



**BROOKLYN AUDIO**

**Thinking out of the box is our style.**

Our effort is to make our products better in performance, ergonomics and design.

# ABOUT



**Thinking out of the box is our style.**

Our mission is to build products that outperform expectations in performance, ergonomics and design.

**Brooklyn Audio was founded in 2012.**

Designing without compromise has always been my philosophy. After spending a lifetime learning experience 'on the road', my personal goal in creating the optimum cabinet system, has been accomplished. The result is a complete modular range of self-powered cabinets, that sounds like the original source, only louder.

The current product-range provides an optimal solution for those who are looking for the best system in handling and pristine sound quality.

**Brooklyn Audio is a sound essential.**

*Founder S. Scheepstra*

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**Brooklyn-Audio is located in the Netherlands.**

We develop and manufacture 'state of the art' professional audio systems, for live events and fixed installations. Our goal is to deliver products that outperform expectations in performance, ergonomics & design and sounds like the original source, only louder.

**Some of our engineering results:**

- Superior eye-catching and meticulously crafted designs.
- Modular flexible system architecture and product-range that can accommodate audiences from 50 to 10.000.
- All cabinets are self-powered, light-weight and user friendly.
- Integrated DSP processing presets enable all products to be used in different system configurations, creating maximum flexibility without the need for additional external processing.
- All products have a superb flat frequency-response and share an identical linear phase-response signature, delivering a pristine soundstage and excellent intelligibility.

# PROSPECT Series



## Prospect Top

Prospect Top	
<b>Transducers:</b>	
<b>Low:</b>	15" neodymium cone driver with water resistant cone
AES power	1200 watt
<b>Mid:</b>	2" coaxial hornloaded neodymium compression driver
AES power	150 watt
High	1" neodymium compression driver
AES power	80 watt
<b>Acoustical:</b>	
Maximum peak SPL	136 dB (100Hz preset)
Usable bandwidth	40Hz-20kHz +/-3dB (full-range preset)
Phase response	<+/- 40° from 300Hz - 20 kHz
Horizontal directivity	100°
Vertical directivity	20° asymmetric 0° up, 20° down
<b>Physical data:</b>	
WxHxD	530x700x530mm
Weight	36kg
Material	15mm birch plywood
Finish	Black PU coating
Grille	Steel powdercoated
Rigging	Four point rigging and pole mount
<b>Amplifier:</b>	
Power	2000/600/600 watt (Low/mid/high)
DSP	24 bit 48kHz AD/DA conversion and 26 bit processing
Gain	32 dB
Voltage gain	x 80
Input impedance	10 kOhm
Input sensitivity	1,15V/3,43 dBu
Max input level	15 dBu
AC mains power	90-400V, 50/60Hz
Protection	Thermal shutdown, short circuit/overload/HF output clip limiter, permanent signal limiter temperature controlled fan
Max environment temp.	40°C
Electrical connections	Powercon in and out, XLR in and out.

The main building-block of the Prospect series is the Prospect top. Equipped with a 15" LF-driver, coaxial 2"/1" MF/HF-driver and 'tri-amped' by a 4kW class-D integrated power/DSP-module. For the mid/high range, a custom asymmetrical horn was designed. Limiting the upward radiation pattern, preventing unwanted sealing reflections and increasing efficiency, resulting in a excellent throw up to 50 meters. Flat frequency response from 40Hz to 20kHz and linear-flat phase response from 300Hz to 20kHz. Light-weight ergonomic design, only 36 kg. Incredible power-to-size-ratio. Expandable with, 'plug-and-play', matching system-aligned components, like the Prospect-kick, Prospect-sub or X28-sub. Venues with a crowd capacity up to 2500 can be equipped with only one top cabinet per side.

Prospect  
series

# Prospect Kick

The Prospect-Kick extends the Prospect modular range. The active-powered single 15" bass-reflex cabinet may be combined with the complete range of Brooklyn-Audio cabinets.

The Prospect-Kick is optimal tuned as a woofer with an impressive dynamic and punchy response down to 40 Hz (-3dB). For larger Prospect system setups, this cabinet can be added as an extension to the Prospect-Top, delivering an extra 6 dB output. Easy selectable matching system-presets arrange an effortless 'plug-and-play' platform with superb system tuning and alignment.

Prospect Kick	
<b>Transducers:</b>	
Low	15" neodymium cone driver with water resistant cone
Voice coil	4"
<b>Acoustical:</b>	
Maximum peak SPL	136 dB (kick preset)
Usable bandwidth	35-100Hz (sub preset) 60/100-250/600Hz (kick presets)
Directivity	Omni directional
<b>Physical data:</b>	
WxHxD	530x700x530mm
Weight	32 kg
Material	15mm birch plywood
Finish	Black PU coating
Grille	Steel powdercoated
Rigging	M20 pole mount
<b>Amplifier:</b>	
Power	1500 watt class-D amp-module
DSP	24 bit 48kHz AD/DA conversion and 26 bit processing
Gain	32 dB
Voltage gain	x 80
Input impedance	10 kOhm
Input sensitivity	1,15V/3,43 dBu
Max input level	15 dBu
AC mains power	90-400V, 50/60Hz
Protection	Thermal shutdown, short circuit/overload/HF output clip limiter, permanent signal limiter, temperature controlled fan
Max environment temp.	40°C
Electrical connections	Powercon in and out, XLR in and out.



# Prospect Sub

The Prospect-Sub is a single 18" (neodymium, extreme long excursion) active-powered subwoofer, sharing identical front-dimensions and styling with the matching Prospect-Top. Developed with the best available components and materials, to produce paramount performance without compromise.

The optimal tuned cabinet delivers a massive low-end down to 25 Hz (-3 dB) and impressive rapid impulse response. The Prospect-Sub may be combined with the complete range of Brooklyn-Audio cabinets. Selectable matching system-presets arrange an effortless 'plug-and-play' platform with superb system tuning and alignment.

Built-in system-presets, support 'end-fire' and 'cardioid' configuration without the need for any external processing.

Prospect Sub	
<b>Transducers:</b>	
Low	18" neodymium cone driver with water resistant cone
Voice coil:	4,5"
AES power	1600 watt
<b>Acoustical:</b>	
Maximum peak SPL	133 dB
Usable bandwidth	30Hz-100Hz +0/-3dB (25Hz - 6 dB)
Directivity	Omni directional
<b>Physical data:</b>	
WxHxD	530x700x650mm
Weight	52kg
Material	18mm birch plywood
Finish	Black PU coating
Grille	Steel powdercoated
Rigging	M20 pole mount
<b>Amplifier:</b>	
Power	2100 watt class-D amp-module
DSP	24 bit 48kHz AD/DA conversion and 26 bit processing
Gain	32 dB
Voltage gain	x 80
Input impedance	10 kOhm
Input sensitivity	1,15V/3,43 dBu
Max input level	15 dBu
AC mains power	90-400V, 50/60Hz
Protection:	Thermal shutdown, short circuit/overload/HF output clip limiter, permanent signal limiter, temperature controlled fan
Max environment temp.	40°C
Electrical connections	Powercon in and out, XLR in and out.



Prospect series

# X28 Subwoofer



## X28 subwoofer

### Transducers:

Low	2x18" wheater resistant neodymium cone driver
AES power	2x1600 watt
Max SPL	139 dB

### Acoustical:

Usable bandwidth:	30Hz-100Hz +0/-3dB
Directivity:	Omni

### Physical data:

WxHxD	600x730x900 mm (WxHxD) without wheels
Weight	80kg
Material	18mm birch plywood
Finish	Black PU coating
Grille	Steel powdercoated
Rigging	Optional

### Amplifier:

Power	4000 watt class-D amp-module
DSP	24 bit 48kHz AD/DA conversion and 26 bit processing
Gain	32 dB
Voltage gain	x 80
Input impedance	10 kOhm
Input sensitivity	1,15V/3,43 dBu
Max input level	15 dBu
AC mains power	90-400V, 50/60Hz
Protection	Thermal shutdown, short circuit/overload/HF output clip limiter, permanent signal limiter, temperature controlled fan
Max enviroment temp.	40°C
Electrical connections	Powercon in and out, XLR in and out.

The X28 is a dual-18" (neodymium, extreme long excursion) active powered (4kW class-D with DSP) compact subwoofer, suited for medium to large indoor/outdoor system applications. The ergonomic design delivers a user-friendly and easy stackable system.

Developed with the best available components and materials, to produce an extremely powerful output without compromise.

The optimal tuned cabinet delivers a massive low-end down to 25 Hz (-3 dB) and impressive rapid impulse response.

The X28 may be combined with the complete range of Brooklyn-Audio cabinets.

Selectable matching system-presets arrange an effortless 'plug-and-play' platform with superb system tuning and alignment.

Built-in system-presets (4x), support 'infra-sub', 'end-fire' and 'cardioid' configuration without the need for any external processing.

X28 subwoofer

The best sound-source, is a point source (all frequencies are being radiated from one infinite small location). The characteristics of a coaxial driver come closest to an ideal point source.

This is the primary reason why all Brooklyn-Audio short-throw cabinets are equipped with a coaxial driver. Each model is powered by a dual-channel class-D, light weight amplifier-module, fitted with pristine DSP processing.

The combination of 'state of the art' components and optimal system tuning, deliver a transparent and powerful sound. Each cabinet has an identical phase-response signature and comes with 4 'plug-and-play' system-presets. This makes it very easy to combine with any product from the complete Brooklyn-Audio product-range.

# Coax Series



**The Coax6** is the most compact family member that comes with an impressive performance.

The linear phase-response signature delivers a very clear and 'in your face' soundstage with excellent intelligibility.

Powered by a 190/60-watt class-D amplifier-module with integrated DSP (with 4 presets, supporting different system configurations), makes the Coax6 a user-friendly 'plug-and-play' system.

It is the perfectly suited for conventions in small to medium sized venues, front or balcony fill for theatre, full range background music in bars, restaurants, boardrooms etc. (also available in white) In combination with the Prospect kick, the system is suited for live music or DJ's in small venues up to 100 people, a perfect example that a very compact-system can sound 'big'.

**The Coax12** is the most 'all-round' model in the product-range for applications where compact size with outstanding performance matters.

The linear phase-response signature delivers a very clear and 'in your face' soundstage with excellent intelligibility.

Powered by a 700/190-watt class-D amplifier-module with integrated DSP (with 4 presets, supporting different system configurations), makes the Coax12 a user-friendly 'plug-and-play' system.

It is the ideal cabinet for bands, presentations, conferences, fixed installations and many other applications. (also available in white)

When combined with the Brooklyn-Audio subwoofers, the system is suited for live music or DJ's in venues up to 250 people, providing a very compact and powerful system.

Model:	Coax 6	Coax 12
<b>Transducers:</b>		
<b>Low</b>	6,5" neodymium weather protected driver	12" neodymium weather protected driver
AES power	150 W	350 W
<b>High</b>	1" coaxial mounted driver	1,4" coaxial mounted driver
AES power	30W	90W
<b>Acoustical:</b>		
Maximum SPL	116 dB (100Hz preset)	128 dB (100Hz preset)
Usable bandwidth	80Hz-16kHz +/-3dB	50Hz-16kHz +/-3dB
Phase response	<+/- 40° from 300Hz-20kHz	<+/- 40° from 300Hz-20kHz
Directivity	80° conical	80° conical
<b>Physical data:</b>		
WxHxD	200*350*220 mm	350*530*400 mm
Weight	6kg	16kg
Material	12 mm birch plywood	15mm birch plywood
Finish	Black PU coating*	Black PU coating*
Grille	Steel powdercoated	Steel powdercoated
Rigging	6 M8 rigging points and a pole mount	6 M8 rigging points and a pole mount
<b>Amplifier:</b>		
Power	190/60 watt	700/190 watt
	24 bit 48kHz AD/DA conversion and 26 bit processing	24 bit 48kHz AD/DA conversion and 26 bit processing
Gain	32 dB	32 dB
Voltage gain	x 80	x 80
Input impedance	10 kOhm	10 kOhm
Input sensitivity	1,15V/3,43 dBu	1,15V/3,43 dBu
Max input level	15 dBu	15 dBu
AC mains power	70-290V, 50/60Hz	70-290V, 50/60Hz
Protection	Thermal shutdown, short circuit/overload/HF output clip limiter, permanent signal limiter temperature controlled fan	
Max environment temp.	40°C	40°C
Electrical connections	Powercon in and out, XLR in and out	Powercon in and out, XLR in and out

*\*Also available in white, other colors optional.*



# Coax series

# Monitor FL122



<b>Monitor FL122</b>	
<b>Transducers:</b>	
<b>Low</b>	12" neodymium weather protected driver
AES power	350 watt
<b>High</b>	1,4" coaxial mounted driver
AES power	90 watt
<b>Acoustical:</b>	
Maximum SPL	128 dB (100Hz preset)
Usable bandwidth	50Hz-16kHz +/-3dB
Phase response	<+/- 40° from 300Hz-20kHz
Directivity	80° conical
<b>Physical data:</b>	
WxHxD	435*390*510 mm
Weight	16kg
Material	15mm birch plywood
Finish	Black PU coating
Grille	Steel powdercoated
Rigging	Pole mount available
Driver angle	27,5° from horizontal
<b>Amplifier:</b>	
Power	700/190 watt
DSP	24 bit 48kHz AD/DA conversion and 26 bit processing
Gain	32 dB
Voltage gain	x 80
Input impedance	10 kOhm
Input sensitivity	1,15V/3,43 dBu
Max input level	15 dBu
AC mains power	70-290V, 50/60Hz
Protection	Thermal shutdown, short circuit/overload/HF output clip limiter, permanent signal limiter temperature controlled fan
Max enviroment temp.	40°C
Electrical connections	Powercon in and out, XLR in and out.

The user friendly active-powered stage monitor. Transparent mid/high, combined with an impressive low-end performance. Light weight ergonomic construction with an integrated handle bar in the front side of the cabinet, that house all cable connections and the bass-reflex port. The 12"-coaxial loudspeaker is protected by an 'abuse resistant' steel grille. Very high 'gain before feedback' headroom, 'plug-and-play' system-presets for vocal, full-range and top-cabinet applications are standard available.

Monitor FL122

# Modular options



The line-array module is suited for medium to large indoor/outdoor applications. Full-range bi-amped dual-10"/2"/1" driver configuration. Equipped with a 3-dimensional wave-guide, which is designed for real line-source-system coupling, delivering an outstanding throw up to 100m. Ultra-fast BA-rigging system for easy and safe rigging, loading capacity up to 16 cabinets. Additional flexible rigging options are available, supporting various system configurations with or without flown subs.

# Line 10



Line 10	
<b>Transducers:</b>	
<b>Low:</b>	2*10" neodymium cone driver
Impedance:	16 Ohm
AES power:	1400Watt/150V
Sensitivity:	98 dB 1W/1m
<b>Mid/High:</b>	2"/1" coaxial neodymium compression driver behind a 3D waveguide*
Impedance:	16 Ohm
AES power:	150 watt/48V
Sensitivity:	118 dB 1W/1m
<b>Usable bandwidth:</b> 60Hz-20kHz +0/-3dB	
<b>Phase:</b> +/-30° 300Hz-16kHz	
<b>Directivity:</b>	
Horizontal:	120°
Vertical:	Depends of the splay between and the number of cabinets.
<b>Electrical connections:</b> 2 Speakon NL4 connectors, low 1+/- high 2+/-	
<b>Physical data:</b>	
WxHxD:	620x312x620mm
Weight:	34kg
Material:	birch plywood
Finish:	Black PU coating
Grille:	Aluminium anodized with integrated rigging.
Available colours:	Blank or black anodized
Rigging:	Brooklyn-Audio rigging with 0, 0,5, 1, 1,5, 2, 3, 4, 5, 6, 7 and 8 degree angles Safety factor >10:1 up to 16 cabinets
Flybumper:	BABUMP eight/ten

\*passive filter between the 2" and 1" driver

Line 10

The powerful DJ monitor that comes with an exclusive design, featuring DMX controlled integrated RGB LED lighting. Can be used as stand-alone DJ monitor or in combination with the Prospect kick / Prospect sub. Powered by a dual-channel Class-D amplifier-module with advanced DSP.

# Xtreme 6



<b>Xtreme 6</b>	
<b>Transducers:</b>	
<b>Low</b>	4x6,5" neodymium cone driver
Impedance	8 Ohm
AES power	1200 watt
<b>Mid/High:</b>	1" hornloaded neodymium compression driver
Impedance	16 Ohm
AES power	75 watt
Usable bandwidth	80Hz-20kHz +0/-3dB
Phase	+/-40° 300Hz-20kHz
<b>Directivity:</b>	
Horizontal	60° conical
Vertical	
<b>Physical data:</b>	
WxHxD	600x270 mm without bracket
Weight	26kg
Material	18 mm birch plywood
Finish	Black or white PU coating*
Grille:	Stainless steel
Rigging:	Stainless steel bracket for pole mount
<b>Amplifier:</b>	
Power	2 channel, 1050 Watt per channel
DSP	24 bit 48kHz AD/DA conversion and 26 bit processing
Gain	32 dB
Voltage gain	x 80
Input impedance	10 kOhm
Input sensitivity	1,15V/3,43 dBU
Max input level	15 dBU
AC mains power	90-264 V, 50/60Hz
Protection	Thermal shutdown, short circuit/overload/HF output clip limiter, permanent signal limiter, temperature controlled fan
Max environment temp.	40°C
Electrical connections	XLR in and out
<b>RGB LED</b>	
Total power:	120W max.
DMX:	RJ-45 and XLR connection

*\*Also available in white, other colors optional.*



# Extreme 6

## Design Essentials

### Alignment

Timing correctness is the most underrated quality aspect of a loudspeaker system.

The standard way of judging the quality of a loudspeaker system is by assessing its frequency magnitude response performance. This response curve is always highly influenced by the room acoustics characteristics and placement. It is relatively easy to correct these magnitude errors.

It is a different story for the phase-response curve, which shows the time relationship and its variation over the frequency spectrum of the system.

Low frequencies are notorious difficult to be reproduced in a 'time correct' manner by a loudspeaker system. Crossover filters, mass and mechanical damping of the loudspeaker, a ported enclosure, all add to an increasing delay as the frequency gets lower. This 'lagging behind' or group-delay can easily add-up to values higher than 100ms (which equals close to 35 meters extra distance!).

These delays degrade the sound reproduction quality. Without proper measurement equipment, it is not always easy to identify this as a sound-system design-error and adequate correction is often not possible afterwards.

Speech intelligibility, tight and punchy dynamics, the accuracy and stability of instrument placement in the stereo-image, are all influenced by the phase response behaviour (the less deviation, the better the result).

All Brooklyn-Audio systems are designed with an identical phase-response signature. They deliver a perfect flat response from 300Hz and up, within a narrow 40° window. As a result,

all frequencies are reproduced in a 'timecorrect' manner, contributing to an excellent impulse response.

Loudspeakers with a different phase-response cannot be combined within a system, as their difference in group-delay result in incorrect summation. This behaviour badly affects the frequency magnitude response.

As all Brooklyn-Audio systems share an identical phase-response signature, they can be used in any combination. The complete product range has been designed with this flexible modular concept in mind.

### Impulse response

The impulse-response shows the ability of a system to accurately reproduce and follow the dynamics of a signal. A perfect impulse-response is an infinitely short peak with no overshoot and no decay. In real-life this perfect response is impossible to realize, as electronics and mechanical properties of loudspeakers all have limitations. Nevertheless, the impulse response delivers a clear indication if the various system components are perfectly time-aligned with a matching phase-response. Overshoot, smearing and decay should be as low as possible. Besides selecting the best drivers for the task, controlling the drivers with amplifiers that have short cabling connections and a high damping-factor contribute to a better impulse-response. This is one of the primary reasons why Brooklyn-Audio chose to integrate the amplifiers and cabinets into self-powered systems.

### Frequency response:

#### Sub:

The Sub frequency spectrum (20-100Hz) requires the most energy to reproduce in a sound system. Most modern music contains a peak range from 50-80Hz and has often very little musical content under 30Hz. It is important that the sub can reproduce down to 30Hz with a high efficiency as this substantially adds to the quality perception of the overall system. The sound-waves that a Sub produces are practically omnidirectional, this means that sound is radiated evenly as a sphere into any direction. This sphere like radiation behaviour in combination with the high energy involved and long distances that low frequencies can travel, contribute to 'sound spill' problems at concerts and events, which can often lead to neighbourhood disturbance complaints. The most efficient solution to deal with these problems is to 'focus' the sound-waves into a directional projection pattern with a cardioid setup. By careful positioning and DSP-processing, Sub radiation patterns can be 'steered' and focused.

Brooklyn-Audio sub-woofers contain built-in system-presets to support 'endfire' and 'cardioid' configuration without the need for any additional external processing. These 'plug-and-play' presets require no additional measurement and alignment procedures and make it very easy to absorb rear-radiating low frequencies, reducing the risk of spillage related complaints.

#### Low-mid:

The Low-mid frequency spectrum (100-300Hz) is very important in the reproduction of dynamics and 'headroom' perception of the system. Almost any instrument and vocals have essential

content in this frequency-range. We notice many system-vendors struggling with the trade-off between quality and SPL, as this frequency-range is very demanding on the drivers and prone for excessive distortion. All Brooklyn-Audio systems are equipped with components that excel in this spectrum and are over-dimensioned to guarantee a low distortion reproduction with 'tons' of headroom.

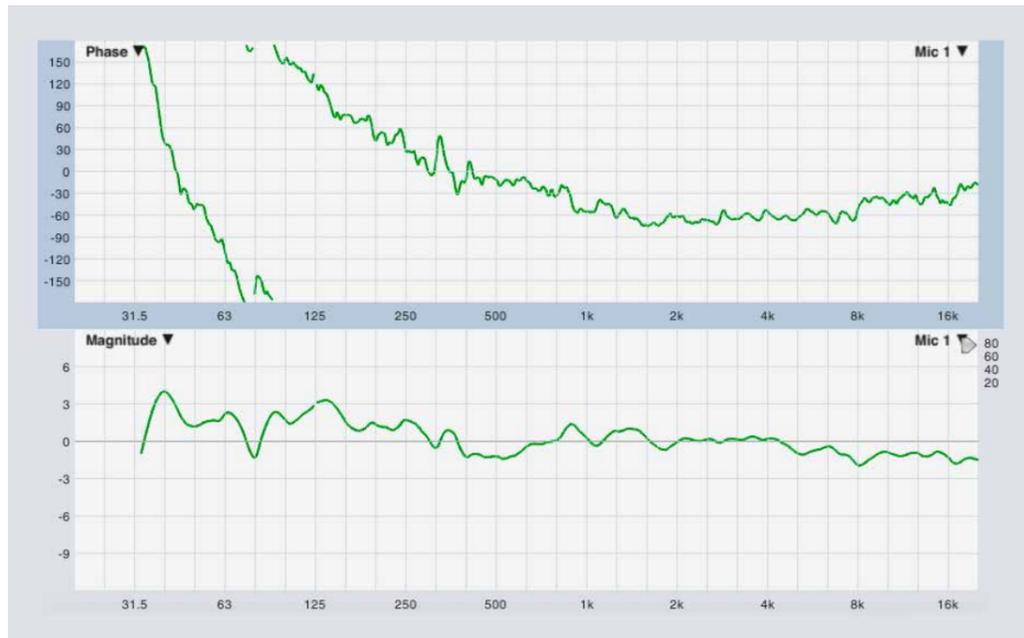
#### High-Mid:

The High-mid frequency spectrum (300Hz-6kHz) covers most of the vocal range. The spectrum between 2-4kHz is the most sensitive area of our hearing. A few dB too much can lead to an unpleasant listening experience, while a few dB too little can cause problems with speech intelligibility. All Brooklyn-Audio systems are equipped with components that are selected for low-distortion and low-coloration in a wide dynamic range and processed to an ultra-flat frequency response and linear phase response.

#### High:

The High frequency spectrum (6-20kHz) is important in producing essential harmonics that are critical for the detailing of character definition from various instruments. We see many system vendors applying a hi-shelf correction to add 'a liveliness color' to the overall impression, masking the problems that result from incorrect transient impulse reproduction. This leads to an overall instable and 'hyped' sound-image and contributes to listening-fatigue.

The Brooklyn-Audio high frequency reproduction is tailored to represent exactly the source, no more and no less. This results into a relaxed and detailed listening experience even at high volumes.



Typical phase/frequency response of a Brooklyn-Audio system. (live measurement)



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