LeWing™ With JBL Speakers Technical Data Sheet



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LeWing With JBL Speakers

Update

Action: W: Written R: Page revi A: Page add D: Page del C: Rewritte	ded eted	bletely			
Date	Rev. N°	Action	New Pages	Rev. Pages	Reason for revision
7-Apr-08	Α	W	all		- New document
21-Apr-08	В	R		3,4 1 all	- Warranty changes, drawings with masking system - Company addresses changes - Language / usage corrections
30-Apr-08	С	R			- Language / usage corrections

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LeWing With JBL Speakers On-Ceiling Introduction

Designed exclusively for the high-end video projection market, LeWing is a unique home theater solution that pairs a fully retractable, acoustically transparent screen with a control-independent, high-performance speaker system.

Screen Material And Masking System Features

- Patented tab-tensioning system ensures smooth surface
- Acoustically transparent fabrics and black backing layer
- Fully retractable system
- Control-independent speaker/screen

Speaker Casing Features

- Control of the speaker casing deployment
- L.C.R speakers (left, center, right)

Security Control

Security belts

Speakers Key Features

	JBL1
Frequency Range	55 Hz - 40 KHz
Power Handling	100 Watts (each)
Sensitivity (2.83V/1m)	91 dB
Nominal impedance	8 Ohms

Warranty

Screen Research's warranty covers defects in workmanship and fabrics, provided screen has been installed in a normal environment and maintained according to the written instructions.

Surface fabric(s) and frame are guaranteed for five (5) years from date of installation, not to exceed 63 months from date of invoice.

Motors, motor controllers, and assembly hardware are guaranteed for three (3) years – including parts and labor – not to exceed 39 months from date of invoice.

LeWing With JBL On-Ceiling



IMAGE SIZE:

80" and 96" JBL1

CASING HEIGHT:

10.6" JBL1

CASING DEPTH:

16.5" JBL1

SPECIFICATIONS:

Aluminim casing Included
Casing Color White-Matte
Speaker Casing* White
Batten Color White
Tab Tensioning System Included
Black-Matte Image Border Included
(Standard 12" black-drop included unless otherwise specified)

FABRICS:

ClearPix2TM Projection Screen Fabric Included
(THX® Ultra,THX® Ultra-II and ISF®N certified)
Black Backing Layer Included
(THX® certified)

MOTORS:

Power 230 Volt - International* To Specify
Power 120 Volt - US* To Specify
Power 115 Volt - Japan * To Specify

MANDATORY CONTROL SYSTEM:

MCS** By default IR/RS232 Optional

MOUTING:

Wall Mount Included

OPTIONS:

- * Speaker casing color and motor voltage are options which must be specified with order.
- ** MCS is required but sold separately.



LeWing With JBL Speakers In-Ceiling Introduction

Designed exclusively for the high-end video projection market, LeWing is a unique home theater solution that pairs a fully retractable, acoustically transparent screen with a control-independent, high-performance speaker system.

Screen Material And Masking System Features

- Patented tab-tensioning system ensures smooth surface
- Screen center-line can be easily adjusted into the casing
- New solid material for horizontal masking
- Acoustically transparent material for vertical masking
- Control-independent speaker/screen
- Fully retractable system

Speaker Casing Features

- Speaker casing motor inside the speaker casing itself
- Anti-vibration system
- Flush-mount system on the top speaker casing
- Control of the speaker casing deployment
 "Quiet blocks" for the speaker casing end of travel
- L.C.R speakers (left, center, right)

Trap door Features

- Flush-mount system for perfect screen in-ceiling
- Trap door can be easily adjusted (height, length, diagonal)

Security Control

- Switch control system not to shut the trap door by mistake
- Control-independent Trap door motors
- Security belts

Speakers Key Features

	JBL2	JBL3	JBL4
Frequency Range	50 Hz - 22 KHz	48 Hz - 40 KHz	70 Hz - 40 KHz
Power Handling	150 Watts (each)	200 Watts (each)	300 Watts (each)
Sensitivity (2.83V/1m)	92 dB	89 dB	90 dB
Nominal impedance	8 Ohms	6 Ohms	8 Ohms

Warranty

Screen Research's warranty covers defects in workmanship and fabrics, provided screen has been installed in a normal environment and maintained according to the written instructions.

Surface fabric(s) and frame are guaranteed for five (5) years from date of installation, not to exceed 63 months from date of invoice.

Motors, motor controllers, and assembly hardware are guaranteed for three (3) years – including parts and labor - not to exceed 39 months from date of invoice.

LeWing With JBL In-Ceiling

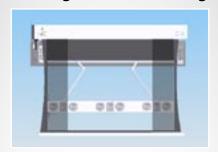


IMAGE SIZE:

Up to 110"	JBL2
Up to 120"	JBL3 - JBL4

MASKING SYSTEM:

1.78 native image ratio with masking to 2:35.1	JBL2-JBL3- JBL4
2:35 native image ratio with masking to 1.78	JBL2-JBL3- JBL4

CASING HEIGHT:

11.8"	JBL2 - JBL3
15.4"	JBL4

CASING DEPTH:

19.6"	JBL2 - JBL3
23.9"	JBL4

SPECIFICATIONS:

Aluminum casing	Included
Casing Color	White-Matte
Speaker Casing*	Black, White
Batten Color	Black-Matte
Tab Tensioning System	Included
Black-Matte Image Border	Included
(Standard 12" black-drop included upless otherwise specified)	included

FABRICS:

ClearPix2™ Projection Screen Fabric	Included
(THX® Ultra, THX® Ultra-II and ISF®N certified)	
Black Backing Layer	Included
(THX® certified)	

MOTORS:

Power 230 Volt - International*	To Specify
Power 120 Volt - US*	To Specify
Power 115 Volt - Japan *	To Specify

MANDATORY CONTROL SYSTEM:

SRCS**	By default
IR/RS232	Optional
Multi Motor Control	Optional

MOUTING:

Wall Mount Included

OPTIONS:

- * Speaker casing color and motor voltage are options which must be specified with order.
- ** SRCS is required but sold separately.



LeWing With JBL Speakers Specifications



On-Ceiling -

LeWing JBL1



Room surface: up to 30 m2

Number of speakers: 3 (LCR)

Power Handling: 100 Watts (with 80Hz cut-off)

Nominal Impedance : 8 Ohms Sensitivity : 91dB Frequency Response : (±3dB)

55Hz - 40kHz

Ultrahigh-Frequency Driver

3/4" (19mm) Mylar® dome, castaluminum chassis, mounted in a Bi-Radial® horn.

High-Frequency Transducer

1" (25mm) Pure titanium dome in JBL EOS™ waveguide, cast-aluminum chassis

Low-Frequency Transducer

Dual 5-1/4" (130mm) PolyPlas™ cones with rubber surrounds, cast-aluminum chassis. HeatScape™ motor structures, Symmetrical Field Geometry™ (SFG™), oversized Kapton® voice coils, magnetic shorting

Magnetically Shielded: Yes

Recommended Sub-Woofer: L8400P, ES250P, ES150P, HTi88 (IW)

Recommended Surround: SP5 II (IW), SP6II (IC), P52 (OW)

LeWing JBL2



Room surface: up to 45 m2

Number of speakers: 3 (LCR)

Power Handling: 150 Watts (with 80Hz cut-off)

Nominal Impedance: 8 Ohms Sensitivity: 92dB Frequency Response: (±3dB)

50Hz - 22kHz

High-Frequency Transducer 1" (25mm) Pure titanium dome in JBL EOS™ waveguide, cast-aluminum chassis

Midrange Transducer

4" (100mm) PolyPlas™ cone with rubber surround, cast-aluminum chassis HeatScape™ motor structure

Low-Frequency Transducer

Dual 6" (150mm) PolyPlas™cones with rubber surrounds, cast-aluminum chassis, HeatScape™ motor structures, Symmetrical Field Geometry™, oversized Kapton® voice coils, magnetic shorting rings

Magnetically Shielded: Yes

Recommended Sub-Woofer: PS1400, L8400P, HTi88 (IW)

Recommended Surround : SP8C II (IC), SP8 II (IW), P52 (OW)



In-Ceiling



Room surface: up to 65 m2

Number of speakers: 3 (LCR)

Power Handling: 200 Watts (with 80Hz cut-off)

Nominal Impedance: 6 Ohms Sensitivity: 89dB Frequency Response: (±3dB)

48Hz - 40kHz

Ultra-High Frequency Driver 045Ti 1" Pure-titanium com-

pression driver with aluminum edge-wound voice coil and 2" (51mm) neodymium motor assembly

High-Frequency Driver

175ND-3 1.75" compression driver w/Bi-Radial® horn compression driver

Mid-Bass Driver

Dual 6-1/2" cones, shielded, Symmetrical Field Geometry™ (SFG), Symmetrical Inductance Modulation (SIM) and Vented Gap Cooling™ (VGC).

Recommended Sub-Woofer: 1500 Array, PS 1400, S2S, S4S

Recommended Surround: S4Ai (IW), P81 (IC), P52 (OW)

THX

LeWing JBL4



Room surface : up to 100 m2

Number of speakers: 3 (LCR)

Power Handling: 300 Watts (with 80Hz cut-off)

Nominal Impedance: 8 Ohms Sensitivity: 90dB Frequency Response (±3dB) 70Hz - 40kHz

Ultra-High Frequency Driver

045Ti 1" Pure-titanium compression driver with aluminum edge-wound voice coil and 2" neodymium motor assembly.

High-Frequency Transducer

435AL-1 3" Aquaplas-treated aluminum-dome compression driver with aluminum edgewound voice coil and neodymium motor assembly, mounted in a vertical SonoGlass™ constant directivity horn.

Low-Frequency Transducer

Dual Array 8C 8" polymer treated pulp-cone driver with rubber surround and massive ferrite motor assembly with 4" copper edge-wound voice coil.

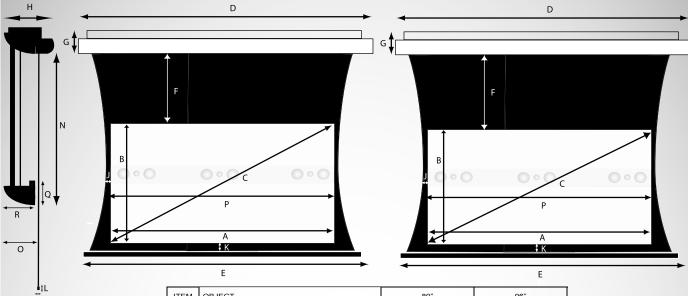
Recommended Sub-Woofer: 1500 Array, S1S-EX, S2S, S4S

Recommended Surround: S4Ai (IW), P941 (IC)





LeWing With JBL1 / On-Ceiling (1.78 and 2.35 native ratios)

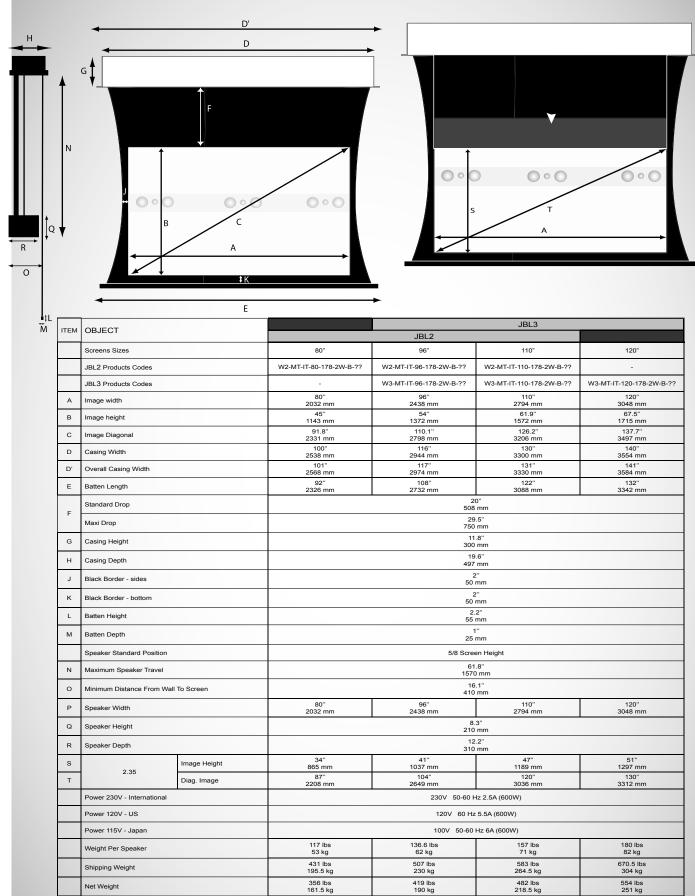


	<u> </u>			E	
ITEM	OBJECT		80"	96"	
	JBL1 Products Co	des (178 native ratio)	W1-80-178-2W-B-??	W1-96-178-2W-B-??	
	JBL1 Products Co	des (235 native ratio)	W1-80-235-2W-B-??	W1-96-235-2W-B-??	
Α	Image width		80" 2032 mm	96" 2438 mm	
	1	1.78 Native Ratio	45" 1143 mm	54" 1372 mm	
В	Image height	2.35 Native Ratio	34" 864 mm	41" 1041 mm	
_	l	1.78 Native Ratio	91.8" 2331 mm	110.1" 2798 mm	
С	Image Diagonal	2.35 Native Ratio	86.9" 2208 mm	104.4" 2651 mm	
D	Casing Width		102" 2580 mm	118" 2986 mm	
E	Batten Length		92" 2326 mm	108" 2732 mm	
	Standard Drop			0" mm	
F	Maxi Drop			.5" mm	
G	Casing Height			10.6" 270 mm	
н	Casing Depth		16	16.5" 420 mm	
J	Black Border - side	es	2	2" 50 mm	
к	Black Border - bott	om	2	2" 50 mm	
L	Batten Height		2.	2.2" 55 mm	
М	Batten Depth		1	mm	
	Speaker Standard	Position		en Height	
N	Maximum Speaker	Travel		.8") mm	
0	Minimum Distance	From Wall To Screen		.8" mm	
Р	Speaker Width		80" 2032 mm	96" 2438 mm	
Q	Speaker Height			1" mm	
R	Speaker Depth		10	.6" mm	
	Power 230V - Inter	national	230V 50-60 Hz 1.5A (350W)		
	Power 120V - US		120V 60 Hz	120V 60 Hz 3.0A (350W)	
	Power 115V - Japa	an	100V 50-60 H	lz 3.5A (350W)	
	Weight Per Speake	er	100 lbs 45 kg	110 lbs 50 kg	
	Shipping Weight		224 lbs 102 kg	251 lbs 114 kg	
	Net Weight		176 lbs 80 kg	198 lbs 90 kg	

Tolerance spec on all screens dimensions are \pm 6mm (1/4") * The 2 question marks at the end of the product code (-??) represent the options which must be specified with the order.



LeWing With JBL2/JBL3/In-Ceiling (1.78 native ratio with masking to 2.35)

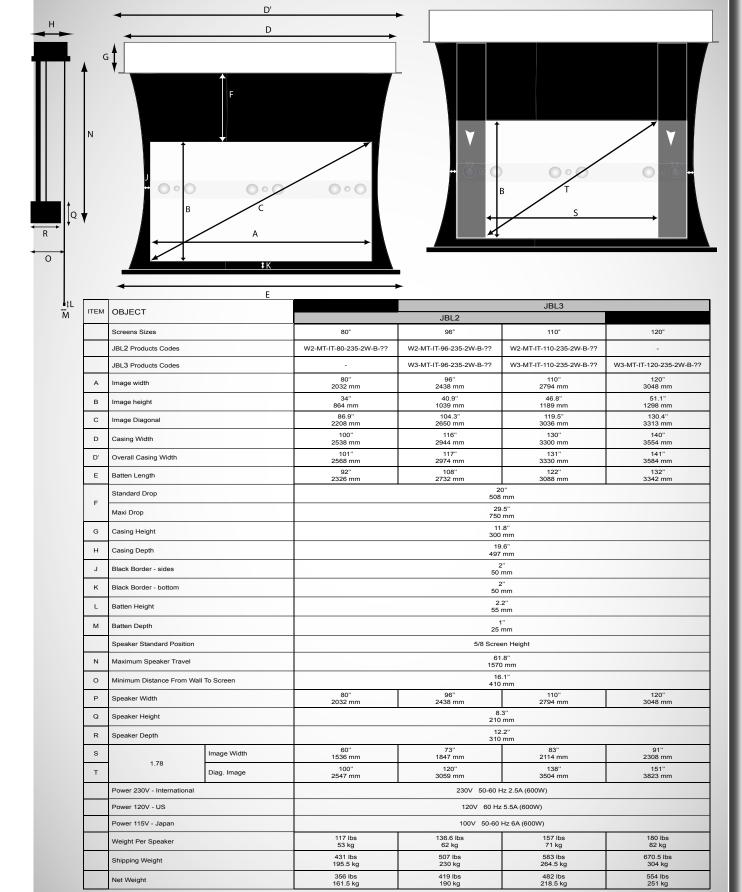


Tolerance spec on all screens dimensions are +/- 6mm (1/4")

^{*}The 2 question marks at the end of the product code (-??) represent the options which must be specified with the order.



LeWing With JBL2/JBL3/In-Ceiling (2.35 native ratio with masking to 1.78)

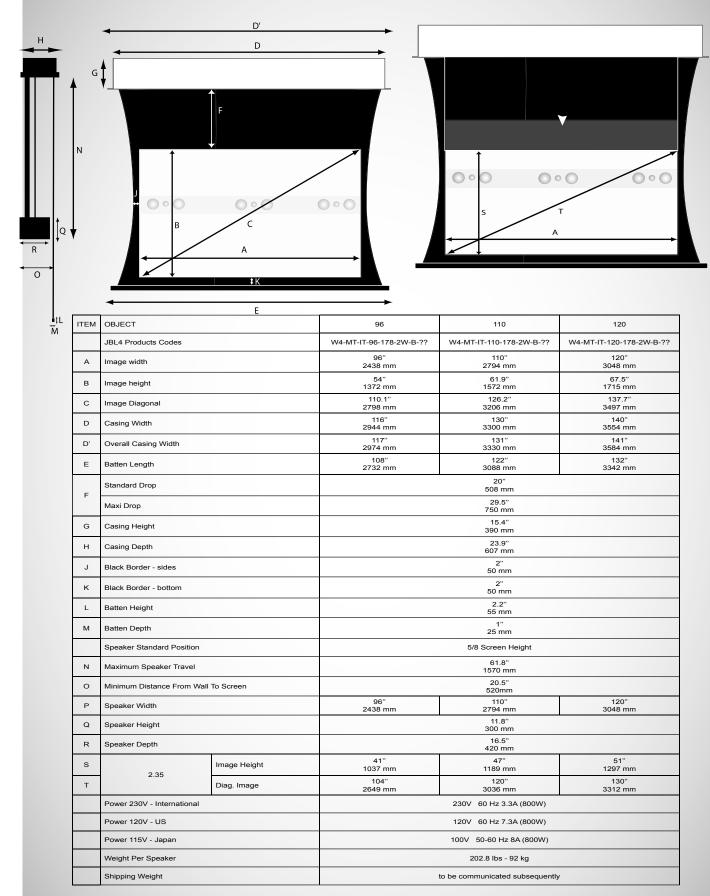


Tolerance spec on all screens dimensions are +/- 6mm (1/4")

^{*} The 2 question marks at the end of the product code (-??) represent the options which must be specified with the order.



LeWing With JBL4 / In-Ceiling (1.78 native ratio with masking to 2.35)

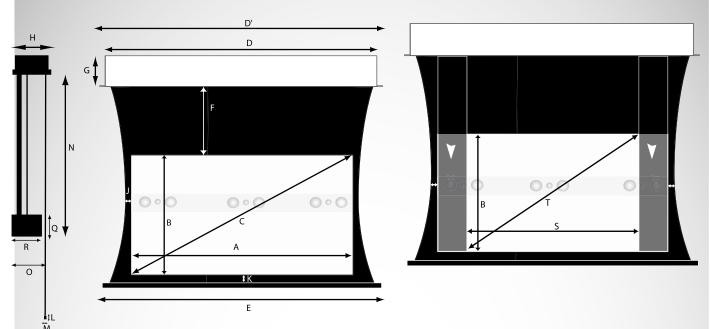


Tolerance spec on all screens dimensions are +/- 6mm (1/4")

^{*}The 2 question marks at the end of the product code (-??) represent the options which must be specified with the order.



LeWing With JBL4 / In-Ceiling (2.35 native ratio with masking to 1.78)

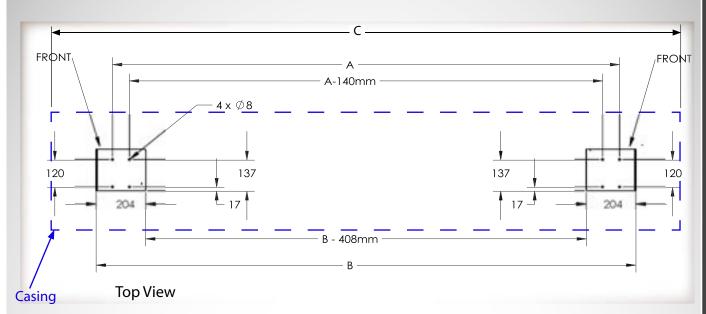


ITEM	OBJECT		96	110	120	
	JBL4 Products Codes		W4-MT-IT-96-235-2W-B-??	W4-MT-IT-110-235-2W-B-??	W4-MT-IT-120-235-2W-B-??	
А	Image width		96" 2438 mm	110" 2794 mm	120" 3048 mm	
В	Image height		40.9" 1039 mm	46.8" 1189 mm	51.1" 1298 mm	
С	Image Diagonal		104.3" 2650 mm	119.5" 3036 mm	130.4" 3313 mm	
D	Casing Width		116" 2944 mm	130" 3300 mm	140" 3554 mm	
D'	Overall Casing Width		117" 2974 mm	131" 3330 mm	141" 3584 mm	
E	Batten Length		108" 2732 mm	122" 3088 mm	132" 3342 mm	
	Standard Drop			20" 508 mm		
F	Maxi Drop			29.5" 750 mm		
G	Casing Height			15.4" 390 mm		
Н	Casing Depth			23.9" 607 mm		
J	Black Border - sides			2" 50 mm		
к	Black Border - bottom			2" 50 mm		
L	Batten Height			2.2" 55 mm		
М	Batten Depth			1" 25 mm		
	Speaker Standard Position			5/8 Screen Height		
Z	Maximum Speaker Travel			61.8" 1570 mm		
0	Minimum Distance From Wall To Screen			20.5" 520mm		
Р	Speaker Width		96" 2438 mm	110" 2794 mm	120" 3048 mm	
Q	Speaker Height			8.3" 210 mm		
R	Speaker Depth			12.2" 310 mm		
S	1.78	Image Width	73" 1847 mm	83" 2114 mm	91" 2308 mm	
Т	1.78	Diag. Image	120" 3059 mm	138" 3504 mm	151" 3823 mm	
	Power 230V - International Power 120V - US Power 115V - Japan			230V 60 Hz 3.3A (800W)		
				120V 60 Hz 7.3A (800W)		
				100V 50-60 Hz 8A (800W)		
	Weight Per Speaker			202.8 lbs - 92 kg		
	Shipping Weight			to be communicated subsequently		

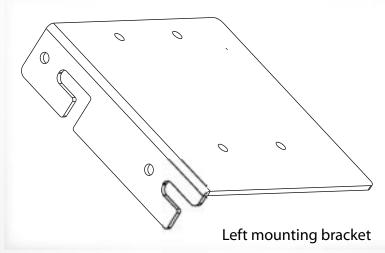
Tolerance spec on all screens dimensions are \pm 6mm (1/4") * The 2 question marks at the end of the product code (-??) represent the options which must be specified with the order.



LeWing With JBL1 / On-Ceiling Mounting Dimensions



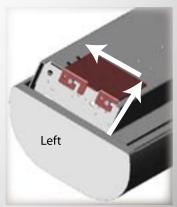
ITEM	80″	96"	
Α	2096mm	2502mm	
В	2230mm	2636mm	
С	2380mm	2686mm	



Each bracket is attached to the ceiling with four 8 mm holes. There is one left bracket and one right bracket.

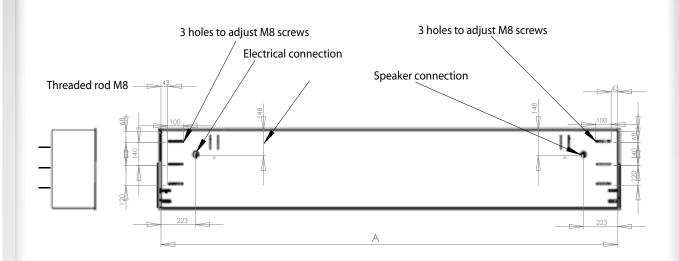
LeWing is attached to the brackets by moving first up, and then towards the back. Installation requires 40 mm of clearance in front of the LeWing's final position in order to allow this movement.

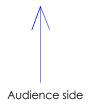
LeWing is secured by two M6x25 screws and two M8x20 (supplied).





LeWing With JBL2 / JBL3 / JBL4 / In-Ceiling Mounting Dimensions





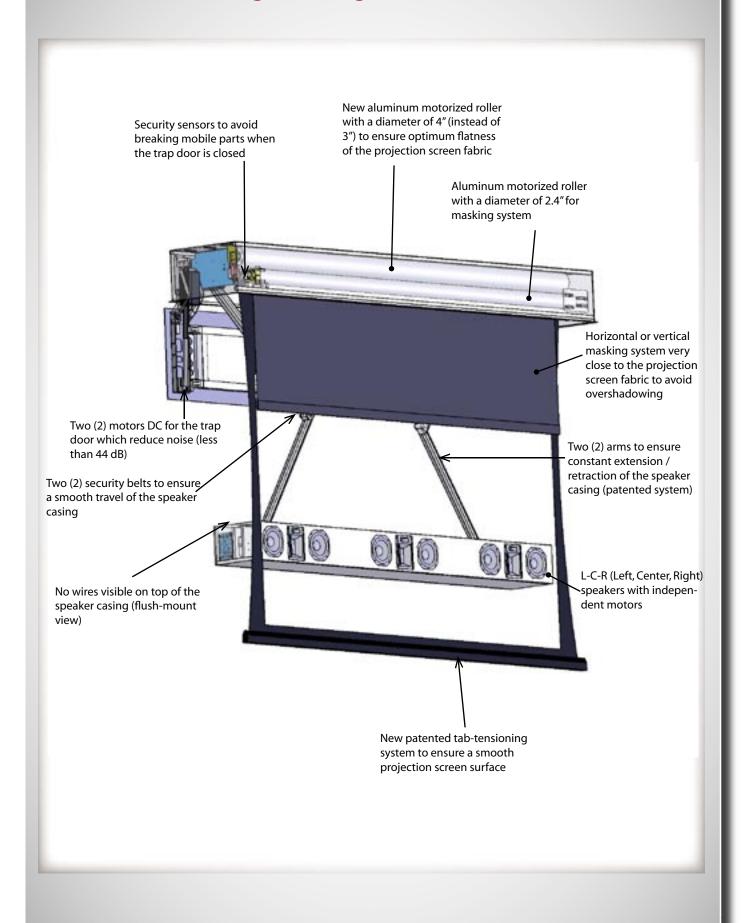
Top view



LeWing In-Ceiling Connections Switch to use only when a SRCS/ computer programming is needed RJ9 connector for optional control (IR, Dry Contact) Available end 2008 (on the "Run" position by default) Power fuse and main switch RS-232 connector AC Power 100V-240V 50-60 Hz To connect the motorized rollers: Female connector DB25 to connect the sensors (trap door, speaker casing, screen, masking) Female jack 6.35 to connect the Trap door motor 1 for speaker casing 1 for screen 1 for masking

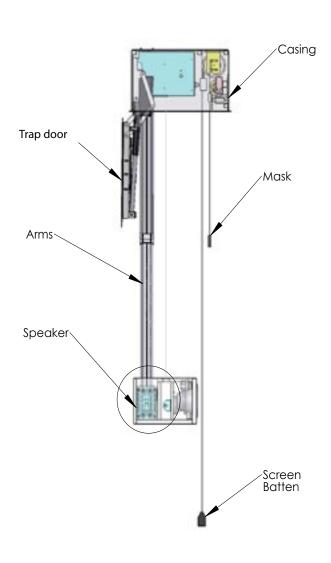


ADDENDUM 1 - LeWing In-Ceiling Features



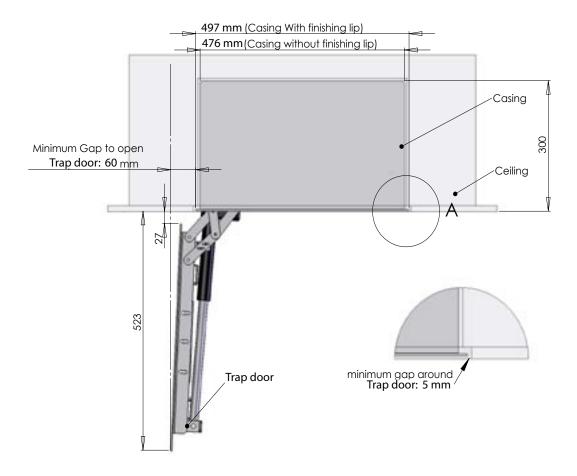


ADDENDUM 2 - LeWing In-Ceiling Speaker Casing Features





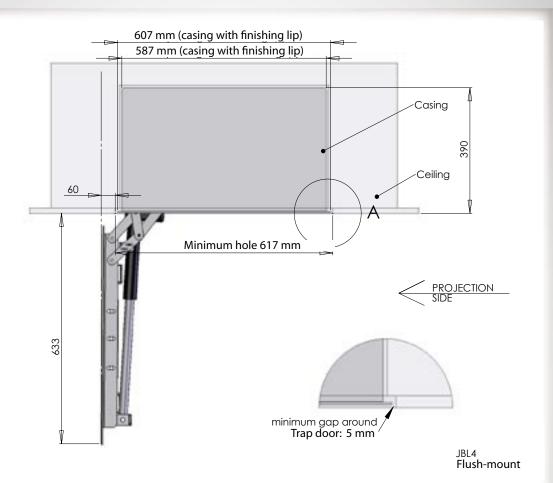
ADDENDUM 3 - LeWing JBL2 / JBL3 Trap Door Features



Mounting dimension with trap door open (flush-mount)



ADDENDUM 4 - LeWing With JBL4 Trap Door Features



Mounting dimension with trap door open (flush-mount)



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