

General

Responding to the need for invisible speaker and immersive audio solutions, the SSP6™ Multiducer™ transducer speaker delivers professional grade equipment of the highest quality, reliability, ease of installation and performance. Covered by multiple patents, and through better engineering and design, the SSP6 tactically resolves the problems inherent to distributed mode loudspeakers. High current is needed to energize large soundboards with substantial mass such as a wall or ceiling. Patented features deliver fidelity at high current settings and corresponding thermal management needs related to high power handling.



Key Features

- True distributed mode loudspeaker engineered to transfer its energy to large surfaces for maximum planar wave generation
- Full, unchanging frequency response delivered throughout entire propagation pattern including high frequency spectrum
- Consistent sound pressure levels delivered via linear SPL degradation
- 92dB Max SPL (drywall – 120W @8Ω unclipped) and 160° dispersion pattern across the upper registers of the frequency spectrum
- Interspeaker spacing (drywall): up to 21' – 7m. 1x SSP6 Multiducer™ transducer is able to cover a similar surface area as compared to up to 4 conventional speakers.
- Unlimited lifecycle – Xmax: 0.004" / 0.1mm @ 50Hz (laser interferometry tested) plus patented double suspension delivers near solid state performance
- UL2043 Fire and Smoke Plenum Rated with EN 54-24 emergency pending
- Finest materials and craftsmanship. Special grade neodymium, and manufactured to the highest industry standards for reliability, performance and longevity
- Reliable, lifetime tool-free 2 - 5 minute installation on all materials. Save for masonry.

*All measurements made by independent third party laboratories.

Product Model	SSP6
Speaker Category	Inertial Type Distributed Mode Loudspeaker
Visible / Invisible	Invisible
Physics	Planar Wave
PERFORMANCE*	
Impedance (nominal)	8Ω
High Z Applications	70 V and 100 V Compatible
Sensitivity dB @ 2.83W/1M	76 dB (Drywall)
Frequency response (-3 dB)	50 Hz (highpassed) – 20 KHz
Power Handling	25W – 120W continuous into 8Ω on unclipped program
Peak Power	200W
Max Program Power	120W
Max Continuous Power RMS	80W
Coverage Angle (-3 dB @ 2 KHz)	160°
Coverage Angle (-3 dB @ 10 KHz)	160°
CERTIFICATIONS / APPROVALS	
Certification: Ingress Protection	APPROVED – IP66
CE Certification	APPROVED
UL 2043 In Plenum Fire & Smoke	APPROVED and Listed
RoHS	APPROVED
EIA 426B Lifecycle Testing	Unenclosed 12.0V 8 Hours 23°C ambient
EN 54-24 Voice Alarm Systems	Pending
PHYSICAL	
Dimensions (Speaker)	2.07" H x 2.7"Ø (52.5mm H x 68.9mm Ø)
Dimensions (Mounting Plate)	4.0"Ø (100mm Ø)
Dimensions (Speaker + Mounting Plate)	2.3" H x 4.0"Ø (58.5mm H x 100mm Ø)
Weight (unit)	1.63lbs (0.73Kg) Individual
Package (units)	2 per box
Package Weight	3.75 lbs (1.7Kg)

Applications

The SSP6 Multiducer™ is a “multifunctional” transducer delivering dynamic range, fidelity and reliability to numerous audio vertical market segments and problem sets. Planar wave physics and planar-source technology delivers consistent SPL and frequency response to all audio applications. Related benefits include non-incitement of room modes or feedback into microphones. Applications include: conferencing, residential, retail, residential, transport, education, sound masking, hospitality, museums, and many more. High Z - 70V / 100V applications are delivered with our RA-T1 multitap transformers. Special large 8Ω installations are supported by our partner technologies, permitting over 100 SSP6’s to be installed on a single speaker channel.

Patents

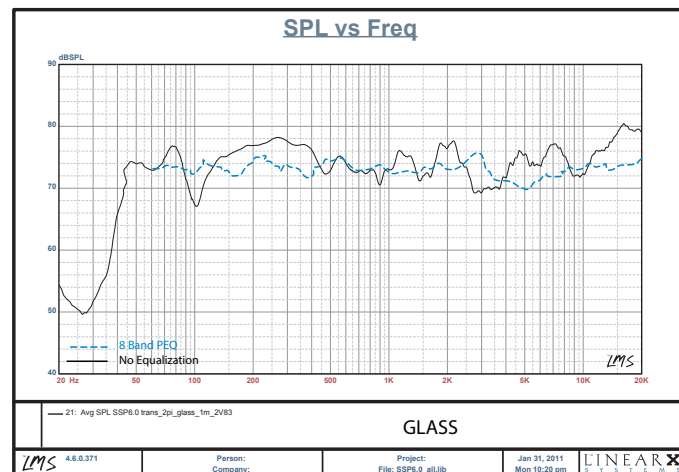
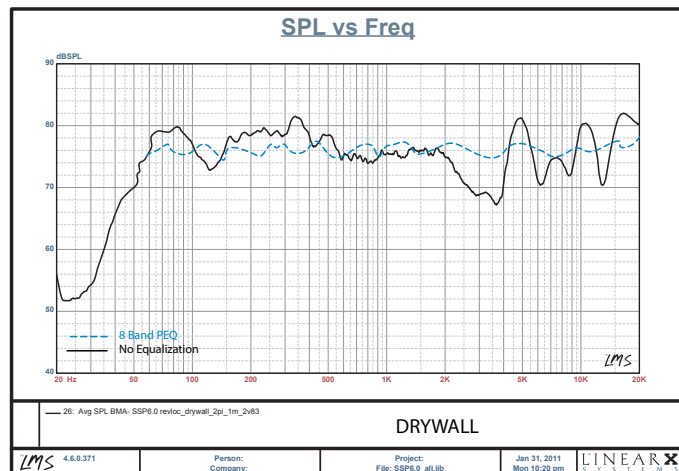
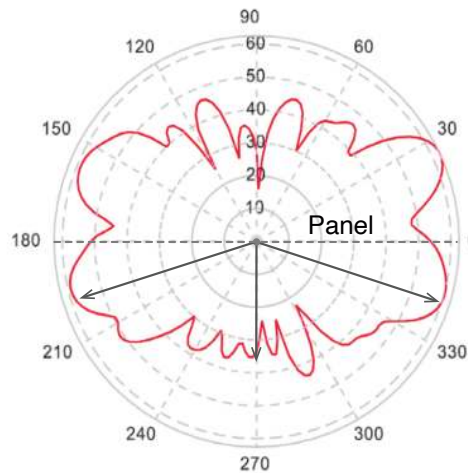
Numerous US and International patents cover multiple proprietary innovations with the goal of securing our dealer network’s interests. All innovations respond directly to related transducer speaker performance needs, setting the SSP6 apart from all competitors. Proprietary innovations include double suspension providing control at high current needed to energize massive panels. Thermal management and numerous other application-driven and performance related innovations cause the SSP6 to deliver best in class dynamic range and reliability. Revolution Acoustics defends its intellectual property aggressively.

Installation

Installation is fast, simple and reliable using the 3 recommended adhesives. Note 1: adhesive installation is recommended over fastener (screw) installation as screws can back off over time under vibrational load. Note 2: Always wipe base of RevLoc™ mounting plate with alcohol swab (provided) before applying any adhesive. **Read Installation Guide found in every SSP6 box.** Note 3: See more installation information on our website videos:

<https://revolutionacoustics.com/resources/videos>

1. **Smooth Non-Porous Materials:** Glass, Formica®, urethane finished wood, etc. Use Revolution Acoustics UHB tape (pressure activated). Remove 1 side of tape backing. Burnish with fingers to RevLoc mounting plate. Peel off outside liner and apply to surface with pressure.
2. **Drywall (plasterboard):** RevLoc mounting plate applied to inside wall surface. Apply lines of liquid formulation of cyanoacrylate glue (super glue) 1/8” – 3mm apart (see installation guide in every SSP6 box).
3. **Rough Materials:** Unfinished wood, fiberglass, etc. Use 5 minute epoxy glue applied to the both the base of the RevLoc mounting plate as well as the surface being adhered to. Press RevLoc™ onto surface squeezing out excess glue and then tape RevLoc plate in place until glue is fully set.

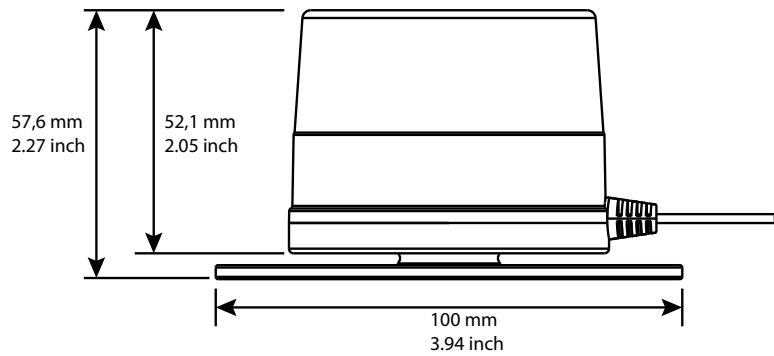
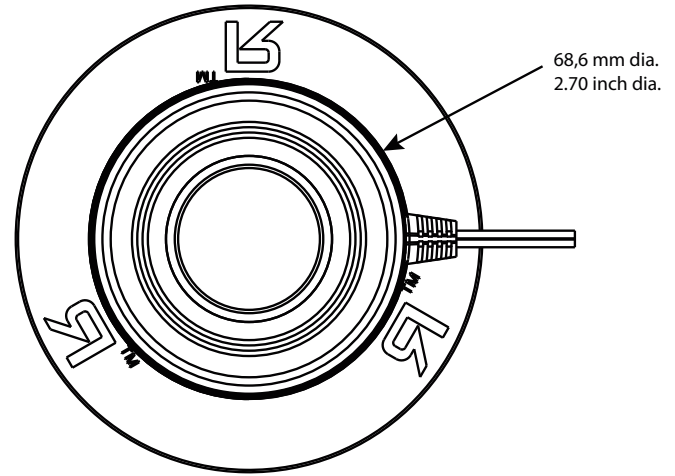


Commissioning / Equalization

SSP6 transducers play well with a flat signal but do benefit by way of equalization. When commissioning, if able and if audio amplifiers used have a digital sound processor offering parametric equalisation or by way of using the following equalization coefficients (See page 4) to optimise the acoustic response in relationship to the substrate material chosen. Note 1: The following tables should be considered as a starting point, with further refinements made adjusting the construct of the material. Proper equalization will lead to a flat response.

Architectural Specification

SSP6 transducers are a full range speaker constructed of very high-grade neodymium magnets, machined aluminum structural and thermal sinking elements, and polymeric housing, the whole certified for in plenum environments. Speaker is water and dust proof for longevity. Usable frequency response: 50Hz (highpassed) – 20KHz (-dB, no external equalization). Power handling: up to 120W @8Ω producing Max. SPL 92dB 1M – drywall and 90dB 5M. Acoustic substrates include: drywall, glass, wood, fiberglass, metal panels, and some stones. Interspeaker distances (drywall) range between 15' – 5M to 21' – 7M dependant on application. Speaker wire is plenum rated. Installed space requirement minimums: 2.27" – 57.6mm height, 3.94" – 100mm diameter. SSP6 shall weigh no more than 1.87 lbs. – 0.85 Kg. Sold in "Pair Packs" (2x SSP6 per box) Technical part specifications including downloadable 3D part files in .dwg, .dxf, .rfa and .pdf files can be downloaded from our download webpage: <https://revolutionacoustics.com/resources/download>



SSP6 Planar Source - SPL Losses Over Distance

		Foreground Audio (Control: 83dB 0°, 1M)								
		1M			5M Distance - Drivers 33" on center			10M Distance - Drivers 65" on center		
		0°	90°	180°	0°	90°	180°	0°	90°	180°
Drywall	db	83	83	83	81	81	81	80	80	80
Glass	db	84	82	84	81	81	81	74	74	74
Wood Table	db	85	84	85	84	82	84	80	80	80

		BGM Audio Level - (Control: 63dB 0°, 1M)								
		1M			5M Distance - Drivers 33" on center			10M Distance - Drivers 65" on center		
		0°	90°	180°	0°	90°	180°	0°	90°	180°
Drywall	db	63	63	63	62	62	62	61	61	61
Glass	db	64	62	64	62	62	62	56	56	56
Wood Table	db	67	65	67	66	63	66	61	61	61

		Sound Masking (Control: 47dB 0°, 1M)								
		1M			5M Distance - Drivers 33" on center			10M Distance - Drivers 65" on center		
		0°	90°	180°	0°	90°	180°	0°	90°	180°
Drywall	db	47	47	47	46	46	46	45	45	45
Glass	db	47	46	47	46	46	46	42	42	42
Wood Table	db	48	47	48	47	46	47	46	46	46

Measurements: interspeaker SPL rolloff
 0 degrees - normal to surface - underspeaker (ceiling)
 90 degrees - in plain of substrate
 Wood Table - solid hardwood table, 1.5" thick
 Source: Pink Noise - all tests
Control Amplifier levels set on Drywall here and then tested throughout
 Drywall mounted to normal metal studs - 12'x 9' high wall

The filter values in the following tables are based on measured optimum SPL under laboratory conditions. They present good starting points. Each installation is unique. Results may vary based on the actual substrates used, the substrate construction and the room itself. It is recommended to adjust the EQ for each installation over and above the EQ coefficients provided below.

Drywall - transducer in-wall			
Name/Type	F	Boost (+) / Cut (-)	Q
	Hz	dB	
HPF -24db/Oct slope (BW) Use the dedicated HPF	50	0	∅
Low Pass Filter, 2nd order	20k	0	1
Parametric Filter	230	-9	1.4
Parametric Filter	650	-3	2
Parametric Filter	980	+2	2
Parametric Filter	3300	+4	1.4

Glass (window glass)			
Name/Type	F	Boost (+) / Cut (-)	Q
	Hz	dB	
HPF -24db/Oct slope (BW) Use the dedicated HPF	60	0	∅
Low Pass Filter, 2nd order	20k	0	1
Parametric Filter	76	-2	3
Parametric Filter	102	+3	3
Parametric Filter	260	-2	0.71
Parametric Filter	800	+2	0.71
Parametric Filter	2000	-2	2
Parametric Filter	3200	+4	1.41
Parametric Filter	7000	-1	2
Parametric Filter	15000	-4	1.41

Sound Masking - Drywall - transducer in-wall			
Name/Type	F	Boost (+) / Cut (-)	Q
	Hz	dB	
High Pass Filter, 2nd order	260	0	1
Low Pass Filter, 2nd order	5000	0	0.75
Parametric Filter	450	8.5	6
Parametric Filter	900	+6.5	8
Parametric Filter	3200	+10.5	9.5
Parametric Filter	4400	-15	40
Parametric Filter	5000	-7.5	14

Wood (MDF 1/2")			
Name/Type	F	Boost (+) / Cut (-)	Q
	Hz	dB	
HPF -24db/Oct slope (BW) Use the dedicated HPF	50	0	∅
Low Pass Filter, 2nd order	20k	0	1
Parametric Filter	230	-9	1.4
Parametric Filter	650	-3	2
Parametric Filter	980	+2	2
Parametric Filter	3300	+4	1.4



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