VIBE®

British Audio

CVEN®

SERIES 7

SPEAKERS

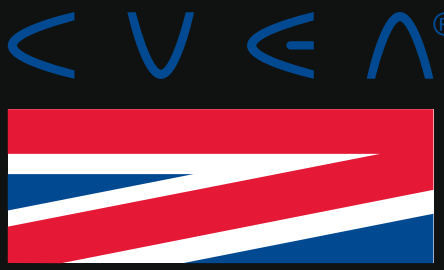
Designed and engineered in England, UK

British Audio

The CVEN speakers were designed by the Vibe Research and Development team of UK and European engineers headed by company founder Carl Venables.

The design brief was to create both a two way and a three way component speaker that delivers a realistic reproduction of recorded sound.

Each component of the system is matched and balanced to produce a linear frequency response which enables the listener to appreciate music as the artist originally intended.



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THE RANGE

CVEN62C-V4

CVEN63C-V4

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CVEN 6 MIDWOOFER

The CVEN 6 has a wide and flat frequency response, enabling it to be common to both a two way and three way component kit.

The midwoofer is designed to overcome the inherent problems of every loudspeaker design: distortion, power handling, dynamic response and efficiency.

VIBE understand that the key to high quality audio reproduction is matching and balancing the magnet, basket, voice coil, spider, cone and surround.

With twenty two years of design experience we believe we have created our best sounding loudspeaker to date.

CVEN 6 FEATURES

- Aluminium field-stabilizing ring inside magnet assembly for reduced high-level distortion
- Vented voice coil former for reduced distortion and compression
- New vented chassis for lower air flow speed reducing audible distortion
- Heavy-duty black fibreglass voice coil bobbin to increase power handling and reduce mechanical losses resulting in better dynamic performance and low-level details
- Large motor system with 1.3” voice coil diameter and 90 mm magnet for better control, power handling, and efficiency
- Black magnet parts for better heat transfer to increase power handling
- Linear suspension with specially designed Conex damper (spider) for long durability under extreme operating conditions
- Gold plated terminals to prevent oxidation, for long-term reliable connection

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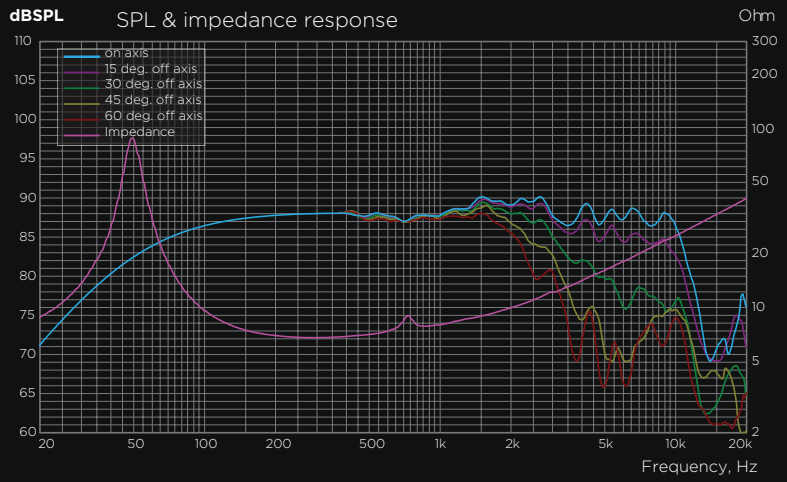
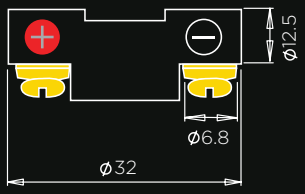
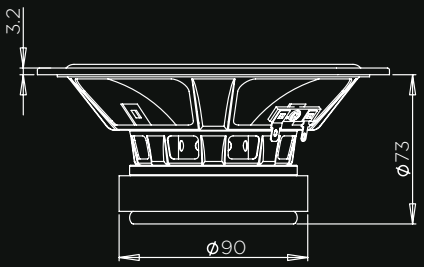
CVEN 6 MIDWOOFER SPECIFICATIONS

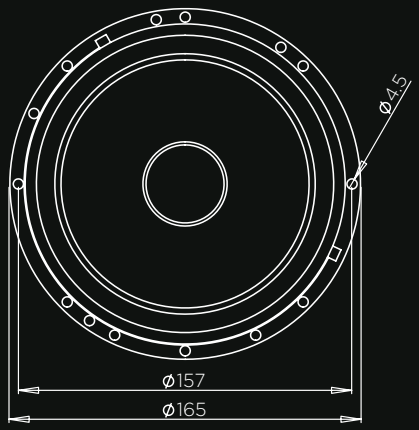


Measuring conditions

Driver mounting: free air, no baffle, back side open (no cabinet)
Input signal: Semi-current-drive, nominal current 2 mA
Smoothing: None







CVEN 6 TS PARAMETERS

Notes	Parameter	CVEN 6		Unit
		Before burn-in	After burn-in	
	Nominal size	6½		[inch.]
	Nominal impedance	4		[ohm]
	Recommended max. upper frequency limit	3		[kHz]
1	Sensitivity, 2.83v/1m (average SPL range 200-1kHz)	91.5		[dB]
2	Power handling, short term, IEC 268-5	120		[W]
2	Power handling, long term, IEC 268-5	30		[W]
2	Power handling, contunuous, IEC 268-5	60		[W]
	Effective radiating area, Sd	139		[cm^2]
3, 6	Resonance frequency (free air, no baffle) Fs	47.5		[Hz]
	Moving mass, incl. air (free air, no baffle), Mms	12.5		[g]
3	Force factor, Bxl	5.1		[N/A]
3, 6	Suspension compliance, Cms	0.90		[mm/N]
3, 6	Equivalent air volume, Vas	24.6		[lit.]
3, 6	Mechanical Q, Qms	7.0		[-]
3, 6	Electrical Q, Qes	0.46		[-]
3, 6	Total Q, Qts	0.43		[-]
4	Voice coil resistance, RDC	3.2		[ohm]
5	Voice coil inductance, Le (measured at 10 kHz)	0.24		[mH]
	Voice coil inside diameter	32		[mm]
	Voice coil winding height	11		[mm]
	Air gap height	5		[mm]
	Magnet weight	400		[g]
	Total unit net weight excl. packaging	1.03		[kg]
3, 5	Krm	0.46		[mohm]
3, 5	Erm	0.88		[-]
3, 5	Kxm	5.2		[mH]
3, 5	Exm	0.69		[-]

Note 1 Measured in Infinite baffle.
Note 2 Tested in free air (no cabinet).
Note 3 Measured using a semi-constant current source, nominal level 2 mA.
Note 4 Measured at 20 deg. C
Note 5 it is generally a rough simplification to assume that loudspeaker transducer voice coils exhibit the characteristics of an inductor. Instead it is a farmore accurate approach to use the more advanced model often referred to as the “Wright empirical model”, also used in LEAP-4 the TSL model (www.linearx.com), involving parameters Krm, Erm,Kxm, and Exm.
Note 6 After burn in specifications are measured 12 hours after exiting the transducer by a 20Hz sine wave for 2 hours at 10/14v RMS
The unit is not burned in before shipping.

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CVEN 3 MIDRANGE

The 3.5” transducers were designed especially for high quality musical reproduction with particular attention to the all important vocal region.

These drivers were designed to perfectly compliment the CVEN 1 tweeter and CVEN 6 Midwoofer to create an unparalleled 3 way speaker system.

CVEN 3 FEATURES

- Vented voice coil former for reduced distortion and compression
- Vented chassis for lower air flow speed reducing audible distortion
- Voice coil wound with Copper Clad Aluminium Wire for higher efficiency and better dynamics
- Heavy-duty black fibreglass voice coil bobbin to increase power handling and reduce mechanical losses resulting in better dynamic performance and low-level details
- Low-loss suspension (high Qm) for better reproduction of details and dynamics
- Black magnet parts for better heat transfer to increase power handling
- Progressive suspension with specially designed CONEX damper (spider) for long durability under extreme operating conditions
- Gold plated terminals to prevent oxidation for long-term reliable connection

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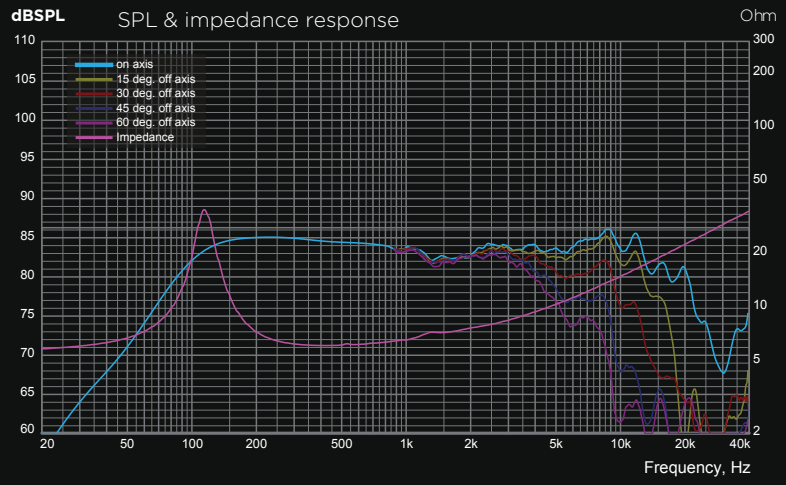
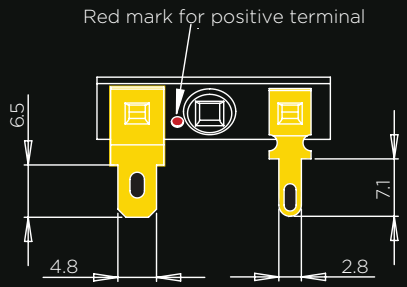
CVEN 3 MIDRANGE SPECIFICATIONS

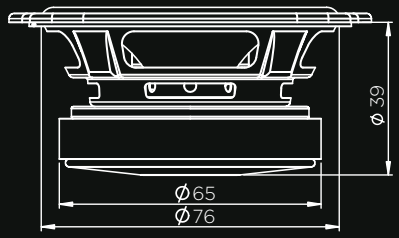


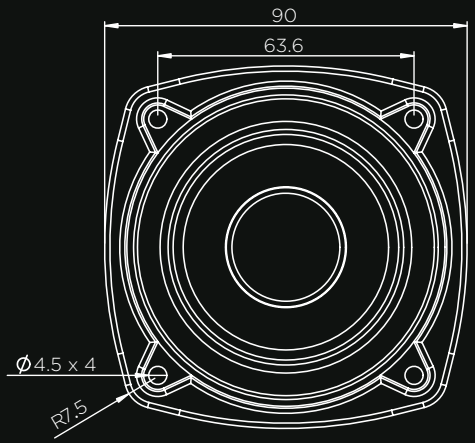
Measuring conditions

Driver mounting: free air, no baffle, back side open (no cabinet)
Input signal: Semi-current-drive, nominal current 2 mA
Smoothing: None



Thickness, both terminals: 0.5 mm
Terminal plating: Gold





CVEN 3 TS PARAMETERS

Notes	Parameter	CVEN 3		Unit
		Before burn-in	After burn-in	
	Nominal size	3½		[inch.]
	Nominal impedance	4		[ohm]
	Recommended max. upper frequency limit	5		[kHz]
1	Sensitivity, 2.83v/1m (average SPL range 200-1kHz)	86.5		[dB]
2	Power handling, short term, IEC 268-5	80		[W]
2	Power handling, long term, IEC 268-5	20		[W]
2	Power handling, contunuous, IEC 268-5	40		[W]
	Effective radiating area, Sd	36		[cm^2]
3, 6	Resonance frequency (free air, no baffle) Fs	115	109	[Hz]
	Moving mass, incl. air (free air, no baffle), Mms	3.5		[g]
3	Force factor, Bxl	2.9		[N/A]
3, 6	Suspension compliance, Cms	0.55	0.62	[mm/N]
3, 6	Equivalent air volume, Vas	1.02	1.14	[lit.]
3, 6	Mechanical Q, Qms	6.4	6.1	[-]
3, 6	Electrical Q, Qes	0.92	0.87	[-]
3, 6	Total Q, Qts	0.81	0.81	[-]
4	Voice coil resistance, RDC	3.1		[ohm]
5	Voice coil inductance, Le (measured at 10 kHz)	0.14		[mH]
	Voice coil inside diameter	22		[mm]
	Voice coil winding height	8.5		[mm]
	Air gap height	3		[mm]
	Magnet weight	135		[g]
	Total unit net weight excl. packaging	0.34		[kg]

Note 1 Measured in Infinite baffle.
Note 2 Tested in free air (no cabinet).
Note 3 Measured using a semi-constant current source, nominal level 2 mA.
Note 4 Measured at 20 deg. C
Note 5 it is generally a rough simplification to assume that loudspeaker transducer voice coils exhibit the characteristics of an inductor. Instead it is a farmore accurate approach to use the more advanced model often referred to as the “Wright empirical model”, also used in LEAP-4 the TSL model (www.linearx.com), involving parameters Krm, Erm, Kxm, and Exm.
Note 6 After burn in specifications are measured 12 hours after exiting the transducer by a 20Hz sine wave for 2 hours at 10/14v RMS The unit is not burned in before shipping.

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CVEN 1 TWEETER

The CVEN 1 features a 22 mm voice coil and wide surround which delivers an extended bandwidth that would usually require multiple drivers to achieve.

Featured with a rear chamber these compact tweeters offer very low resonance frequency which further increases the tweeters ability to produce frequencies thought impossible by a driver of this size.

In order to keep distortion and resonance frequency low the CVEN 1 Tweeter is designed around an external neodymium ring magnet in order to allows for a larger internal volume than that of traditional neodymium tweeters providing improved frequency response .

CVEN 1 FEATURES

- 22 mm design for optimal compromise between on- and off-axis frequency response, resonance frequency, and power handling
- Rear chamber for low resonance frequency and reduced distortion
- Outside ring neodymium magnet for lower resonance frequency and distortion
- Precision-coated textile diaphragm for improved consistency and high-frequency extension
- Optimized dome shape for ultra high frequency cutoff
- Vented voice coil former for reduced distortion and compression
- Copper-clad aluminium voice coil wire offering lower moving mass for improved efficiency and transient response
- Build-in cavities under dome/edge to equalize pressure for lower distortion and lower resonance frequency
- Flexible lead wires for higher power handling and larger excursion
- Large hexagon mesh grille secured by the magnetic force of the motor allows easy removal for ultimate purity of sound
- Gold plated terminals to prevent oxidation and ensure long-term reliable connection

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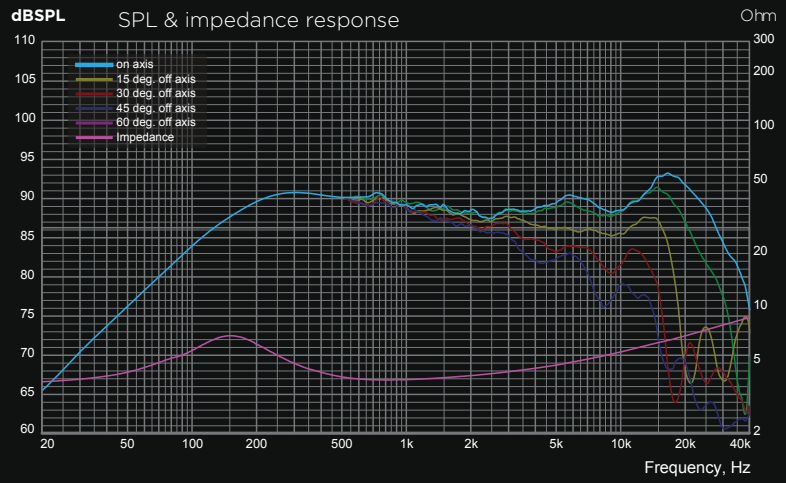
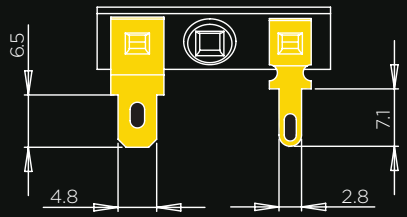
CVEN 1 TWEETER SPECIFICATIONS

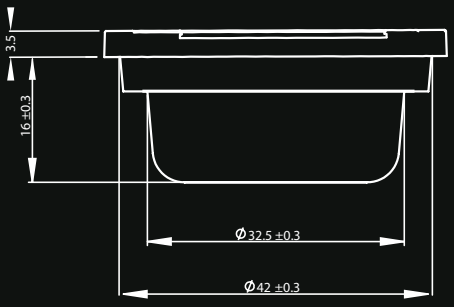


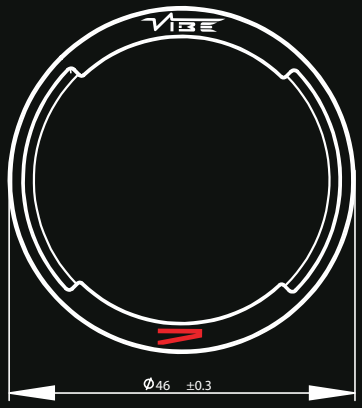
Measuring conditions

Driver mounting: free air, no baffle, back side open (no cabinet)
Input signal: Semi-current-drive, nominal current 2 mA
Smoothing: None



Thickness, both terminals: 0.5 mm
Terminal plating: Gold





CVEN 1 TS PARAMETERS

Notes	Parameter	CVEN 1	Unit
		Value	
	Nominal size	22	[mm.]
	Nominal impedance	4	[ohm]
	Recommended frequency range	2 ~ 30	[kHz]
1	Sensitivity, 2.83v/1m (average SPL range 200-1kHz)	89.5	[dB]
2	Power handling, short term, IEC 268-5	60	[W]
2	Power handling, long term, IEC 268-5	15	[W]
2	Power handling, contunuous, IEC 268-5	30	[W]
	Effective radiating area, Sd	6.1	[cm^2]
3, 6	Resonance frequency (free air, no baffle) Fs	825	[Hz]
	Moving mass, incl. air (free air, no baffle), Mms	0.26	[g]
3	Force factor, Bxl	1.6	[N/A]
3, 6	Suspension compliance, Cms	0.144	[mm/N]
3, 6	Equivalent air volume, Vas	7.6	[lit.]
3, 6	Mechanical Q, Qms	1.4	[-]
3, 6	Electrical Q, Qes	1.9	[-]
3, 6	Total Q, Qts	0.80	[-]
4	Voice coil resistance, RDC	3.6	[ohm]
5	Voice coil inductance, Le (measured at 10 kHz)	40	[mH]
	Voice coil inside diameter	22	[mm]
	Voice coil winding height	1.6	[mm]
	Air gap height	2.5	[mm]
	Total unit net weight excl. packaging	0.06	[kg]
3, 5	Krm	3.2	[mohm]
3, 5	Erm	1.12	[-]
3, 5	Kxm	3.2	[mH]
3, 5	Exm	0.56	[-]

Note 1 Measured in Infinite baffle.
Note 2 Tested in free air (no cabinet).
Note 3 Measured using a semi-constant current source, nominal level 2 mA.
Note 4 Measured at 20 deg. C
Note 5 it is generally a rough simplification to assume that loudspeaker transducer voice coils exhibit the characteristics of an inductor. Instead it is a farmore accurate approach to use the more advanced model often referred to as the “Wright empirical model”, also used in LEAP-4 the TSL model (www.linearx.com), involving parameters Krm, Erm,.Kxm, and Exm.
Note 6 After burn in specifications are measured 12 hours after exiting the transducer by a 20Hz sine wave for 2 hours at 10/14v RMS
The unit is not burned in before shipping.

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PASSIVE CROSSOVER

Many speaker designs hide behind a veil of crossover components which can add colour and reduce efficiency in even the best engineered product.

The CVEN two way system is different. An exquisitely designed and tuned tweeter purposefully matches the roll off frequency of the CVEN midwoofer.

In doing so it produces an almost linear frequency response without the need for a crossover.

PASSIVE CROSSOVER FEATURES

Protection is the only requirement, therefore, a Mundorf reference capacitor is included in each kit.

A three way system requires much more filtering, however, our philosophy is to use only a single Mundorf reference capacitor to provide protection for the tweeter with a polyswitch added as an additional safeguard.

There is an optional 90Hz high pass filter selectable via high current gold plated jumpers adding further functionality.

- Single Mundorf reference capacitor for tweeter high pass filter
- High current gold plated Jumpers
- Selectable 90Hz 6dB high pass filter for the low frequency channel
- Inductor coils specifically orientated to provide minimal crosstalk and improved sound quality.
- High grade plexiglass top cover
- Gold plated screw down speaker connectors prevent oxidation and ensure long-term reliable connection

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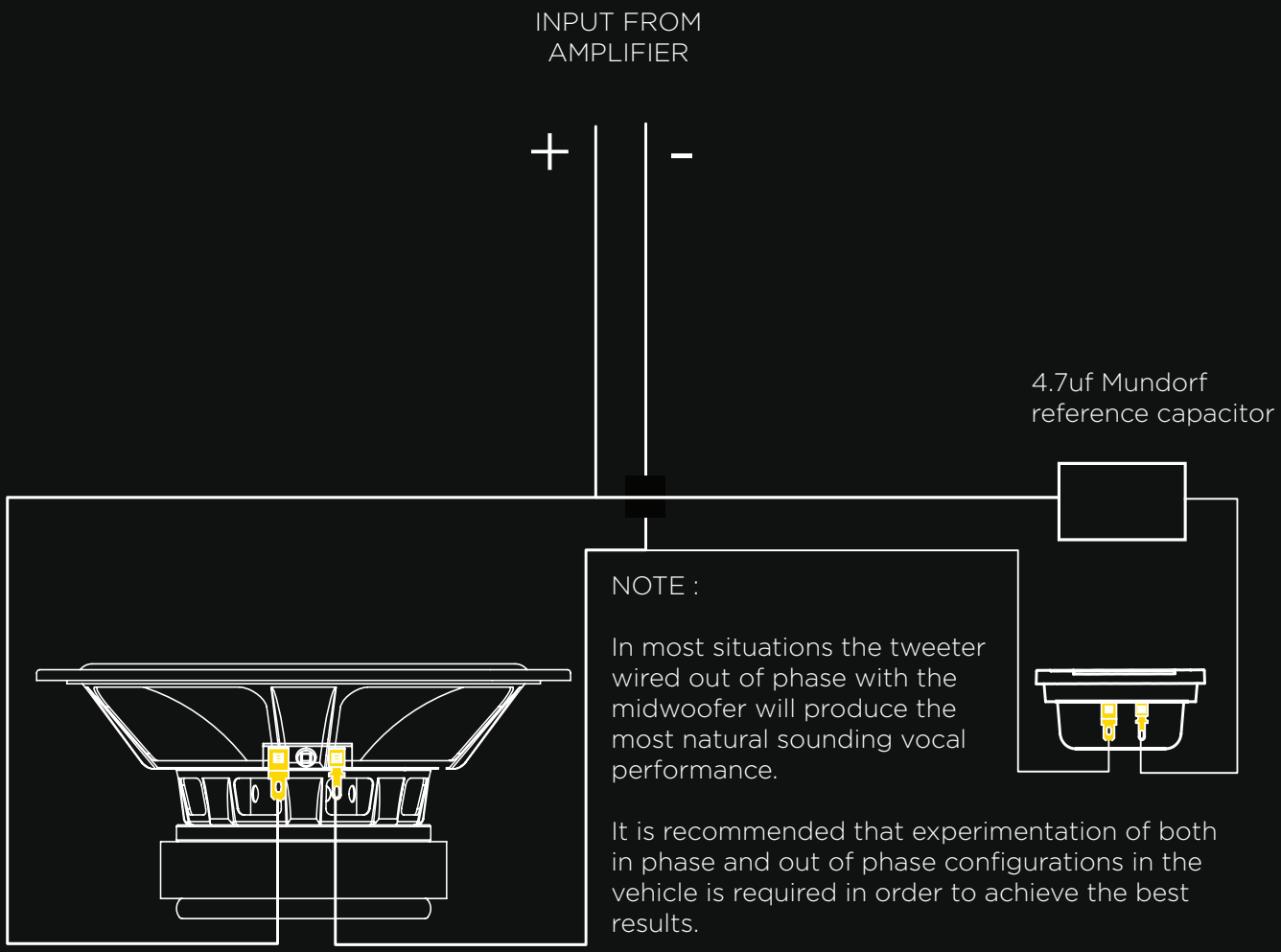
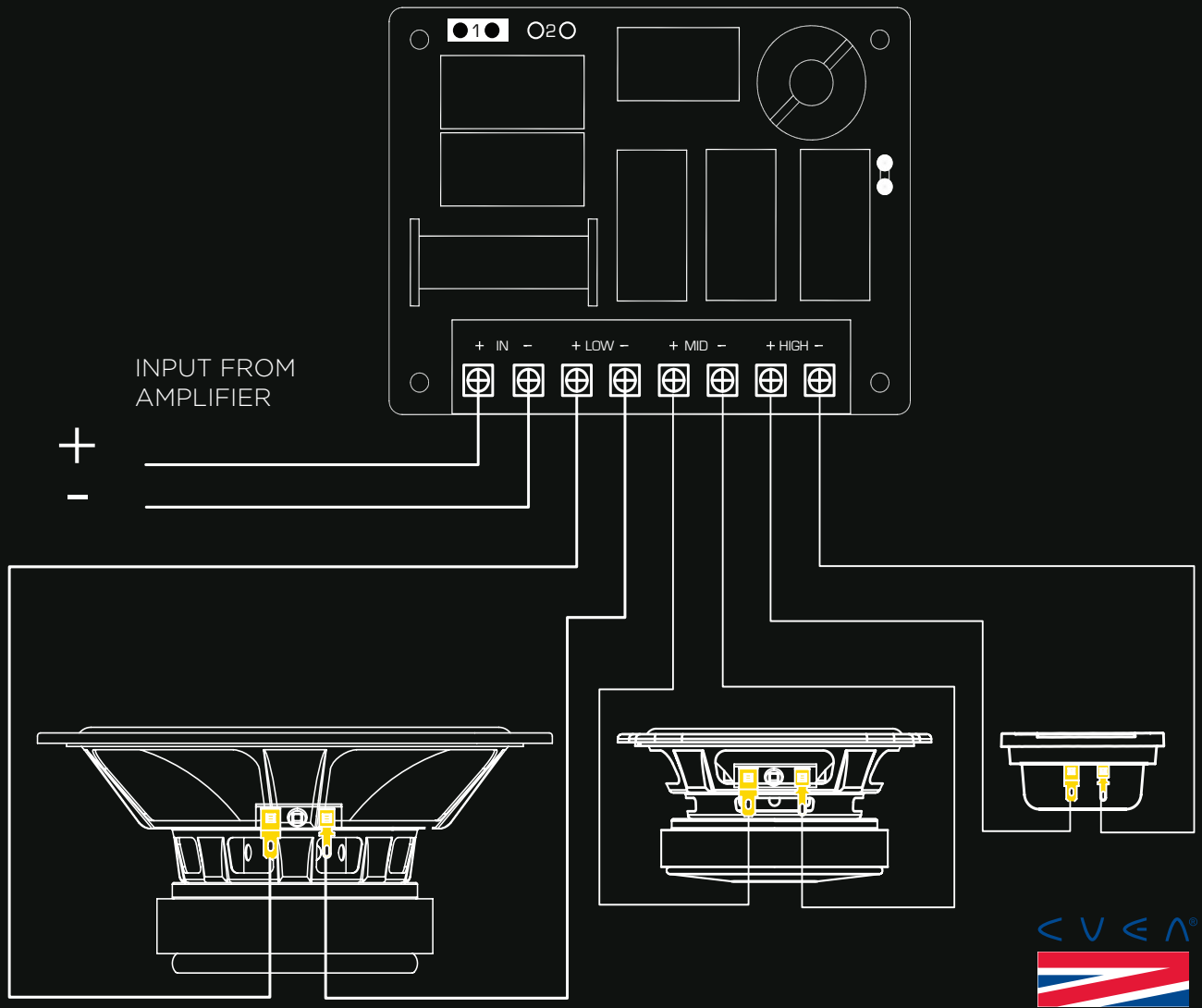
CVEN62C-V4 WIRING CONFIGURATION



CVEN63C-V4 WIRING CONFIGURATION

JUMPER CONFIGURATION
1 : High pass filter bypass
2 : 90Hz high pass filter



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