

■ ASTRA series Specifications

SPECIFICATIONS		ASTRA 212A	ASTRA 210A	K-LA218-DSP	S3218A
Frequency Response(-10dB)		40Hz-20kHz	40Hz-20kHz	29Hz-140Hz	26Hz-135Hz
Horizontal Coverage		90°		/	
Vertical Coverage		Splay angle dependent		/	
Maximum Calculated SPL/1M	Continuous	128dB	126dB	134dB	131dB
	Program	131dB	129dB	137dB	134dB
	Peak	134dB	132dB	140dB	137dB
Drivers	HF	Customized driver, 2x1.75" voice coil,1.0" exit		/	
	LF	Customized 2x12" driver, 3.0"voice coil	Customized 2x10" driver, 2.5"voice coil	Customized 2x18" driver, 4.0"voice coil	Customized 2x18" driver, 4.0"voice coil

DSP				
Processor	96kHz signal sampling frequency, FIR filtering		96kHz signal sampling frequency	48kHz signal sampling frequency
Presets	LINEAR,2 Units,W/SUB		80Hz, 100Hz, 120Hz	80Hz, 100Hz, 120Hz

AMPLIFIER				
Amplifier	Class D			
Power(RMS standards)	1600W		2800W	2000W
Peak Power	3200W		5600W	4000W
Frequency Response(1W 8Ω 2ch)	20Hz-20kHz(±0.5dB)			
Intermodulation Distortion (20Hz-20kHz, half power)	<0.05%			
Total Harmonic Distortion (20Hz-20kHz, half power)	<0.05%			
Cooling	Cooling with fans			Cooling with fans, air convection
Protection	DC protection, Short circuit protection, Overheat protection, Output overload protection, Soft startup protection, Overvoltage protection, Undervoltage protection			
Signal Input/Output Connectors	Female XLR input, male XLR output			
Power Input Connectors	Power connector			
Power Output Connectors	Power connector		/	
AC Power Operating Range	100-130V~ / 220-240V~(±10%, 50/60Hz)			
Power consumption (1/8 output power)	176W	117W	295W	237W

CABINET				
Cabinet Material	CNC made of excellent wood		Russian birch plywood	CNC made of excellent wood
Angle Adjustment	0°,2°,4°,6°,8°,10°		/	
Coating	Durable Polyurea Coating			/
Cabinet Color	Black is the default color. Contact Audiocenter for customization			
Grille	Iron mesh			
Handles	2 side,2 rear	2 side	8 side	4 side
Speaker Dimension(W×H×D)	938×347×462mm	760×295×412mm	1080×595×760mm	1206×565×694mm
Carton Dimensions (W×H×D)	1077×436×545mm	899×374×495mm	846×1186×681mm	651×1331×780mm
Net Weight	42.0kg	30.0kg	101.0kg	68.0kg
Shipping Weight	46.0kg	34.0kg	105.0kg	74.0kg

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Dynamic Audio Solutions

Technology for Music & Arts
Designed & Engineered in Europe

BrainCore™
Technology Inside



ASTRA Series
Active DSP-controlled Line Array Loudspeaker

ASTRA provide exceptional sound quality, simple and flexible installation and highly competitive cost-performance ratio, fully satisfying the sound reinforcement requirements of medium and small-scale fixed install and touring applications like corporate events, parties, wedding, bars, night clubs, conference rooms, lecture halls, ballrooms.



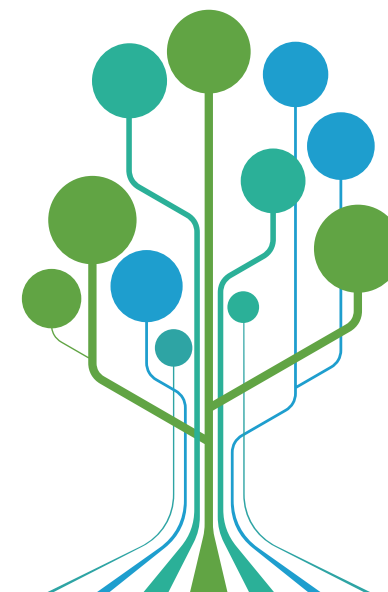
Joan La Roda
Audiocenter R&D Director

Joan La Roda is an European electro-acoustic engineer, graduated from the Polytechnic University of Valencia (Spain), began his career in the audio industry since 1990 and has held various positions since then. During these 33 years, he first worked as a touring sound engineer, gaining experience in real-life situations. Then successfully designed sound systems for the largest Spanish audio manufacturer, including a top-selling stage monitor which is with linear phase response using FIR filters. After this period, he continued his career as a loudspeaker designer for several companies.

He has published educational articles in Spanish and English on phase alignment and tuning of cardioid subwoofers and has given educational seminars in Southeast Asia, Europe, Oceania and Latin America. Recently he published a book in Spanish to help people make the right choice when buying a sound system. He now uses BEM (Boundary Element Method) techniques to design horns and line array waveguides for Audiocenter.

Design Concept

- With **FIR BrainCore™** processing technology and patents
Adhering to the principle of standing on the shoulders of giants, Audiocenter integrates top European R&D teams and top European loudspeaker and electronic suppliers.
- The most stylish and compact design of active line array loudspeaker , with exquisite workmanship, and a maximum SPL up to 134dB
- Serving the largest customer base with the best products
- Allow more people to enjoy the latest and most advanced technology
- Durable and suited to all weather conditions and scenarios



BrainCore™

BrainCore™ is an innovative core application technology researched and developed by Audiocenter, devoted to Audiocenter active DSP-controlled loudspeakers with supreme performance and high reliability.

With its advanced technology and scientific methodology, BrainCore™ analyses and processes the input signal, DSP module, Class D amplifier and loudspeaker optimally, achieving excellent frequency response and audio reproduction even at high levels of SPL.

Main Features



Innovative BrainCore™ technology to improve the audio performance of the system

The innovative BrainCore™ technology and built-in powerful DSP improve the performance of the loudspeaker. With Cort™ correction technology and Limita™ processing technology, the system works with safety and reliability and achieves supreme performance.



Advanced Digital FIR Filter Technology

FIR filtering enhances the audio's attack, ensuring a dynamic and impactful sound experience. The linear phase response preserves the original transient characteristics of the audio signal, resulting in a sharper, more defined attack.



Class D Amplifier

The power amplifier module and DSP module have been designed by Audiocenter's R&D team in Europe and manufactured according to Europe engineering standards. The system operates stably and efficiently, ensuring high-quality audio output.



Innovative ETE™ Waveguide Technology

The innovative ETE™ waveguide technology realizes the perfect joint of frequency response, which provides the accurate horizontal coverage and ensures the well-balanced, clear and clean sound for the system.



Flexible Mounting System

Equipped with full variety of accessories, it supports installation methods such as flying, stacking (4+2 combination), and pole support (2+1 combination). Simple operation, and quick setup.



Stylish, Sturdy, and Compact Cabinet Structure

The cabinet is built using high-quality birch plywood and molded parts to minimize resonance. The cabinet is compact, sturdy and has a professional and stylish appearance.



3 Presets

Three presets are available in the Astra Series, for LINEAR, 2 Units, W/SUB. The presets can be selected via a switch on the back panel.



Durable Polyurea Coating

The polyurea coating is waterproof, wear resistance, impact resistance and aging resistance.

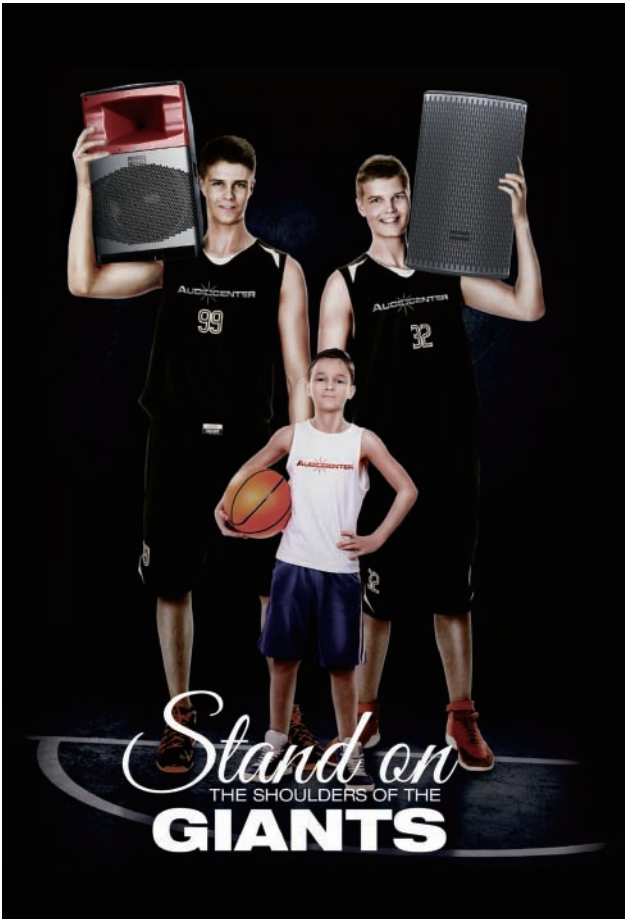


Customized Audiocenter ProDriver

Latest driver technology and Audiocenter drivers ensure a clean sound and impressive dynamics.

European R&D design, German standard engineering

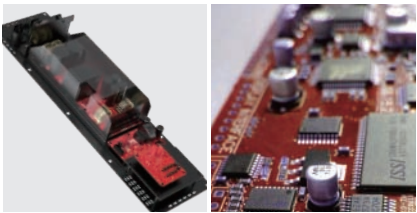
The power amplifier module and DSP module were designed by Audiocenter's R&D team in Europe and manufactured according to German standard engineering. The system operates stably and efficiently, ensuring high-quality audio output.



Advanced Digital FIR Filter Technology
FIR filtering enhances the audio's attack, ensuring a dynamic and impactful sound experience. The linear phase response preserves the original transient characteristics of the audio signal, resulting in a sharper, more defined attack.

More than 500,000 amplifier and DSP modules have been distributed worldwide along the years, proving their stability and reliability.

High-efficiency Class D Amplifier Module
The high-efficiency amplifier module can provide the highest sound output power among similar products. A single module has a peak power of up to 2200W and can provide excellent dynamic and transient response, greatly improving the audio performance of the loudspeakers.



Modular Power Amplifier Module
The modular power amplifier module adopts a sturdy mechanical structure, which can better protect the power amplifier. The tunnel-type heat dissipation also provides optimal heat dissipation efficiency (The aximum temperature rise is 30°).

Advanced Digital FIR Filter Technology

FIR filters ensure that all frequencies within the audio signal experience equal delay, preserving the natural timing and phase relationships. This remarkable feature allows for seamless integration of audio systems. Two different systems featuring linear phase response can be put in phase in the whole frequency range simply by using a delay line.

FIR filtering enhances the audio's attack, ensuring a dynamic and impactful sound experience. The linear phase response preserves the original transient characteristics of the audio signal, resulting in a sharper, more defined attack. This means that every drum hit, guitar strum, or vocal emphasis retains its full impact, allowing the audience to immerse themselves in the intricate details and nuances of the sound.

Compact and light weight cabinet design

Product design strives for ultimate compactness and lightweight, not only being small in size and easy to carry, but also boasting an astonishing pressure level of up to 134dB, achieving a perfect combination of lightweight and powerful sound output.

ASTRA 212A
Dimenton(W×H×D):938×347×462mm
Net Weight:42.0kg

ASTRA 210A
Dimenton(W×H×D):760×295×412mm
Net Weight:30.0kg



P48 Professional Audio Processor



The P48 is a professional audio processor that integrates a compressor/limiter, crossover, dynamic equalizer, delay, equalizer, input/output FIR, phase filter, and a mixing matrix, capable of performing a variety of DSP functions. With the PC software, users can quickly carry out debugging and monitoring, providing great convenience for the construction and operation of professional audio reinforcement systems.

Features

- Designed with high-performance AD/DA converter chips, P48 offers exceptional audio quality and performance with a 24-bit, 96kHz sampling rate.
- 4-channels analog input, 8-channels analog output
- FIR filter, featuring 4x1024 taps for inputs and 8x512 taps for outputs
- Each input channel is equipped with a 3-band Dynamic Equalizer (DEQ).
- Each input channel features 15-band EQ, outputs with 10-band EQ. Various filter types are selectable, including PEQ, High/Low Shelf, and Allpass.
- Both the inputs and outputs are equipped with 48th-order high-pass and low-pass crossovers, offering Butterworth, Bessel, and Linkwitz filter options.
- Both inputs and outputs provide delays of up to 1000ms, with a precision of 0.01ms.
- Each output is configured with both a compressor and a limiter for dual protection.
- The front panel controls allow for immediate muting of any input or output channel, as well as editing of all common parameters and recall of presets.
- PC software management supports simultaneous control of multiple devices.
- P48 supports various connections and controls, including USB driver-free automatic connection software, TCP/IP for centralized management and debugging of multiple devices, and an RS232 interface for central control system connection and control.

Application

- Lecture Halls
- Stadiums
- Live Shows
- Auditoriums
- Ballrooms

Specifications

Audio System Delay	<1.8ms (analog input- analog output)
AD/DA Converter	24bit
Sampling Rate	96kHz
Input Channels	4-channel electronically balanced
Input Interface	4x Female XLR
Output Channels	8-channel electronically balanced
Output Interface	8x Male XLR
Input Impedance	≥10kΩ
Output Impedance	<100Ω
Maximum Input/Output Level	≥+17dBu
Requency Response	±0.3dB,20Hz-20kHz
S/N Ratio	≥109dB @1kHz,A weighted
THD+N	≤0.005% @1kHz,0dBu,A weighted
Crosstalk	≥110dB @1kHz
Connection Type	USB/RS232/TCP/IP
AC Power Operating Range	100-240V/(±10%, 50-60Hz)
Power consumption	<20W
Rack space	1U
Dimension(WxHxD)	483x44x202mm
Net weight	3.6kg

DSP	
EQ	Each input 15-band EQ, each output 10-band EQ EQ types: PEQ, High/Low Shelf, ALLPASS
DEQ	Each input with a 3-band DEQ
Delay	Input delay: each channel 1000ms Output delay: each channel 1000ms
FIR	Input FIR :each channel 1024Taps Output FIR:each channel 512Taps
Crossover	Butterworth, Linkwitz-Riley, Bessel:6 dB/oct to 48dB/oct
Limiter	Compressor:Threshold/Knee/Attack/Ratio/Release time; Limiter:Threshold/Release time

BrainCore CU

Audio Black Box



BrainCore CU is an audio black box with flexible applications and easy configuration. Through the BrainCore™ technology, an innovative core technology independently developed by Audiocenter, based on the characteristics of different speakers and different application scenarios, scene presets that can meet a variety of application needs have been created. Users only need to call the corresponding presets according to the combination of speakers and application scenarios, and can quickly create an audio system without professional debugging, and get a more satisfactory sound effect.

Key Features

- With more than 20 years experiences of product development and system application, and repeated testing and debugging, these presets can meet a variety of application needs
- Users only need to import the system preset package through "CU Preset" to use
- Directly call the system preset package, you can get satisfactory sound effects without professional debugging
- 1 ~ 9 total 9 preset gears (0 default is BY PASS)
- BrainCore CU is with ultra compact 1U design and half 19" rack space enclosure. With customized rack adapter, it allows for single installation or side-by-side (two devices) in a 19" equipment rack.

Installation



Specifications	BrainCore CU
Audio System Delay	0.25ms (INPUT to OUTPUT)
AD/DA Converter	24Bit
Sampling Rate	96kHz
Input Channels	Two-way balanced
Input Interface	Female XLR
Output Channels	Three-way balanced
Output Interface	Male XLR
Input Impedance	> 10KΩ
Output Impedance	< 100Ω
Maximum Input Level	≥+15dBu
Requency Response	±0.3dB,20Hz-20kHz
Dynamic	≥106dB
THD+N	≤0.05% @1kHz,0dBu
Audio System Delay	USB, Free drive
AC Power Operating Range	100-240V~(±10%, 50/60Hz)
Power consumption	< 10W
Rack space	1U design and half 19" rack space enclosure
Dimension(WxHxD)	218x44x153mm
Net weight	1.0kg

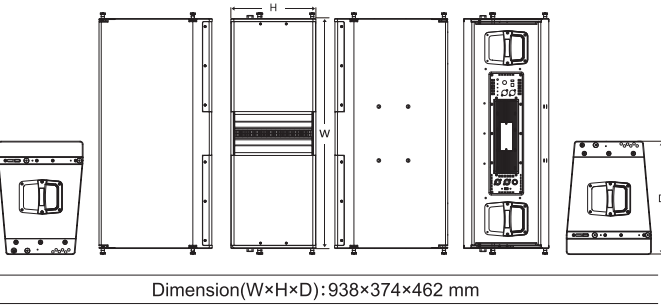


ASTRA 212A

The ASTRA 212A 12-inch two-way active line array is specially designed for small to medium-scale sound reinforcement and fixed install applications.

With the innovative ETE™ waveguide, the ASTRA 212A achieves even high frequencies diffusion, delivering clear and powerful sound. The horizontal 90 degrees horn provides precise coverage to ensure the system output is uniform, full, and smooth, allowing to the audience an exceptional auditory experience.

The cabinet is made from high-quality CNC processed plywood and with polyuria coating, giving it the characteristics of being waterproof, wear-resistant and heat-resistant as well. The compact symmetrical cabinet structure not only ensures the stability and practicality of the cabinet but also effectively reduces its volume and weight, enabling easier installation and transportation. The ASTRA 212A stands out as an ideal choice for small to medium-scale sound reinforcement applications with its excellent sound quality, stability and flexibility.



Dimension(W×H×D):938×374×462 mm

Key Features

- Perfect integration of BrainCore™ technology achieves supreme performance of the loudspeaker system.
- 3 presets
- High end DSP, with 96kHz signal sampling frequency, with FIR filter
- Class D amplifier
- Customized Audiocenter driver
- Optimized, compact cabinet design
- Durable polyurea coating is waterproof, wear and high temperature resistant.
- CNC machined plywood cabinet



Specification

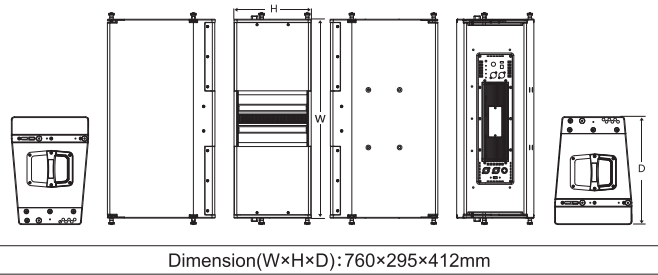
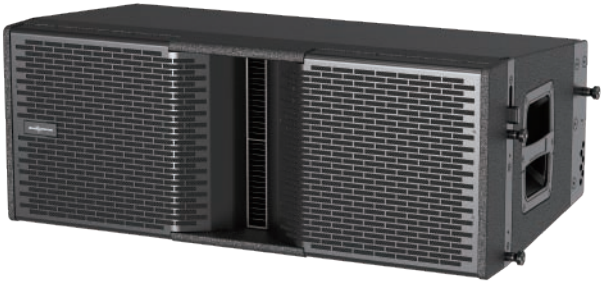
Frequency Response(-10dB)	40Hz-20kHz
Maximum Calculated SPL/1M(Continuous/Peak)	128dB/134dB
Horizontal Coverage	90°
Vertical Coverage	Splay angle dependent
HF	Customized 2x1.75"voice coil driver, 1.0"exit
LF	Customized 2x12" driver, 3"voice coil
DSP	
Processor	96kHz signal sampling frequency, FIR filtering
Presets	LINEAR,2 Units,W/SUB
AMPLIFIER	
Amplifier Circuitry	Class D
Power(RMS standards)	1600W
Peak Power	3200W
Frequency Response (1W 8Ω 2ch)	20Hz-20kHz(±0.5dB)
Intermodulation Distortion	< 0.05%
Total Harmonic Distortion	< 0.05%
Cooling System	Cooling with fans
Protection	DC protection, short circuit protection, overheat protection, input overload protection, output overload protection, soft startup protection, overvoltage protection, undervoltage protection
Output/Input	
Signal Input	Female XLR
Signal Output	Male XLR
Power Input	Power connector
Power Output	Power connector
AC Power Operating Range	100V-130V~ or 220V-240V~(±10%,50/60Hz)
Power consumption (1/8 output power)	176W
Cabinet	
Cabinet Material	CNC made of excellent wood
Angle Adjustment	0°,2°,4°,6°,8°,10°
Coating	Durable Polyurea Coating
Cabinet Color	Black is the default color. Contact Audiocenter for customization
Grille	Iron mesh
Handles	2 side,2 rear
Speaker Dimension(W×H×D)	938×347×462mm
Carton Dimensions (W×H×D)	1077×436×545mm
Net Weight	42.0kg
Shipping Weight	46.0kg

ASTRA 210A

The ASTRA 210A dual 10-inch two-way active line array is specially designed for small to medium-scale sound reinforcement and fixed install applications.

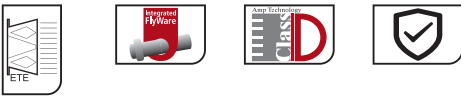
With the innovative ETE™ waveguide, the ASTRA 210A achieves even high frequencies diffusion, delivering clear and powerful sound. The horizontal 90 degrees horn provides precise coverage to ensure the system output is uniform, full, and smooth, allowing to the audience an exceptional auditory experience.

The cabinet is made from high-quality CNC processed plywood and with polyuria coating, giving it the characteristics of being waterproof, wear-resistant and heat-resistant as well. The compact symmetrical cabinet structure not only ensures the stability and practicality of the cabinet but also effectively reduces its volume and weight, enabling easier installation and transportation. The ASTRA 210A stands out as an ideal choice for small to medium-scale sound reinforcement applications with its excellent sound quality, stability and flexibility.



Key Features

- Perfect integration of BrainCore™ technology achieves supreme performance of the loudspeaker system.
- 3 presets
- High end DSP, with 96kHz signal sampling frequency, with FIR filter
- Class D amplifier
- Customized Audiocenter driver
- Optimized, compact cabinet design
- Durable polyurea coating is waterproof, wear and high temperature resistant.
- CNC machined plywood cabinet

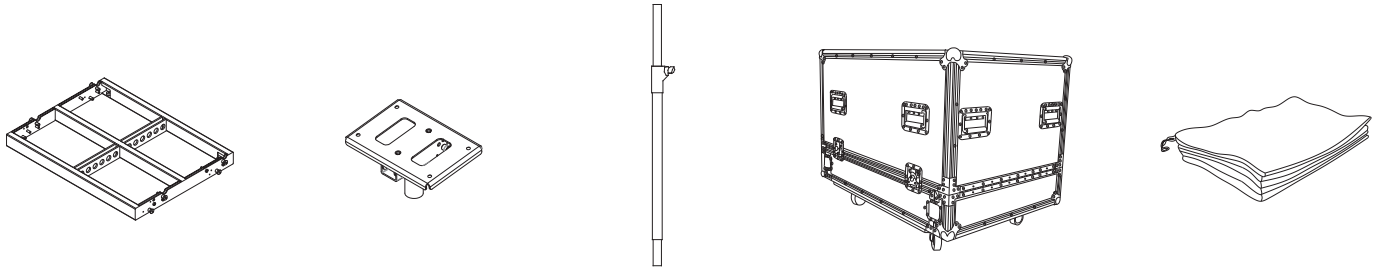


Specification

Frequency Response(-10dB)	40Hz-20kHz
Maximum Calculated SPL/1M(Continuous/Peak)	126dB/132dB
Horizontal Coverage	90°
Vertical Coverage	Splay angle dependent
HF	Customized 2x1.75"voice coil driver, 1.0"exit
LF	Customized 2x10" driver,2.5"voice coil
DSP	
Processor	96kHz signal sampling frequency, FIR filtering
Presets	LINEAR,2 Units,W/SUB
AMPLIFIER	
Amplifier Circuitry	Class D
Power(RMS standards)	1600W
Peak Power	3200W
Frequency Response (1W 8Ω 2ch)	20Hz-20kHz(±0.5dB)
Intermodulation Distortion	< 0.05%
Total Harmonic Distortion	< 0.05%
Cooling System	Cooling with fans
Protection	DC protection, short circuit protection, overheat protection, input overload protection, output overload protection, soft startup protection, overvoltage protection, undervoltage protection
Output/Input	
Signal Input	Female XLR
Signal Output	Male XLR
Power Input	Power connector
Power Output	Power connector
AC Power Operating Range	100V-130V~ or 220V-240V~(±10%,50/60Hz)
Power consumption (1/8 output power)	117W
Cabinet	
Cabinet Material	CNC made of excellent wood
Angle Adjustment	0°,2°,4°,6°,8°,10°
Coating	Durable Polyurea Coating
Cabinet Color	Black is the default color. Contact Audiocenter for customization
Grille	Iron mesh
Handles	2 side,2 rear
Speaker Dimension(W×H×D)	760×295×412mm
Carton Dimensions (W×H×D)	899×374×495mm
Net Weight	30.0kg
Shipping Weight	34.0kg



Accessories



Frame for flying and ground stacking

Adjustable Bracket (2°, 6°, 10°)

Pole bar Bearing 50kg

Flightcase For 2 cabinets, with 100mm wheels

Rain bag (customized)

Installations



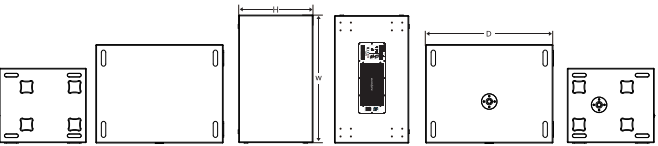
K-LA218-DSP

K-LA218-DSP, an active DSP-controlled Dual 18" subwoofer, is designed to meet the high requirements of touring performance, rental and fixed installation.

The LF drivers of K-LA218-DSP are two customized 18"drivers (4"voice coil).

User Selectable 3 low-pass filters (80Hz,100Hz,120Hz) in K-LA218-DSP are available for the users to choose according to different environments and music styles.

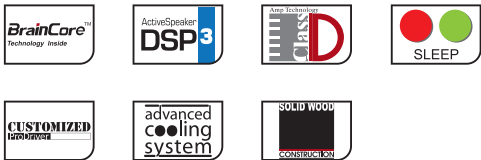
K-LA218-DSP is a perfect match for all Audiocenter full range loudspeakers, extending band width of frequency response and delivering powerful, impressive, punchy bass sound.



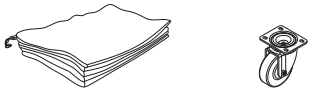
Dimension(W×H×D): 1080×595×760mm

Features

- Hi end digital controller on board (DSP) with 96kHz signal sampling frequency
- Sleep mode automatically if without signal input for 15mins
- Class D amplifier
- Advanced cooling system in the driver
- Rock solid humidity free birch plywood CNC made cabinet
- Comprehensive accessories suitable for different applications



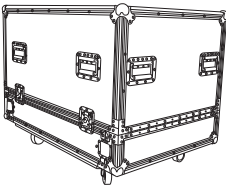
Accessories



Rain bag(customized) Wheel



Dolly
For 2 cabinets



Flightcase
For 1 cabinet,
with 100mm wheels



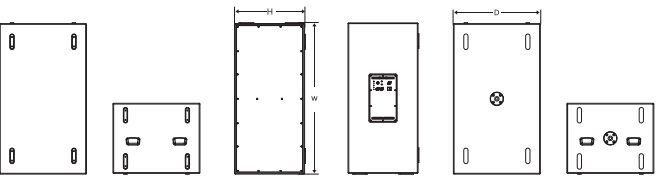
Specification

Type	Active DSP-controlled subwoofer
Frequency Response(-10dB)	29Hz-140Hz
Maximum Calculated SPL/1M(Continuous/Peak)	134dB/140dB
LF Driver	Customized 2x18" driver, 4.0"voice coil
DSP	
Processor	96kHz signal sampling frequency
Presets	80Hz,100Hz,120Hz
AMPLIFIER	
Amplifier Circuitry	Class D
Power(RMS standards)	2800W
Peak Power	5600W
Frequency Response (1W 8Ω 2ch)	20Hz-20kHz(±0.5dB)
Intermodulation Distortion	< 0.05%
Total Harmonic Distortion	< 0.05%
Cooling	Cooling with fans
Protection	DC protection, short circuit protection, overheat protection, input overload protection, output overload protection, soft startup protection, overvoltage protection, undervoltage protection
Signal Input	Female XLR
Signal Output	Male XLR
Power Input	Power connector
Power Output	/
AC Power Operating Range	100V-130V~ or 220V-240V~ (±10%,50/60Hz)
Power consumption (1/8 output power)	295W
CABINET	
Cabinet Material	Russian birch plywood CNC made
Coating	Durable Polyurea Coating
Cabinet Color	Black is the default color. Contact Audiocenter for customization
Grille	Iron mesh
Handles	8 side
Pole Mount	M20 base Φ35mm
Speaker Dimension(W×H×D)	1080×595×760mm
Carton Dimensions (W×H×D)	846×1186×681mm
Net Weight	101.0kg
Shipping Weight	105.0kg

S3218A

3 low-pass filters (80Hz, 100Hz, 120Hz) in S3218A are available to choose according to different venues and music styles. There is also phase switch. All connectors and function buttons are on the back panel.

S3218A subwoofer is with 1-way XLR for input and output. Signals can be sent to different speakers for sound distribution.



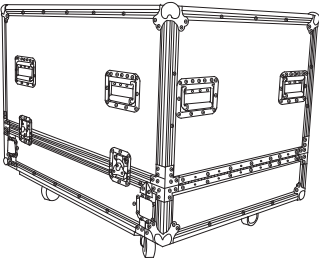
Dimension(W×H×D): 1206×565×694mm

Features

- Maximum SPL 137dB
- Customized driver
- Built in DSP with 48kHz signal sampling frequency
- Class D amplifier
- Advanced cooling system in the driver
- Optimized, compact and light weight cabinet design for easy usage
- Comprehensive accessories for different applications



Accessories



Flightcase(customized)
For 1 cabinet, with 100mm wheels

Specification

Type	Active DSP-controlled Compact Subwoofer
Frequency Response(-10dB)	26Hz-135Hz
Maximum Calculated SPL/1M(Continuous/Peak)	131dB/137dB
LF Driver	Customized 2x18" driver, 4.0"voice coil
DSP	
Processor	48kHz signal sampling frequency
Presets	80Hz, 100Hz, 120Hz
AMPLIFIER	
Amplifier Circuitry	Class D
Power (RMS standards)	2000W
Peak Power	4000W
Frequency Response (1W 8Ω 2ch)	20Hz-20kHz(±0.5dB)
Intermodulation Distortion	<0.05%
Total Harmonic Distortion	<0.05%
Cooling System	Cooling with fans, air convection
Protection	DC protection, short circuit protection, overheat protection, input overload protection, output overload protection, soft startup protection, overvoltage protection, undervoltage protection
Signal Input	Female XLR
Signal Output	Male XLR
Power Input	Power connector
AC Power Operating Range	100V-130V~ or 220V-240V~ (±10%,50/60Hz)
Power consumption (1/8 output power)	237W
CABINET	
Cabinet Material	CNC machined plywood
Cabinet Color	Black is the default color. Contact Audiocenter for customization
Grille	Iron mesh
Handles	4 side
Pole Mount	M20 base Φ35mm
Speaker Dimension(W×H×D)	1206x565x694mm
Carton Dimensions (W×H×D)	651x1331x780mm
Net Weight	68.0kg
Shipping Weight	74.0kg