, 6K	250, 1700, 6K	250, 1700, 6K
Nominal Coverage	90° H x +20° to -30° V	90° H x +20° to -30° V	90° H x +20° to -30° V
System Dimensions (HWD) inches	V: 80 x 31.5 x 19 H: 40 x 63 x 19	92 x 30 x 20.25	110.3 x 30 x 20.25
System Dimensions (HWD) mm	V: 2032 x 800 x 483 H: 1016 x 1600 x 483	2337 x 762 x 514.4	2801.7 x 762 x 514.4

¹ Tri-amp only; not designed for quad-amp operation.



DCS Screen Channel LF Components

Designed not only to deliver, but to thrive on today's pushed-to-the-max soundtracks, QSC low-frequency enclosures bring out the full richness of screen channel sound. Unlike repurposed rock and roll PA cabinets, our LF components are built from the ground up with cinema-specific details that speed installation, like offset terminal cups and pre-installed rubber feet. We also enhance performance with smart design, like using tight driver spacing in our multi-driver boxes to improve coupling and widen coverage angles. LF enclosures are the foundation of full, clear screen channel sound, and nobody builds better screen channel enclosures than QSC.

	LF-4115	2150-LF	LF-2215	LF-3215
System Models	2-way: SC-412C 3-way: SC-413C 4-way: SC-414	3-way: SC-2150	3-way: SC-223	2-way: SC-322XC SC-322C 3-way: SC-323C 4-way: SC-324)
Drivers	1	2	2	2
Driver Information	15" (381 mm) high-efficiency, extended bass woofer, 4" copper voice coil	15" (381 mm) high-efficiency, extended bass woofer, 3" copper voice coil	15" (381 mm) high-efficiency, extended bass woofer, 3" copper voice coil	15" (381 mm) high-efficiency, extended bass woofer, 3" copper voice coil
Impedance	4Ω	4Ω	4Ω	4Ω
Rated Noise Power ¹	500 W RMS	500 W RMS ³	600 W RMS	800 W RMS
Sensitivity ²	95.5 dB	100 dB	98 dB	98.5 dB
Dimensions (HWD) inches	18.63 x 30 x 20.25	38.3 x 30 x 14.5	35.75 x 30 x 20.25	35.75 x 30 x 20.25
Dimensions (HWD) mm	473.2 x 762 x 514.4	972 x 762 x 368	908.1 x 762 x 514.4	908.1 x 762 x 514.4

¹ 2 hours of 6 dB crest factor pink noise, AES method.

² Based on nominal impedance, measured in half space 1 W @ 1 m.
 ³ AES2-1984, 2 hrs, Power = Vrms²/Znom

LF enclosures connect with barrier strip screw terminals that accept up to #10 AWG stranded wire xcept for LF-4215-8F, which uses Neutrik SpeakonTM NL4.

	LF-4215	LF-4215-F	LF-4215-8F	LF-4315	LF-4215 x 2
System Models	2-way: SC-422C 3-way: SC-423C 4-way: SC-424	3-way: SC-423C-F	4-way: SC-424-8F	3-way: SC-433C 4-way: SC-434	3-way: SC-443C 4-way: SC-444
Drivers	2	2	2	3	4
Driver Information	15" (381 mm) high-efficiency, extended bass woofer, 4" copper voice coil	15" (381 mm) high-efficiency, extended bass woofer, 4" copper voice coil	15" (381 mm) high-efficiency, extended bass woofer, 4" copper voice coil	15" (381 mm) high-efficiency, extended bass woofer, 4" copper voice coil	15" (381 mm) high-efficiency, extended bass woofer, 4" copper voice coil
Impedance	4Ω	4Ω	8Ω	5.5Ω	4Ω
Rated Noise Power ¹	1000 W RMS	1000 W RMS	1000 W RMS	1500 W RMS	2000 W RMS
Sensitivity ²	99.5 dB	99.5 dB	99.5 dB	99.5 dB	102.5 dB
Dimensions (HWD) inches	35.75 x 30 x 20.25	40 x 31.5 x 19	40 x 31.5 x 19	53 x 30 x 20.25	72 x 30 x 20.25
	908.1 x 762 x 514.4	1016 x 800.1 x 482.6	1016 x 800.1 x 482.6	1346 x 762 x 514.4	1820 x 762 x 514.4



DCS Screen Channel Mid-High Components

QSC mid-high components are all about intelligibility. The midrange element - a 10-inch, high-output, horn-loaded cone driver - places nearly the entire dialog range on a single element, helping audiences hear every word clearly. For high frequencies, our 3-way systems feature a high-performance titanium diaphragm compression driver. In 4-way systems, our proprietary HF/VHF driver uses coaxial diaphragms to provide superior fidelity. And because all systems include a passive crossover, we give you plenty of choices for bi-/tri-amp or tri-/quad-amp operation.

	2150-HF ¹	MH-1060	MH-1075C	MH-1075C-F	MHV-1090	MHV-1090F ²
Loudspeaker Models	3-way (shallow): SC-2150	3-way: SC-223	3-way: SC-413C, SC-323C, SC-423C, SC- 423C-8, SC-433C, SC-443C	3-way (flying): SC-423C-F	4-way: SC-324, SC-414, SC-424, SC-424-8, SC-434, SC-444	4-way (flying): SC-424-8F
Impedance (Bi-Amp mode)	8Ω	8Ω	8Ω	8Ω (BI-AMP MODE)	8Ω	8Ω (TRI-AMP MODE)
Rated Noise Power ³	80 W RMS 4	200 W RMS	Bi-amp: 350 W RMS Tri-amp: MF 275 W RMS HF 75 W RMS	Bi-amp: 350 W RMS	Tri-amp: MF 275 W RMS HF/ VHF 230 W RMS Quad-amp: MF 275 W RMS HF 150 W RMS VHF 80 W RMS 2	Tri-amp: MF 275 W RMS HF/ VHF 230 W RMS
Sensitivity ⁵	102 dB	103.5 dB	Bi-amp: 105 dB Tri-amp: MF- 105dB HF- 107.5dB	Bi-amp: 105 dB Tri-amp: MF- 105dB HF- 107.5dB	Tri-amp: MF 105 dB, HF/VHF 110 dB, Quad-amp: MF 105 dB, HF 110 dB, VHF 110 dB	Tri-amp: MF 105 dB, HF/VHF 110 dB
Driver Infor- mation	6.5" high-efficiency mid range, 1" (25.4 mm) exit, 1.4" (35.5 mm) diaphragm com- pression driver	10" high efficiency mid-range, 1.4" (36mm) exit, 2.4" voice coil titanium compression driver	10" high-efficiency midrange, 1.5" (38 mm) exit, 3" (75 mm) titanium diaphragm compression driver	10" high-efficiency midrange, 1.5" (38 mm) exit, 3" (75 mm) titanium diaphragm compression driver	MF: 10" high-efficien- cy, horn-loaded cone HF/VHF: coaxial neo- dymium compression driver with 3.5" (90 mm) HF diaphragm and 1.75" (44 mm) VHF diaphragm	MF: 10" high-efficien- cy, horn-loaded cone HF/VHF: coaxial neo- dymium compression driver with 3.5" (90 mm) HF voice coil and 1.75" (44 mm) VHF voice coil
Dimensions (HWD) inches	17.3 x 16.3 x 6.8	38.8 x 30 x 20.25	38.8 x 30 x 20.25	40 x 31.5 x 19	38.8 x 30 x 20.25	40 x 31.5 x 19
Dimensions (HWD) mm	440 x 414 x 173	985.5 x 762 x 514.4	985.5 x 762 x 514.4	1016 x 800.1 x 482.6	985.5 x 762 x 514.4	1016 x 800.1 x 482.6

¹ Not designed for tri-amp operation.

² Not designed for quad-amp operation.
³ 2 hours of 6 dB crest factor pink noise, AES method.
⁴ Pink noise, 500 Hz – 20 kHz, 6 dB crest factor, 2 hrs, Power = Vrms²/Z_{nem}

⁵ Based on nominal impedance, measured in half space 1 W @ 1 m.

MH and MHV systems connect with barrier strip screw terminals that accept up to #10 stranded wire except the 2150-HF and MHV-1090F, which use Neutrik SpeakonTM NL4.



DCS Screen Channel HF Components

DCS high-frequency components are an ideal match for the LF enclosures in our bi-amped and passive 2-way screen channel systems. The HF components include durable titanium diaphragm compression drivers and intelligent features that allow easy setup and long service life. Power limiting circuitry protects the drivers from damaging peaks. Built for quality, DCS HF components make our 2-way systems an unbeatable value.

	HF-75Cx2	HF-75C
System Type	2-way passive	2-way active
Loudspeaker Models	SC-322XC	SC-412C SC-422C
Driver Information	1.5" (38 mm) exit, 3" (75 mm) titanium diaphragm compression driver	1.5" (38 mm) exit, 3" (75 mm) titanium diaphragm compression driver
Impedance	see SC-322XC	8Ω
Rated Noise Power 1	see SC-322XC	75 W RMS
Sensitivity ²	see SC-322XC	108 dB

¹ Continuous IEC specified test signal, 2 hours unless otherwise stated.

 $^{\scriptscriptstyle 2}$ Based on nominal impedance, measured in full space. 1 W @ 1 m.

Specifications common to all HF components

Connectors	Dimensions (HWD) inches	Dimensions (HWD) mm	Weight
Barrier strip screw terminals accept up to #10 AWG stranded wire	15.96 x 30 x 20.25	405.4 x 762 x 514.4	36 lb / 16.3 kg



Surround Loudspeakers

Surround channels draw the audience into the action by creating an immersive multidimensional soundscape. It takes power, fidelity, and coverage to accurately create that experience in an auditorium. QSC surround loudspeakers offer outstanding audio performance and styling to look as good as they sound. With three series to choose from, QSC offers the industry's widest selection of surround loudspeakers.

SR Series

Our SR Series surround loudspeakers are made from quality MDF and plywood enclosures that deliver extended bass response over wide coverage areas. And highoutput drivers project cleanly to every seat. The uniform power response of these loudspeakers is a result of DMT[™] (Directivity Matched Transition), a design approach that matches LF and HF coverage in the crossover region. Pre-installed speaker-side hardware allows fast single-installer mounting, and brackets support down-angles of either 15° (standard) or 23° (optional).*

* Except on model SR-5152



SR-1290 and SR-1590 surround loudspeakers feature a unique coaxial design, and are ideal for immersive sound applications.

44

loudspeakers

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	SR-800	SR-1000	SR-8101	SR-8200	SR-1020	SR-1030	SR-1290	SR-1590	SR-5152
System Type	2-way	2-way	2-way	2-way	2-way	2-way	Coaxial 2-way	Coaxial 2-way	2-way
Frequency Range ¹ at -10 dB (Hz)	60 Hz - 20 kHz	64 Hz - 20 kHz	54 Hz - 20 kHz	52 Hz - 20 kHz	50 Hz - 20 kHz	56 Hz - 20 kHz	50 Hz - 20 kHz	50 Hz - 20 kHz	44 Hz - 18 kHz
Nominal Coverage ²	135° conical	90° conical	130° H x 110° V	90° H x 90° V	90° H x 90° V	90° H x 90° V	90° H x 90° V	90° H x 90° V	75° H x 75° V
Nominal Impedance	8Ω	8Ω	8Ω	8Ω	8Ω	8Ω	4Ω	4Ω	8Ω
Rated Noise Power ³	125 W	150 W	125 W	200 W	300 W	400 W	400 W	500 W	625 W
Sensitivity ⁴	90 dB	94 dB	91 dB	94 dB	94 dB	95.5 dB	96 dB	98 dB	96 dB
Driver Information	8" low-frequency transducer, 1" soft dome tweeter	10" low-frequency transducer, 1" compression driver	8" low-frequency transducer 1" soft dome tweeter	8" long throw low-frequency transducer, 1.4" titanium diaphragm compression driver	10" low-frequency transducer, 1.4" titanium diaphragm compression driver	10" long throw low-frequency transducer, 1.75" titanium diaphragm compression driver	12" low-frequency transducer with coaxially-mounted 1.75" compression driver	15" low-frequency transducer with coaxially-mounted 3" voice coil compression driver	15" low-frequency transducer with 3" voice coil compression driver
Dimensions (HWD) inches ⁵	14.4 x 11.7 x 9	19.5 x 11.7 x 11.5	19.5 x 12 x 9.6	19.5 x 14.3 x 9.6	19.5 x 15.8 x 10.2	19.5 x 15.8 x 10.2	20.25 x 15.75 x 12.75	23.62 x 19.69 x 13.78	32 x 17.5 x 15.2
Dimensions (HWD) mm ⁵	365 x 298 x 228.5	495 x 298 x 291	495 x 305 x 244	495 x 363 x 244	495 x 401 x 259	495 x 401 x 259	515 x 400 x 325	600 x 500 x 350	813 x 445 x 386
Weight ⁶	14.3 lb / 6.5 kg	19.8 lb / 9 kg	18.6 lb / 8.4 kg	24.5 lb / 11.1 kg	27.1 lb / 12.3 kg	32 lb / 14.5 kg	35 lb / 16 kg	48 lb / 22 kg	80 lb / 36.2 kg
Brackets 7	QM-SW, QM-BW YM-300	QM-SW, QM-BW, YM-300	QM-SW, QM-BW YM-300, YM-46	QM-SW, QM-BW, YM-46	QM-SW, QM-BW, YM-400	QM-SW, QM-BW, YM-400	QM-SW, QM-BW, YM-400	QM-SW, QM-BW, YM-500	M10 eyebolts

All frequency ranges specified refer to measured free field response (4 p).
 ² Averaged from 1 kHz to 10 kHz, -6 dB except SR-8101, which is averaged from 1 kHz to 8 kHz.
 ³ 2 hours of 6 dB crest factor pink noise, AES method.
 ⁴ Based on nominal impedance, measured in half space 1 W @ 1 m, except SR-1290, SR-1590 measured with 2.0V @ 1 m.

⁵ Dimensions do not include pre-installed speaker mounting bracket.
⁶ Single unit net weight, all units are pair packed except SR-1290, SR-1590 and SR-5152 which are single packed.
⁷ QM-BW recommended for rear wall surrounds in steep stadium applications only. Sloped floor and moderate stadium applications should use the QM-SW on side and rear walls. Yoke mounts can be used when adjustable aiming is required.
All specs are subject to change. DCS surrounds connect with barrier strip screw terminals that accept up to #10 AWG stranded wire.



45

Contractor



Surround Low **Frequency Extension** Loudspeakers

As new cinema audio formats evolve, there is growing demand for full-range sound in the surround channels. Yet for aesthetic reasons, surround loudspeakers are typically designed to be as visually unobtrusive and as small as possible-and deep bass for a large room usually requires a large loudspeaker. Using bass management processing found in many cinema processors, surround channel low-frequency extension (LFE) loudspeakers allow you to locate the cabinet where it's less visually invasive, like on the ceiling or along a rear wall. This relieves the surround loudspeakers from having to produce the very lowest bass frequencies, which allows them to produce greater overall output. Let a QSC Surround LFE Loudspeaker do the sonic heavy lifting.



AD-S112sw



AP-212sw



SB-118F



SB-218F

System Type	12" subwoofer	Dual 12" subwoofer	18" subwoofer	Dual 18" subwoofer
Frequency Range at -10 dB (Hz) ¹	30 Hz – 135 Hz	35 Hz – 250 Hz	32 Hz - 230 Hz	32 Hz - 230 Hz
Peak Output ²	121 dB	127 dB	133 dB	139 dB
Rated Noise Power ³	300 W	600 W	800 W	1600 W
Impedance	8Ω nominal	8Ω nominal	4Ω nominal	4Ω nominal
Sensitivity ⁴	90 dB	93 dB	98 dB	101 dB
Driver Information	12" transducer, 2.5" voice coil, ferrite magnet	Dual 12" transducers, 2.5" voice coil	18" transducer, 4" voice coil	Dual 18" transducers, 4" voice coils
Attachment Points	Two (2), fits yoke bracket	n/a	Eight (8) x M10 threaded mounting points	Eight (8) x M10 threaded mounting points
Dimensions (HWD) inches	23.5 x 13.9 x 12.7	26 x 15 x 24	23.2 x 24.2 x 23.6	46.5 x 23.2 x 25.25
Dimensions (HWD) mm	596 x 354 x 323	660 x 381 x 610	590 x 616 x 615	1180 x 595 x 640
Weight	29 lb / 13.2 kg	67 lb / 30.4 kg	95 lb / 43 kg	168 lb / 76.4 kg

All frequency ranges specified refer to measured free field response

² Calculated SPL at 1m, (half space, 2 pi), speaker operating at rated RMS power with pink noise within specified frequency range.

⁹ 2 hours of 6 dB crest factor pink noise, AES method.
⁴ 1 watt /1 meter, half space.
All models except AD-S112sw connect with Barrier strip screw terminals that accept up to #10 AWG stranded wire. AD-S112sw uses a Euroblock connector



Subwoofers

SB-2180 Subwoofer



QSC Subwoofers bring earth-shaking realism to the cinema experience, driving home the impact of explosive soundtrack action. Our high quality MDF and plywood subwoofer enclosures feature large, fully radiused and flared ports that smooth airflow at high levels to minimize noise from port turbulence. Symmetrical spacing of ports relative to drivers creates uniform internal pressure to prevent distortion and damage. In dual-driver systems, the box is completely divided into single-woofer chambers for greater strength and rigidity, allowing each driver to function normally in the rare event that the other fails. With both single- and dual-driver models to choose from, our subwoofers excel at clean, punchy lows, delivering excitement you can feel to every seat.



2 pi), 2 Calculated SPL at 1m, (half space, 2 pi), speaker operating at rated RMS power with pink noise within specified frequency range.

³ 2 hours of 6 dB crest factor pink noise, AES method. ⁴ 1 watt /1 meter, half space. All models connect with Barrier strip screw terminals that accept up to #10 AWG stranded wire. 49

Reference Monitor System

The Reference Monitor System from QSC combines everything we know about achieving the best possible sound for critical listening situations. A collection of the best audio components is only part of the answer — the real secret is Total System Design. All parts are designed to work together in a system, as a system. It's what makes the QSC Reference Monitor System the new audio reference standard for the most demanding sound professionals and discriminating listeners.



- Complete system including loudspeakers, signal processing, and power amplification
- For rooms up to 35 feet (11 meters) from screen to last row of seating
- New RSC-112 3-way loudspeaker for low, mid, and high frequencies
- New RSB-212 subwoofer featuring two high-excursion 12-inch drivers
- Q-SYS™ Cinema Core for digital signal processing, routing, and control
- Legendary DCA amplifiers for crystal-clear power



	RSC-112	RSB-212
Rated Coverage Angle (-6 dB)	90 degrees Axisymmetric	Omnidirectional
Frequency Range ¹ (-10dB)	55 Hz to 20 kHz	30 Hz to 80 Hz
Crossover Frequencies (up to 48 dB/oct using dedicated Q-SYS DSP)	LF: 80 to 120 Hz (selectable) MF: 1.2 kHz / HF: 7 kHz	N/A
Rated Noise Power (Voltage) ²	LF: 500 W / 63 V MF: 80 W / 25 V HF: 55 W / 20 V	1000 W / 54.8 V
Sensitivity ³	LF: 94 dB / MF: 107 dB / HF: 105 dB	96 dB
Maximum continuous SPL ⁴	LF: 121 / MF: 126 / HF: 122	120.5 dB
Maximum peak SPL ⁴	LF: 127 / MF: 132 / HF: 128	126.5 dB
Rated Impedance	LF: 8Ω, MF: 8Ω, HF: 8Ω,	3Ω
Maximum Recommended Amplifier Power	LF: 1000 W / MF: 500 W / HF: 300 W	1000 W
Transducers	LF: 12 in. (305 mm) woofer MF/HF: coaxial neodymium compression driver with 3.5" (90mm) MF voice coil and 1.75" (44mm) HF voice coil	2 x 12 in. (305 mm) Kevlar-reinforced paper cone woofers, 3 in. voice coils
Enclosure Details		
Input Connector	Parallel NL8: 1/to sub, 2/LF, 3/MF, 4/HF	Parallel NL8: 1/to sub, 2/LF, 3/MF, 4/HF
Enclosure Material	15-ply Baltic birch plywood	15-ply Baltic birch plywood
Dimensions (HxWxD)	28.5 x 15.1 x 13.5 inches (725 x 383 x 344 mm)	28.5 x 15.1 x 13.5 inches (725 x 383 x 344 mm)
Net Weight	66.4 lb (30.1 kg)	89 lb (40.4 kg)
Optional Accessories	RBK-12 baffle wing kit	RBK-12 baffle wing kit
Subject to change without notice. ¹ Free-field, unprocessed, -10 dB from on-axis sensitivity ² AES2-1984 noise signal for 2 hrs ³ On-Axis, free-field sensitivity, 2.83V, 1 m ⁴ Calculated from rated noise voltage and sensitivity		

In Theatre/Behind **Screen**

Screen Channels and Subs

3 x RSB-212

3 x RSC-112





Surrounds

Projection/Rack Rooms

Control	/	Processing

1 x Cinema Core 510c



Min. 4 x CODP4 I/O cards (input cards as needed)







AcousticDesign[™] Series

Surface-Mount **Speakers**

QSC offers an extensive range of loudspeakers for other areas within a cinema complex where high quality sound is important. Ranging from Lobbies and restaurants to bowling lanes and arcade gaming, QSC has it covered. AcousticDesign loudspeakers offer a wide range of models specifically tailored for the demands of higher fidelity applications. Designed for clarity and presence, all models feature Directivity Matched Transition (DMT™), and Intrinsic Correction™.

	AD-S4T	AD-S6T	AD-S8T	AD-S10T	AD-S12	AD-S112sw	AD-28Tw
	4", 2-way	6", 2-way	8", 2-way	10", 2-way	12", 2-way	12" woofer	2x 8" woofer
Frequency Range ¹	68 Hz – 20 kHz	60 Hz – 20 kHz	55 Hz – 20 kHz	50 Hz – 19 kHz	52 Hz – 20 kHz	30 Hz – 135 Hz	36 Hz – 205 Hz
Rated Noise Power ²	50 W	150 W	200 W	250 W	300 W	300 W	250 W
Sensitivity ³	87 dB	89 dB	90 dB	92 dB	95 dB	90 dB	94 dB
Net Weight	6.5 lb (2.9 kg)	13.6 lb (6.2 kg)	24.1 lb (13.2 kg)	31 lb (15 kg)	35 lb (16 kg)	29 lb (13.2 kg)	43 lb (19.5 kg)
Dimensions (HxWxD)	10.3 x 6.34 x 6.42 in (261 x 161 x 163 mm)	14.4 x 8.5 x 8.5 in (365 x 215 x 215 mm)	17.3 x 10 x 19.9 in (440 x 254 x 251 mm)	20.3 x 12.5 x 11.7 in (516 x 318 x 298 mm)	23.4 x 13.9 x 12.7 in (594 x 354 x 323 mm)	23.4 x 13.9 x 12.7 in (594 x 354 x 323 mm)	15.9 x 9.9 x 22.75 in (404 x 251 x 603 mm)

¹ Free-field, -10 dB from on-axis sensitivity ² IEC60268-1 noise signal for 2 Hrs

³ On-Axis, free-field sensitivity, 2.83V, 1 m
⁴ Calculated from rated noise voltage and sensitivity

Pendant and Column Loudspeakers









	AD-P4T	AD-P6T	AD-S802T	AD-S162T
	4", 2-way	6", 2-way	8 x 2.75"	16 x 2.75"
Frequency Range ¹	65 Hz – 20 kHz	55 Hz – 20 kHz	90 Hz - 17 kHz	90 Hz - 17 kHz
Rated Noise Power ²	30 W	60 W	120 W	240 W
Sensitivity ³	87.9 dB	88 dB	87 dB	89 dB wide 88 dB narrow
Net Weight	6.5 lb (2.9 kg)	9 lb (4.1 kg)	13.7 lb / 6.2 kg	25 lb / 11.8 kg
Dimensions (HxWxD)	9.3 x10.7 in (237 x 272 mm)	11.3 x 12.7 in (287 x 323 mm)	23.4 x 5.2 x 5 (595x 131 x 126 mm)	45.8 x 5.2 x 5 in (1162 x 131 x 126 mm)

1 Free-field, -10 dB from on-axis sensitivity

² IEC60268-1 noise signal for 2 hours ³Based on nominal impedance, on-axis, full space, 2.83V, 1 m



Ceiling Loudspeakers

	AD-C4T	AD-C4T-LP	AD-C6T	AD-C6T-LP	AD-C820/C821	AD-C1200
	4.5", 2-way	4.5", 2-way	6.5", 2-way	6.5", 2-way	8", 2-way	12", 2-way
Frequency Range ¹	70 Hz – 20 kHz	70 Hz – 20 kHz	65 Hz – 20 kHz	65 Hz – 20 kHz	61 Hz – 18 kHz	37 Hz – 18 kHz
Rated Noise Power ²	30 W	30 W	60 W	60 W	200 W	300 W
Sensitivity ³	90 dB	90 dB	90.1 dB	90.1 dB	91 dB	93 dB
Net Weight	6.4 lb (2.9 kg)	6.6 lb (3 kg)	9.5 lb (4.3 kg)	9.3 lb (4.2 kg)	17.5 lb (7.9 kg) / 16 lb (7.3 kg)	78 lb (35.3 kg)
Dimensions (HxWxD)	9 x 6.9 in (230 x 176 mm)	11 x 3.9 in (280 x 100 mm)	11 x 9.3 in (280 x 237 mm)	13.4 x 3.9 in (340 x 100 mm)	14.9 x 8.3 in (379 x 211 mm)/ 13.4 x 11.9 in (340 x 302 mm)	23 x 18 x 15.5 in (584 x 454 x 393 mm)

¹ Free-field, -10 dB from on-axis sensitivity

²IEC60268-1 noise signal for 2 hours

³Based on nominal impedance, on-axis, full space, 2.83V, 1 m

Subwoofer/Satellite Loudspeakers

	AD-S.SUB	AD-S.SAT	AD-C.SUB	AD-C.SAT	AD-P.SUB	AD-P.SAT
	6.5" subwoofer	2.75"	6.5" subwoofer	2.75"	6.5" subwoofer	2.75"
Frequency Range ¹	45 Hz - 150 Hz	150 Hz - 20 kHz	45 Hz - 150 Hz	150 Hz - 20 kHz	55 Hz - 150 Hz	150 Hz - 20 kHz
Rated Noise Power ²	100 W	25 W	100 W	25 W	100 W	25 W
Sensitivity ³	86 dB	82 dB	86 dB	82 dB	86 dB	82 dB
Net Weight	23.6 lb (10.7 kg)	0.95 lb (0.43 kg)	19.2 lb (8.7 kg)	1.39 lb (0.6 kg)	16.5 lb (7.5 kg)	0.92 lb (0.43 kg)
Dimensions (HxWxD)	13.8 x 8.2 x 17 in 350 x 209 x 432 mm	3.6 x 3.5 x 5.4 in 92.5 x 89 x 136 mm	13.4 x 10 in 340 x 254 mm	5.9 x 3.4 in 150 x 86 mm	13.6 x 13.8 in 345 x 350 mm	4.3 x 4.5 in 110 x 115 mm

¹ Free-field, -10 dB from on-axis sensitivity

²IEC60268-1 noise signal for 2 hours

³Based on nominal impedance, on-axis, full space, 2.83V, 1 m

53

AcousticCoverage[™] Series

AcousticCoverage loudspeakers are designed to offer sound system designers and installers a cost effective solution for applications where voice reinforced coverage is of primary concern, while providing improved musicality not often seen in typical paging or background music products.



Surface-Mount Loudspeakers

	AC-S4T	AC-S6T	
	4", 2-way	6", 2-way	
Frequency Range ¹	70 Hz – 20 kHz	60 Hz – 20 kHz	
Rated Noise Power ²	16 W	30 W	
Sensitivity ³	85 dB	86 dB	
Net Weight	5.2 lb (2.4 kg)	86 lb (3.8 kg)	
Dimensions (HxWxD)	9.1 x 6.3 x 5.9 in (230 x 160 x 150 mm)	11.9 x 8.5 x 7.8 in (303 x 215 x 197 mm)	

Ceiling Loudspeakers

	AC-C2T	AC-C4T	AC-C6T	AC-C8T
	2.75"	4", 2-way	6", 2-way	8", 2-way
Frequency Range ¹	70 Hz - 20 kHz	70 Hz - 16 kHz	65 Hz - 20 kHz	52 Hz - 20 kHz
Rated Noise Power ²	16 W	16 W	30 W	80 W
Sensitivity ³	84 dB	89 dB	89 dB	89 dB
Net Weight	4.2 lb (1.9 kg)	4.9 lb (2.22 kg)	7.6 lb (3.5 kg)	11.5 lb (5.2 kg)
Dimensions (HxWxD)	8.4 x 7.9 in (214 x 201 mm))	8.4 x 7.9 in (214 x 201 mm)	10.24 x 8.4 in (260 x 201 mm)	12.4 x 11.3 in (381 x 381 mm)





Premium Business Music Solutions

QSC Premium Business Music Solutions offer complete range of audio products for applications beyond just the theatre. Simplify the quoting and design process by choosing from a single catalog that offers a complete end-to-end audio solution for the entire cinema complex.

- All loudspeakers, wall controllers and rack-mount devices share a sleek, modern design
- Unadorned loudspeaker grilles and stylish enclosures, available in black or white, support the aesthetic of the most demanding installations
- Simple yet elegant wall controllers, available in black and white, feature a crisp display

MP-M Series Paging and Music Mixers

MP-M Series paging and music mixers offer unprecedented capabilities for processing and routing high-quality foreground/background audio for multi-zone applications, and provides live mixing functionality for live speech reinforcement -- including lobby or restaurant paging, performance areas, etc.

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	MP-M40	MP-M80
Inputs	8	16
Outputs	6	10
Dimensions (HWD)		1.75 x 19 x 14 in (450 x 483 x 356 mm)
Net Weight		7.0 lb (3.2 kg)

MP-A Series Multi-channel Amplifiers

The MP-A Series music and paging amplifier family an incredible amount of flexibility for music and paging applications. The load selector toggles between 4 Ω , 8 Ω , 70 V / 100 V, and a selectable 80 Hz highpass filter is offered on each channel. FlexAmpTM technology allows the installer to configure each pair of channels to deliver up to 400 W of total output power in any ratio.



	MP-A20V	MP-A40V	MP-A80V
Power	2 x 200 W	4 x 200 W	8 x 200 W
Dimensions (HWD)	1.75 x 19	9 x 14.8 in (44 x 483 x 37	7 mm)
Net Weight	7.7 lb (3.5 kg)	9.3 lb (4.2 kg)	12.8 lb (5.8 kg)
Net Weight	7.7 lb (3.5 kg)	9.3 lb (4.2 kg)	12.8 lb (5.8 kg)

MP Install

Premium Business Music Solutions are designed and configured using the MP Install application. An intuitive workflow guides the programmer through zone configuration, EQ settings, QSC loudspeaker tuning (Intrinsic Correction), paging priorities, end-user controllers and more.



MP-MFC Series

MP-MFC Series are elegantly simple wall controllers that can be configured so that access is only available for pre-determined settings, sources and ranges.



MP Manage

MP Manage is a wireless system controller application for day-to-day operations and functions, including zone level control, source selection, scheduling, scenes and more.

Loudspeakers

Mix and match any of the loudspeakers from our AcousticDesign[™] Series (page 52) for a complete, consistently high-quality audio experience throughout every zone in the cinema complex.





accessibility solutions



Accessibility Solutions

CCH-100



CCH-100 Closed Captioning Glasses

With our CCH-100 closed-caption eyeglasses, Captionwear® text is projected into the user's view, and the user can adjust the position of the text. The engineered optics make the captions appear as a distant "virtual image" which minimizes eye strain due to refocusing between text and the movie image. Users may select one of up to four caption languages.

CCR-100



CCR-100 Closed Caption Display

The CCR-100 seat mount closed caption receiver is a private display attached by gooseneck to the seat arm. It displays the user-defined welcome message until the presentation starts, then displays the closed captions delivered in the digital cinema package (DCP). With multi-language DCPs, the user can select which of up to four languages to view.

Optics present a distant virtual image to the user so the caption and movie screen can be viewed without refocusing the eye. The optics also reduce visibility of the display to other patrons. An optional clamp mount is available for those seats that do not have a cupholder built into the arm seat.

IRH-280i/281i



IRH-280i/281i Headphones

The IRH-280i/281i headphones receive audio from the IRC panels over infrared. High quality sound ensures maximum intelligibility for the hearing and visually impaired. Two models are available: IRH-280i and IRH-281i. The IRH-280i headphones include a channel switch which allows the user to select to hear either the film soundtrack (HI) or descriptive narration (VI-N) through both earcups. The IRH-281i headphones have individual volume controls for each channel, allowing the user to mix HI and VI-N to both ears at the same time.

IRC-28/28C/28C-N



IRC-28/28C/28C-N Infrared Audio and Caption Emitter

Using infra-red (IR) light, the IRC-28 emitter panel transmits two channels of audio (HI and VI-N), while the IRC-28C and IRC-28C-N transmit both audio and caption content. The IRC-28/28C panels distribute IR energy over a wide angle, enabling IR receivers to pick up signal both from behind (when the panel is mounted at the rear of the room) and from the front, reflected from the screen. The IRC-28C-N panel features a very narrow beam and coverage angle, focusing most of the IR energy to reflect from the screen – especially useful for rooms with obstructions or where fully-reclined seats may not easily receive IR energy coming from the rear of the room.

Test & Measurement



LSS-200

The LSS-200 Light and Sound Sensor is designed for cinema auditorium quality control. It measures sound pressure level, luminance and chromaticity and includes PoE.



PCA-100+

The PCA-100+ Projection Color Analyzer accurately measures luminance and chromaticity with more precision than filter-based instruments.



DAT-100

The DAT-100 Digital Audio Tester allows the technician to determine if a problem is in the source, the destination, or the cable between the two.



MMP-10

The MMP-10 Microphone Multiplexer allows remote selection of its lab quality microphone inputs. The system includes four measurement microphones, cables, and armrest mounts.



Cinema Media Server



CMS-5000 Cinema Media Server

The DCI-compliant CMS-5000 Cinema Media Server is a next-generation server that delivers ultra-fast data transfer speeds and is compatible with all current and future sound and picture formats. It features up to 6 TB of onboard solid-state storage, and supports JPEG-2000 decoding of 2K up to 60 fps, or 4K up to 30 fps and 3D 2K up to 60 fps per eye. The CMS-5000 fits Series 2 digital cinema projectors and supports immersive audio formats with rendering of up to 64 channels (DTS-X[®]), and bitstream transmission of Dolby[®] Atmos[®]. Best of all, the CMS-5000 is part of the Q-SYS[™] Ecosystem for Cinema and can be directly interfaced with Q-SYS for fully integrated audio, video, and control (AV&C).



inputs/outputs



63



Solid-state data storage

Unlike hard disk drives (HDD), solid-state drive (SSD) storage has no moving parts, and is many times more reliable and faster. Estimated mean time before failure for SSDs is over 1.75 million hours – that's over 200 years. The CMS-5000 offers storage options from 1.5 TB to 6 TB, which is more than enough to store an entire multiplex worth of DCPs.



Dimensions (HxWxD)	2.5 x 12.625 x 8.75 in (63.5 x 318 x 222 mm)
Weight	3 lb (1.4 kg)
Physical Mounting	Fits Series 2 projector slot
Power	12VDC (supplied by projector), 60W typ.
Status Indicators	LED: Power, Ready, Fault, Tamper, Drive Status, Ingest
Ingest Ports	eSATA, USB 3.0, 10 Gb Ethernet (copper or fiber) small form-factor pluggable
Alternate Content Inputs	2 x HDMI 2.0, 2 x HD-SDI (HD-BNC)
Audio I/O	70 Channels O-LAN network audio out, 3 x RJ-45 AES Out (24 channels incl. HI/VI) 1 x 3.5mm (stereo) 1 x RJ-45 AES in (4 channels)
Sync	In/Out, 2 x HD-BNC
Network	2 x redundant RJ-45 Q-LAN A & B (for Q-SYS), 2 x RJ-45 Ethernet (TMS, control etc)
Automation	2 x RJ-45 Ethernet



Cinema

Photo courtesy of TK Architects International



Technology Innovations for Cinema

Providing optimal performance at the best possible value for your cinema investment is the result of a lot of innovation. At QSC, innovation is a combination of industry best practices and our own design inventions and lab-proven technology breakthroughs.

Directivity Matched Transition (DMT[™])

All woofers have wide coverage at lower frequencies that narrows as frequency increases. Many speaker designs ignore this acoustic principal and pretend that only the high frequency horn coverage matters. In reality, a smooth, directional transition from woofer to horn is important. QSC calls this technique Directivity Matched Transition (DMT). DMT matches the high-frequency coverage angle to the coverage angle of the woofer at the crossover frequency. The result is smooth, even coverage at all frequencies throughout the listening area.

Intrinsic Correction[™]

Intrinsic Correction corrects the intrinsic behaviors of cinema loudspeakers, removing any anomalies from the equation of factors that affect measured response and, ultimately, the quality of sound. It involves a set of laboratory derived settings which are implemented in the Q-SYS Core processor. Intrinsic Correction optimizes performance and minimizes the amount of on-site room-tuning, because many response anomalies are corrected before the loudspeakers are installed.



Lab measurements produce a response curve of the loudspeaker.



Then, an inverse of that response is created using FIR filters.





Pre-installed speaker-side brackets

Our SR Series surround loudspeakers are packaged with pre-installed speaker-side hardware*, which allows fast single-installer mounting. Brackets support down-angles of either 15° (standard) or 23° (optional).

*Except SR-5152

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Digital Cinema Processors

QSC was the first company to combine all the essential functions of cinema audio into a single device: crossovers, booth monitor, routing, EQ, and status monitoring.



DPM-100H



DCP 300

Coaxial Drivers

QSC's unique coaxial drivers align components in both time and space, eliminating phase cancellation and uneven frequency response.

When two drivers are spaced far apart relative to the wavelength of the crossover frequency, pattern interference occurs in the overlap region, resulting in audible effects like lobing and comb filtering. (Figure 1)

Coaxial drivers have the same origin, so they are aligned in both the horizontal and vertical planes. This eliminates interference and lobing/comb filtering, producing even coverage throughout the listening area. (Figure 2)







Three-Point Pan-Tilt

The pan-tilt mechanism for mid-high components makes quick work of assembling and aligning screen channel systems. The assembly is labeled for repeatability and features a notched tilt adjustment to maintain vertical alignment.



Axisymmetric Horn Design

The most natural sounding horns avoid parallel surfaces and abrupt changes in contour. Axisymmetrical horn design results in a coverage pattern that is the same in both the vertical and horizontal axes, ensuring that all listeners hear the same sound, everywhere.

DataPort

Using a standard VGA-style connector that simplifies wiring and speeds installation, DataPort provides single-cable integration of our DCA amplifiers with QSC processors. DataPort enables DSP crossovers, speaker-specific EQ, and monitoring and control of amplifier and loudspeaker functions. A single QSC DataPort connection includes two channels of audio, output voltage monitoring (VMON), current monitoring (IMON), clip/ protect monitoring, and thermal monitoring.





Designed for Pallet Loading

Cost effective design goes beyond product performance and installation features. QSC takes special care when designing the dimensions of products and shipping cartons to ensure that when they're loaded on pallets, cargo and container space is utilized in the most efficient manner possible. You'll never pay for shipping "air".



CineSight[™]

CineSight[™] is an exclusive integrated sight that works even after the screen has been installed. CineSight allows fast, accurate aiming without having to remove the driver.



Online Application Guide

While offering the industry's widest selection of loudspeakers assures that we can provide the most appropriate solution for your specific cinema application, we recognize that it can also make it challenging to select the best package of processing, amplifiers and loudspeakers.



Our Online Application Guide makes that selection much easier. Simply enter a few basic parameters for your application, click "View Results", and you'll get a basic system package which can be used as a starting point to tailor the most optimal system configuration for your requirements, at the most cost-effective price. Visit qsc. com/cinema/resources.



Notes





qsc.com





US only: 1-800-854-4079 Outside the U.S. +1-714-754-6175 Fax +1-714-754-6174 Technical support: cinematechsupport@gsc.com

Address: 1675 MacArthur Boulevard Costa Mesa, CA 92626



Phone: 407-857-8770 Fax: 407-857-8771 Email: sales@techni-lux.com www.techni-lux.com

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