

PRESS RELEASE

Focal introduces Shape Twin - a weapon of mass production



Focal unveils the Shape Twin active studio monitors at NAMM 2018. One year after the launch of Shape 40, 50 and 65 monitors, Focal is expanding its monitoring range with the line's new benchmark product: Shape Twin. This standard bearer of the Shape series features two passive radiators, woofers equipped with a new Flax cone, and the latest 'M'-shaped Aluminum/Magnesium inverted dome tweeter. Shape Twin is made in France, just like Shape 40, 50 and 65. Designed to meet the needs of nearfield monitoring, these monitors combine an ingenious design and numerous settings optimised for the acoustics of small listening rooms. Shape Twin stands out through its excellent rendering over the whole audio spectrum, its broad frequency response in the low end, and its high SPL considering its size. The compact design makes it easy to integrate even into the most cramped of rooms. Finally, its 2.5-way design gives it a decisive advantage when it comes to controlling the bass and lower mid-range registers which are the hardest to control in small rooms.

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Rangsdorf, 25th of January 2018 – Shape Twin is the standard bearer of the Shape series and stands out through its excellent rendering of the whole audio spectrum, in addition to its broad frequency response in the low end, and to its high SPL considering its size. The compact design makes it easy to integrate, even into the most cramped of rooms. Its 2.5-way design gives it a decisive advantage when it comes to controlling the bass and lower mid-range registers which are the hardest to control in small rooms. This monitor will express its full potential from a listening distance of three feet away (1 metre).



Overview

Facts

- Focal announces Shape Twin active studio monitors
- Shape Twin are 2.5-way design
- Tri-Amping with 2x 80 Watt Class AB and 1x 50 Watt Class AB
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Product name

Shape Twin

Brand

Focal

Exclusive distribution

Sound Service GmbH

Website

www.sound-service.eu
www.focal.com

Price (MSRP)

849,- Euro per pcs

Availability

Q1 2018

Media

Press download incl. images

<http://www.sound-service.eu/press-area/press-kits>

Products for review

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CABINETS, A QUEST FOR NATURAL MATERIALS...

Like its predecessors, Shape Twin sets itself apart at first glance through its unique design. The front and top of the MDF cabinets are finished with an authentic, mass-coloured, walnut veneer. The curved shape of the top of each loudspeaker was calculated specifically for each monitor in order to ensure a linear frequency response in the high end. The natural wood finish recalls the finishes of Twin6 Be studio monitors, and perfectly complements the new flax cones.

PACKED WITH INNOVATION

Developing speaker driver cone technologies is part of Focal's core expertise. The Flax sandwich cones used for the woofers are composed of two materials: glass fibres and flax fibres. A layer of flax fibres is sandwiched between two layers of glass fibres. Glass fibre cones were also used on the "W" composite sandwich cone of the SM6 and SM9 series, and are revered for their high rigidity considering their light weight.

The sandwich cone needs to provide good damping while being as light as possible. Flax fibres are twice as light as glass fibres as they're hollow. What's more, they also have very low elasticity. This increases the speaker driver's Young's modulus when in excursion, an essential property to ensure a piston-like action even in the very low end. Finally, it is composed of 80% cellulose which gives it excellent damping properties. So, it was only natural for us to choose this material. This new technology has proven to be a considerable improvement over the Polyglass cone in terms of weight, rigidity and damping.

TMD SUSPENSION

New finite element method simulation tools have enabled us to identify an essential component which could be improved: the suspension. The solution actually came from the world of civil engineering and famous skyscrapers, such as Taipei 101. It consists of a 660-tonne steel sphere suspended to a pendulum at the top of the building. It acts as a harmonic absorber to ensure the stability of the building in strong winds. TMD suspension is based on the same principle: to optimise harmonic absorption to ensure a piston-like action for the whole audio spectrum reproduced. Thus, two rings have been integrated into the suspension. The diameter and location of these rings are determined according to the flexibility of the suspension, its elongation, its resonance frequency and the targeted frequency response curve of the speaker driver in excursion. This technology provides a linear frequency response curve between 1 and 2kHz, while significantly reducing distortion in the same range. With this the mid-range register benefits from remarkable neutrality. It also contributes to the excellent precision of the overall stereo image.

NEUTRAL INDUCTANCE CIRCUIT

The magnetic field is very difficult to control because it's modulated by three factors: the movement of the voice coil, the current passing through it and the frequency. Consequently, the voice coil and the moving part take support on the magnetic field which becomes too "flexible", and this eventually leads to a loss of precision. This is where the recourse to finite element method simulation tools pays off. It made it possible to visualise these complex interactions, and enabled us to come up with an extremely stable magnetic circuit: N.I.C. technology (Neutral Inductance Circuit). This solution consists in a Faraday ring whose dimensions, materials and positioning have been optimised so that the magnetic field is no longer affected by the position of the voice coil, by the amperage or by the frequency of the current passing through it. This also increases frequency response in the high end of the spectrum, thus optimising the crossover with the tweeter while reducing harmonic distortion and intermodulation.

NEW 'M'-SHAPED ALUMINUM/ MAGNESIUM INVERTED DOME TWEETER

Focal has further improved its famous Aluminum/ Magnesium inverted dome tweeter by coming up with two significant mechanical innovations: the new 'M'-shaped dome and the new suspension, like that used on the tweeters of the SM6 and SM9 lines. The inverted 'M'-shaped dome offers two major advantages.

Its directivity is even less than that of the inverted dome tweeter, allowing for more flexibility in terms of listening position. Mechanically speaking, the 'M' shape gives the dome much more rigidity while reducing distortion even more. In addition to this, the Poron® suspension provides a more linear frequency response curve below 6kHz, improving crossover with the woofer. The magnetic component has also been optimised thanks to a voice coil with a Kapton® frame which significantly reduces the Foucault current, and consequently, distortion. The horn housing the tweeter has been designed to provide equal horizontal and vertical directivity.

DOUBLE PASSIVE RADIATOR

The 8" (21 cm) double passive radiator on Shape Twin monitors is an ingenious solution to a common issue encountered with nearfield monitors: to combine a compact design, extended frequency response in the low end and comfortable positioning. Indeed, when ported systems meet their limits in terms of integration (a long-enough port to match its surface is required), the passive radiator is the ideal solution. However, rocking modes can often occur depending on the frequency and the volume. In order to compensate for this phenomenon, two U-shaped suspensions positioned opposite each other join the passive disk to the basket, ensuring perfect symmetry during excursion and incursion. Finally, the very low tuning frequency allows Shape Twin to be placed very close to a wall.

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ELECTRONICS AND SETTINGS

Class AB amplification was the obvious choice for these monitors in order to provide optimal control over the audio signal's dynamic range. Both 5" (13cm) woofers are powered by a dedicated 80W amplifier channel which ensures tonal balance however high the volume. As for the settings, particular attention has been paid to integration, regardless of the room's acoustics. Shape Twin features a comb filter for high and low frequencies (HF: +/- 3dB from 4.5kHz; LF +/- 6dB above 250Hz).

A crossover at 160Hz (+/-3dB) allows you to correct any parasite reflections due to an installation on a mixing console or near a reverberating surface. Shape Twin is equipped with an adjustable high-pass filter to solve any issues due to rooms which result in sporadic behaviour in the low end, but also for the crossover with a subwoofer if one is used.

ACCESSORIES AND INSTALLATION

Shape Twin comes with 4 adjustable decoupling spikes. The height of the front and rear spikes can be adjusted to solve any problems which are sometimes encountered due to the monitors not being at the same height as the listener. The angle changes the height of the soundstage to best suit the height of the sound engineer. A clever finishing touch to the spikes is their rubber coating. This improves isolation of the loudspeakers in relation to their support. Each monitor is supplied with three specific protective grilles for the two woofers and the tweeter. Particular attention has been paid to efficiency, with a design which enables the grilles to be removed or assembled without tools. We haven't forgotten the diversity of listening environments and set-ups, so. Shape Twin is equipped with fastening mechanisms on the back and underneath so that they can be mounted to the wall or ceiling.

FIVE INNOVATIONS

Shape Twin's five innovations are the source of the great acoustic performance of this professional work tool. The 2.5-way design brings out the best of two 5" speaker drivers. The woofer in the lower section of the cabinet is used for the 40-180Hz range, whereas the second transducer is dedicated to frequencies between 40Hz and 2.5kHz. Thus, the emissive surface dedicated to the bass frequencies is equivalent to that of an 8" subwoofer, with the extra advantage of being compact. The aptitude to work on the mid-range and upper mid-range is considerably increased with a 5" speaker driver compared to larger transducers. This physical advantage is further enhanced thanks to Flax cone technology whose damping properties are unrivalled in this price range. Thus, the slightest lack or addition of information in this register is immediately emphasised, allowing engineers to achieve remarkably precise mixing and equalisation.

The sound of these new work tools distinguishes itself through the wide and extremely precise stereo image, facilitating the task of arranging the different tracks. What's more the bass register is articulated and controlled. Shape Twin's 2.5-way d'Appolito configuration ensures extremely precise control of the bass and lower mid-range while making it easy to integrate into all interiors thanks to its low footprint.

Finally, the new tweeter is what's at the source of the very high definition. It efficiently reveals any hissing, and it's also very precise in the very high end. This is why Shape Twin has become the standard bearer and absolute reference of the Shape line. (1534 words / 8071 characters)

Features

- Tweeter with very low directivity for a flexible sweet spot
- Designed without a port (double passive radiator) allowing it to be placed near a wall
- 2.5 channels to provide optimal control of bass and low mid-range registers
- Numerous settings for optimal integration
- Accurate control, even in the very high frequencies
- Flax sandwich cone: controlled and articulated bass, natural and detailed lower mid-range and upper mid-range registers
- Fastening mechanisms for mounting to the ceiling or a wall (fastening accessories not supplied)

Specifications

- System: SHAPE TWIN
 - Frequency response (+/- 3dB): 40Hz - 35kHz
 - Maximum SPL (of musical signals): 110.5dB SPL (peak at @ 1m)

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Specifications

- **Electronics**
 - Inputs / Impedance Type:
 - XLR: balanced 10 kOhms
 - RCA connectors: unbalanced 10 kOhms with sensitivity compensation
 - Mid-range and low frequency amplifier: 2 x 80W, class AB
 - High frequency amplifier: 50W, class AB
 - Automatic standby
 - Off: Approximately 30 minutes with no signal
 - Deactivate standby: Signal detection > 3mV
 - Power supply
 - Voltage: 220-240V (fuse T2AL / 250V) or 100-120V (fuse T3.15AL / 250V)
 - Connexion: IEC connector and detachable power cable
 - Settings
 - High-pass filter: Adjustable Full range 45/60/90Hz
 - Bass level (0 - 250Hz): Adjustable, +/-6 dB
 - Midrange/bass (160 Hz, Q=1): Adjustable, +/-3 dB
 - Treble level (4.5 - 35kHz): Adjustable, +/-3 dB
 - Power on/off: On/off switch on rear panel
 - Power consumption in standby: < 0.5W
 - Displays and controls: LED for power on/off and standby
- **Transducers**
 - Woofers: 2 x 5" (13cm) Flax Cone woofers
 - Tweeter: 1" (25mm) 'M'-shaped Aluminum/Magnesium
- **Cabinet**
 - Construction: 15mm MDF
 - Finish: Vinyl, real walnut and black paint
 - Dimensions including 4 rubber feet (HxLxD): 478 x 211 x 279mm
 - Weight: 11kg
- **Recommended mounting kits**
 - Wall mounting kit: K&M® 24471 + K&M® 24359 adapter
 - Ceiling mounting kit: K&M® 24496 + K&M® 24359 adapter

About the Company Sound Service GmbH

Founded in 1983, the Berlin based Sound Service GmbH has been growing steadily from a one-product-distributor (MFB Fricke; the world's first digital drummachine) to one of the major independent german distribution companies for musical instruments recording studio equipment and PA, Lightning and DJ products. Today Sound Service is one of the leading distribution companies in Europe with exclusive distribution rights for a lot of the A-List MI-brands covering most of the countries in Europe.