

SC3



SC3 single 18" subwoofer

The new SC3 subwoofer incorporating award winning feedback loop control technology in a compact single 18" enclosure*

- Coda Audio 18" extreme high output subwoofer
- Velocity sensor for feedback-loop control
- Extended frequency range down to 20 Hz (-6 dB), 25 Hz (-3 dB)

- Ultra low distortion
- Fast transient response, the upper and the ultra low frequency are time aligned
- Ultra compact design
- Optional rigging hardware

SC-Series KEY TECHNOLOGIES:

The advanced design aligns several new technologies for outstanding performance.

- Feedback-loop control – ultra low distortion, very extended and controlled response
- Long excursion drivers with integrated velocity sensor

The feedback-loop controlled subwoofers have clear advantages over conventional amplifier / subwoofer solutions when it comes to sonic performance, output and size.

What is Velocity Feedback Loop Comparator?

The new designed 18" driver includes a built in "velocity sensor" that measures precisely the movement of the voice coil. The "velocity sensor" sends information to the Comparator about velocity, excursion and speed of the voice coil (using XLR cable). The comparator compares the original input signal to the movement measurement from the "velocity sensor" and adjusts the amplifier driving voltage and/or current so that the diaphragm moves the way it should move. This compensates in real time for the non linearity of the speaker/cabinet.

Main advantages of the Active Feedback Loop Comparator:

Total Harmonic Distortion is reduced significantly

THD drops 80 - 90% at low frequency (about 20 dB less distortion at 20 Hz compared to the same driver without velocity sensor).

Extended Frequency response

Using this technology the frequency response of the speaker can be modified without equalization. The comparator is adjusted to compensate not only for the loudspeaker nonlinearities, but its frequency response as well. The flat frequency response goes down to 25 Hz (-3 dB). No high pass filters or equalizers are required.

Reduced group delay

This is a big issue that is most often overlooked in conventional designs. The feedback comparator technology offers great advantages in the time domain. In fact the upper bass and the very low frequency are time aligned which means they are reproduced at the same time resulting in extremely accurate and musical bass reproduction.

TECHNICAL SPECIFICATIONS SC3

Type:	Sensor controlled subwoofer
Application:	Extended low frequency subwoofer
Frequency response:	20 Hz (-6 dB), 25 Hz (-3 dB) to 150 Hz
Power handling (AES / peak):	1500 W / 6000 W
Sensitivity 1 W / 1 m:*	100 dB @ 50 Hz
Maximum output peak:**	138 dB
Components:	18" neodymium ultra low distortion woofer 4" (101.6 mm) voice coil, 1500 W (AES)
Nominal impedance:	8 Ohm, +1 / -1
Input connectors:	2 x Neutrik™ NL4MP
Velocity sensors output:	1 x Neutrik™ NC5MDL1
Suspension:	Optional
Enclosure material:	Baltic birch
Finish:	Textured black Paint
Dimensions: (W x D x H)	520 x 630 x 500 mm
Net weight:	36 kg

* Half-space loading

** Measured with pink noise 6 dB crest factor

* PLASA Innovation Technology Award 2009

SC4



SC4 double 18" subwoofer

The new SC4 subwoofer incorporating award winning feedback loop control technology in a compact double 18" enclosure*

- 2 x Coda Audio 18" extreme high output subwoofer
- Velocity sensor for feedback loop control
- Extended frequency range down to 20 Hz (-6 dB), 25 Hz (-3 dB)
- Ultra low distortion
- Fast transient response, the upper and the ultra low frequency are time aligned
- Compact size for reduced labor and transport costs
- Optional rigging hardware

Reduced truck space

The sealed enclosures ensure best output to size ratio reducing up to 50% the cabinet volume.

TRANSDUCERS

The SC-Series subwoofers are equipped with extremely long excursion 18" neodymium ultra low distortion woofers with integrated velocity sensor that measure, compare and control cone movements. The neodymium motor delivers extreme high magnetic flux for increased efficiency. The 4" voice coil is 50 mm high, ensuring ultra linear excursion of 40 mm / pp at consistent magnetic force. State of the art carbon-fiber cone ensures maximum stiffness and low moving mass. Three aluminum shorting rings reduce inter-modulation distortion; minimize induction variation while reducing thermal compression. This design reduces dramatically the distortion of a typical subwoofer at longer excursion levels, and improves the overall sound quality and performance characteristics of the cabinet. The sensor is in fact an additional voice coil connected to the loudspeakers voice coil in a high precision, magnetically shielded system.

ELECTRONICS AND CABLING

Using C2 - 19" Comparator

The C2 Comparator is the active electronic loop control unit for the SC-Series subwoofers. The unit includes two balanced audio inputs and two outputs as well as two sensor control loops connected to a 5-pol Neutrik™ XLR input. The Comparator's electronic circuit loop measures the voice coil excursion of the subwoofer and corrects the signal, significantly decreasing distortion. The unit is set for flat frequency response down to 25 Hz (-3 dB).

* PLASA Innovation Technology Award 2009

Rigging Hardware

The SC-Series subwoofers can be ordered with or without flying hardware.

Application

The SC-Series subwoofers are suited for a variety of applications in touring and installations where high precision and deep bass is needed and provide a perfect sub-extension for AIRLINE LA8, LA4, G-Series and CUE-Series in Houses of Worship, Theatres and clubs.

TECHNICAL SPECIFICATIONS SC4

Type:	Sensor controlled subwoofer
Application:	High output subwoofer
Frequency response:	20 Hz (-6 dB) 25 Hz (-3 dB) to 150 Hz
Power handling (AES / peak):	3000 W / 12000 W
Sensitivity 1 W / 1 m:*	103 dB @ 50 Hz
Maximum output peak:**	144 dB
Components:	2 x 18" neodymium ultra low distortion woofers 4" (101.6 mm) voice coil, 1500 W (AES) each
Nominal impedance:	4 Ohm, +1 / -1
Input connectors:	2 x Neutrik™ NL4MP
Velocity sensors output:	1 x Neutrik™ NC5MDL1
Suspension:	Optional
Enclosure material:	Baltic birch
Finish:	Textured black Paint
Dimensions: (W x D x H)	750 x 800 x 540 mm
Net weight:	68 kg

*Half-space loading

**Measured with pink noise 6 dB crest factor