

# **User Guide**







# Introduction

#### Approvals

This equipment conforms to the requirements of the EMC Directive 89/336/EEC, amended by 92/31/EEC and 93/68/EEC and the requirements of the Low Voltage Directive 72/23/EEC, as amended by 93/68/EEC.

EMC Emission: EN55103-1:2009

EMC Immunity: EN55103-2:2009

Safety: IEC60065:2002 + A2:2010

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#### **Unpacking the Units**

Every Martin Audio loudspeaker is built to the highest standard and thoroughly inspected before it leaves the factory. After unpacking the system, examine it carefully for any signs of transit damage and inform your dealer if any is found. It is suggested that you keep the original packaging so that the system can be repacked at a future date if necessary. Please note that neither Martin Audio nor its distributors can accept any responsibility for damage to any returned product which arises through the use of non-approved packaging. Please think of our environment. When the product has reached the end of its useful life, please dispose of it responsibly through a recycling centre.







# **SX** Series

#### Introduction

The SX Series subwoofers are a range of sub bass enclosures designed to complement any of Martin Audio's full range systems. The range encompasses ultra-compact sub-miniature subs perfect as a discreet, unobtrusive installation partner to the ADORN or CDD ranges, right up to very high output twin 18" models perfect for touring use in conjunction with Wavefront Precision line arrays.

The SX Series is suitable for installation or portable applications. Larger models are built to be weather resistant as standard making them suitable for occasional outdoor use as a portable system or for installed systems as long as they are not directly exposed to the elements.

Larger, heavier models are available with optional castors for touring use to make handling as easy as possible.

Two powered, Dante equipped models are available for any applications requiring an active, networked solution. These are an ideal partner to the CDD-LIVE range.

A range of accessories are available including eyebolts for flying the smaller models, a flying frame for the twin 18" SX218 and rugged transit covers.



#### SXF115

# SXF115



#### Introduction

The SXF115 is a passive subwoofer designed to extend the performance of Martin Audio WPM and MLA Mini systems down to 42Hz. Featuring a powerful, long excursion 15" (380mm)/4" (100mm) voice coil driver in a very compact bass reflex enclosure, it can be flown as part of a WPM or MLA Mini array, or ground-stacked separately.

The design of the 15" driver maximises output while minimising power compression and distortion, and four reflex ports reduce air noise at very high output levels. The SXF115 enclosure is constructed from multi-laminate birch ply, finished with a durable polyurethane coating and equipped with a perforated steel grille, skids and twin bar handles. An M20 threaded fitting in the top surface facilitates pole-mounting of up to 4 WPM or MLA Mini enclosures.

Being a passive subwoofer, the SXF115 is ideal for flown WPM or MLA Mini fixed installations where ground-based, rack-mount amplification is preferred — either for ease of servicing, increased IP protection, or reduced visible cabling in the air.

When used with a WPM or MLA Mini array, Martin Audio iKON amplifiers or the MSX rack-mount power plant respectively deliver the correct drive characteristics to the SXF115, with onboard DSP presets for a variety of system configurations. Cardioid operation can be achieved by arranging the SXF115 in forward and rear-facing pairs.

By adding the input board cover accessory, the subwoofer is fully weather resistant and suitable for permanent outdoor usage.

#### Accessories

Install flying frame	ASF20054
Touring flying frame	ASF20064 (includes inclinometer & shackles)
Transition grid	WPMMSXGRID
Ground stack base plate	ASF20062
Wheelboard and cover	ASF17025
Wind-up pole	ASF20071
Weather kit	WRKIT



#### Connections

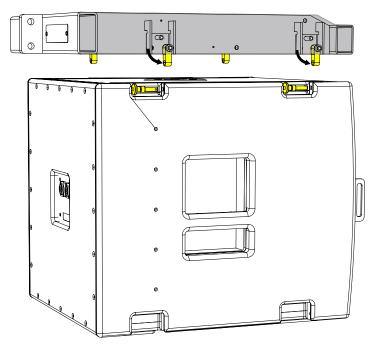


The SXF115 has a pair of NL4 connectors on the rear panel. These are wired in parallel and whilst one is nominally labelled 'INPUT' and the other as 'LINK', connection in and out can be made to either connector. Connection to the drive unit(s) is made to pins 1+/-. There is no internal connection to pins 2+/- although these are linked together so can be used for example to carry a mid/top signal and connected to a full range system using a cable wired with reverse connections (pins 2 to pins 1).

#### Flying SXF115

The SXF115 may be flown using the ASF20054 or ASF20064 flying frames which are also used with the MLA Mini system. The ASF20054 is designed for installations, whilst the ASF20064 is fitted with an inclinometer sensor and supplied with shackles making it suitable for touring applications. Deployment of the system is identical with both versions of the flying frame.

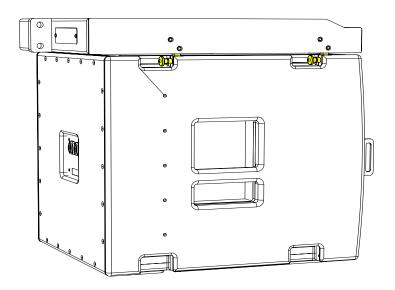
With the sub on the floor under the desired position for its final deployment, attach the frame to the chain or motor hoist(s) and raise so it is just above the SXF115. Remove the four flying pins on the bottom of the flying frame to release the drop-down rigging links.



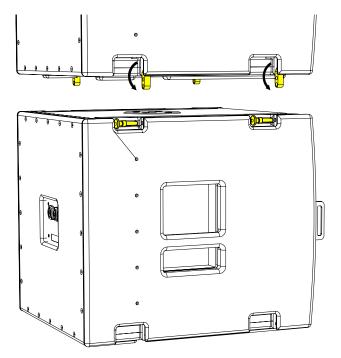




Lower the flying frame onto the sub guiding the four links into the corresponding slots in the top of the sub. Insert flying pins into the four rigging brackets on the sub to lock it to the frame. Ensure that the central button on the flying pin has popped out to ensure that the array is safe.



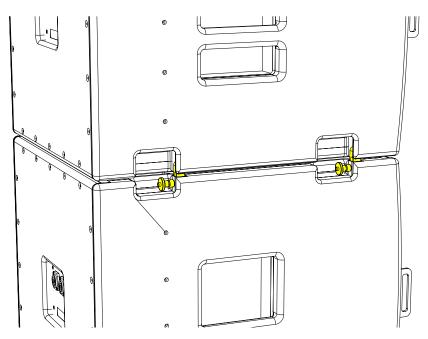
If more subs are to be linked under the first, raise the height of the first sub so you can position a second sub directly under the first. Remove the flying pins in the bottom drop-down rigging links in the first sub and lower it onto the second ensuring that the rigging links engaging all four rigging slots in the second sub exactly as you did with the frame and first cabinet.



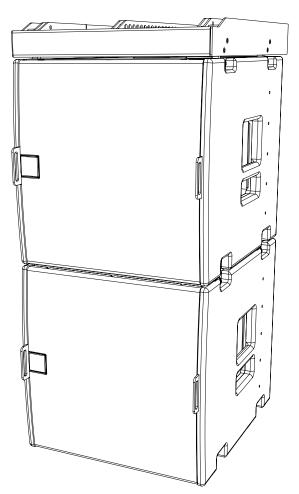




Insert the four flying pins into the rigging brackets on the second SXF115 ensuring that the pins are correctly engaged.



More cabinets can be added as required or transition frames connected to enable flying of either MLA Mini or WPM arrays under the SXP115. For more details see the User Guides for MLA Mini and WPM.

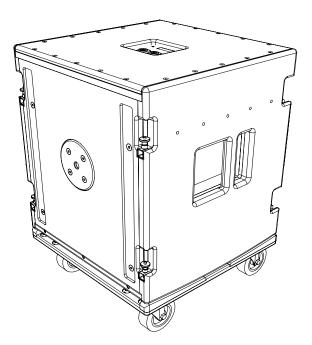






#### Wheelboard

The SXF115 uses a front mounted wheelboard and travels face-down. The transit cover drops over the top of the cabinet once it is on the wheelboard.





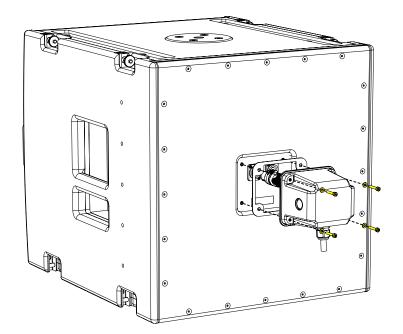


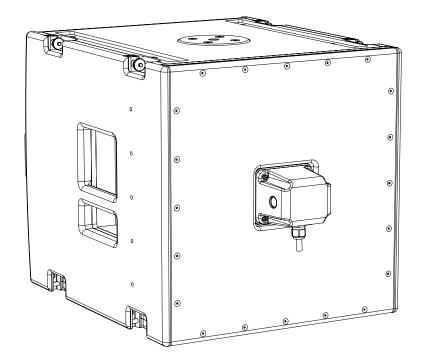
#### Weather Kit

The WRKIT for non-powered SX Series subwoofers is a glanded cover which fits over the connection panel to prevent water ingress protecting the NL4 speaker connection.

The cable entry may be through one of two knock-out positions depending the angle from which you wish the cable to enter. First remove the knock-out blank that you wish to use and fit the cable gland in position. Note that to use the WRKIT it is necessary to remove the NL4 connector from your speaker cable so the cable can be fed through the cable gland. Once the cable has been threaded through the gland the NL4 can be re-attached.

Remove the four counter-sunk screws in the connector panel and position the cover on the connector panel. Connect the NL4 to the input connector and position the cover, pulling the slack in the speaker cable as you lower the cover in position. Secure the cover using the four M4 x 25 cap socket screws and fibre washers. Finally tighten the gland to ensure a waterproof seal.







#### Specifications

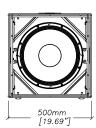
TYPE	Compact, single driver, direct radiating subwoofer
FREQUENCY RESPONSE (1)	$50$ Hz-150Hz $\pm$ 3dB, -10dB @ 42Hz
DRIVER	1 x 15" (300mm)/4" (100mm) voice coil, ultra-long excursion, ferrite magnet
RATED POWER (2)	800W AES, 3200W peak
RECOMMENDED AMPLIFIER	iK42/81
SENSITIVITY (10)	103dB
MAXIMUM SPL (9)	136dB continuous
NOMINAL IMPEDANCE	8 ohms
DISPERSION (-6dB)	Omnidirectional
CROSSOVER	80-120Hz active
ENCLOSURE	Multi-laminate birch plywood
FINISH	Textured PU coating
PROTECTIVE GRILLE	Perforated steel
CONNECTORS	2 x NL4
PIN CONNECTIONS (INPUT)	+1, -1 (+2, -2 link through)
PIN CONNECTIONS (LINK)	+1, -1 (+2, -2 link through)
FITTINGS	Two skids on base, matching channels on top
	M20 top-mounted thread plate for pole mounting
	Integral flyware for suspension of up to four SXF115
	Large bar handle on each side
	Two front-mounting latch plates for wheelboard
DIMENSIONS (INCL FEET)	(W) 500mm x (H) 510mm x (D) 575mm (725mm incl wheelboard)
	(W) 19.7in x (H) 20.1in x (D) 22.6in (28.5in incl wheelboard)
WEIGHT	45kg (99lbs)
	52kg (115lbs) incl wheelboard

#### **Technical Drawing**



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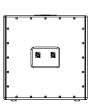






574mm [22.60"]

25mm [0.98"]



#### Notes

- (1) Measured on-axis in half (2pi) space at 2 metres, then referred to 1 metre.
- (2) AES Standard ANSI S4.26-1984.
- (3) Measured in half (2pi) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
- (4) Measured in half (2pi) space at 2 metres using band limited pink noise, then referred to 1 metre.
- (5) Measured on-axis in open (4pi) space at 2 metres, then referred to 1 metre.
- (6) Measured in open (4pi) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
- (7) Measured in open (4pi) space at 2 metres using band limited pink noise, then referred to 1 metre.
- (8) Measured in open (4pi) space at 2 metres with 2.83V input, using band limited pink noise, then referred to 1 metre.
- (9) Calculated at 1 metre.
- (10) Measured in half (2pi) space at 2 metres with 2.83V input, using band limited pink noise, then referred to 1 metre.





### Warranty

Martin Audio SX subwoofers are warranted against manufacturing defects in materials or craftsmanship over a period of 5 years from the date of original purchase.

During the warranty period Martin Audio will, at its discretion, either repair or replace products which prove to be defective provided that the product is returned in its original packaging, shipping prepaid, to an authorised Martin Audio service agent or distributor.

Martin Audio cannot be held responsible for defects caused by unauthorised modifications, improper use, negligence, exposure to inclement weather conditions, act of God or accident, or any use of this product that is not in accordance with the instructions provided by Martin Audio.

Martin Audio is not liable for consequential damages.

This warranty is exclusive and no other warranty is expressed or implied. This warranty does not affect your statutory rights.

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