SX215 User Guide





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Introduction



The SX215 is a powerful, compact subwoofer with an operating range of 45 - 100 Hz \pm 3dB. It features two long excursion 15" (380 mm) / 4" (100 mm) voice coil drivers with water-resistant cones and triple roll surrounds, delivering exceptional low-frequency extension and impact from a compact enclosure. Eight reflex ports with a large frontal area increase LF output efficiency and reduce turbulent air noise at high levels.

Finished in hardwearing textured paint, the SX215 incorporates threaded inserts for eye bolt suspension of a single enclosure, while an M20 threaded plate facilitates pole-mounting of Martin Audio full-range enclosures. Four ergonomic handles assist handling and installation, and the drivers are protected by a coated steel grille with an acoustically transparent fabric backing.

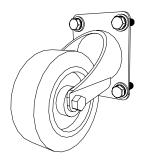
The SX215 can be used singly or stacked using the locating skids and mating channels on the top and bottom. Cardioid operation can be achieved by arranging the SX215 in forward and rear-facing pairs, with each enclosure powered individually in conjunction with dedicated DSP presets in the iK42 amplifier or DX series controllers (DX0.4, DX0.6 and DX4.0).

The SX215 is available exclusively in black. With the addition of an optional connector cover, the SX215 is weather resistant and suitable for outdoor use. Castors and transit cover are available as optional accessories.



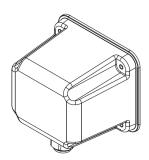
Optional accessories

Castor kit



- Product code: WHEELKIT
- Four heavy duty 4" wheels (swivel castors)
- 16 M8 hex head screws
- 16 flat washers
- 16 spring washers
- Optional accessory for Martin Audio 15" and 18" subwoofers (SX115, SXC115, SXCF115, SX215, SX118, SXC118, SXCF118, SX218, SXP118, SXP218, Blackline X115, X118, X218, XP118)
- Supplied with SXH218 and SXHF218

Weatherised kit



- Product code: WRKIT
- Cover and cable gland to prevent water ingress and protect the NL4 speaker connection
- Upgrades compatible subwoofers to IP24 rating
- Compatible with SX115, SX215, SX118, SXC118, SXCF118, SX218, SXH218 and SXHF218
- Two knockout holes, one on the side and one below, allowing you to choose where to fit the cable or to fit two cables

Transit cover

- Product code: SX215TC
- Tour grade transit cover
- Cut outs for easy access to handles
- Protects the SX215 in transit

M10 eye bolt



- Product code: HTKCT06
- Threaded 10 mm eye bolt
- M10 x 1.5 thread size
- 35 mm (1.38 in) shank length
- 740 kg (1,628 lbs) working load limit

Wind-up telescopic pole



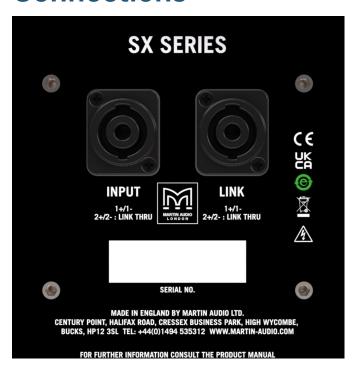
Product code: ASF20071



- Wind-up handle for raising speakers to required height
- Rugged steel construction
- Locking screw and safety button
- 35 mm diameter to fit standard portable speaker tophat fittings
- M20 threaded base fitting



Connections



The SX215 has two NL4 sockets on the back panel, labelled INPUT and LINK. Despite the labels, the two sockets are the same, so you can use them either way round. For both sockets, the pins connect as follows:

- Pins 1+/1— connect to the driver.
- Pins 2+/2— connect to pins 2+/2— of the other socket for use as a link.

Link cable

To link through to another speaker, use a cable where pins 2+/2- of the link connector connect to pins 1+/1- of the input connector for the other speaker.



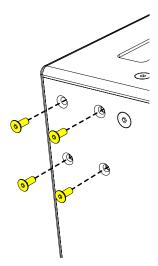
Fitting castors

We supply swivel castors in sets of four with all required fittings. The product code for this optional accessory is WHEELKIT (page 4).

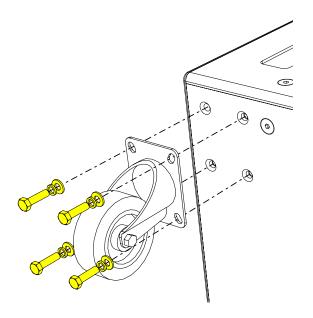
Make sure you use the bolts from the kit, not the screws from the cabinet.

To fit the castors

1. Remove the M8 counter-sunk screws from the back of the sub.



2. Screw each castor into place using the following order of fittings: cabinet, castor, flat washer, spring washer, bolt.





Flying a single SX215

To fly individual SX215 subwoofers from ceilings, trusses or poles, use Martin Audio M10 shouldered eye bolts (part number HTKCT06) and appropriately rated steel ropes or chains.



When using eye bolts, you can only fly single subwoofers.

Note that Martin Audio shouldered eye bolts are made of cast steel and are specifically engineered and rated for flown applications.



Don't use eye bolts from other manufacturers as this could be dangerous.

Forged-steel eye bolts available from DIY suppliers are definitely not strong enough. Cast or machined eye bolts rated for purpose can have shoulders that are too wide, causing the bolt to tighten against the cabinet rather than the thread.

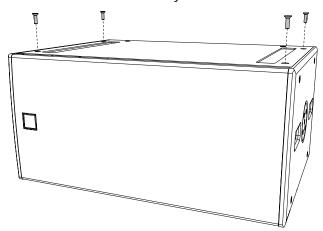
The SX215 has 24 M10 inserts: six on the top, six on the bottom, four on each side and four on the back.



Flying heavy equipment in public spaces is dangerous. Make sure the installer uses appropriately rated equipment and has suitable qualifications and experience.

To fly a single SX215

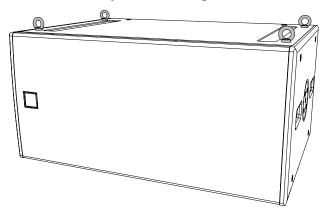
 Remove M10 counter-sunk screws from the SX215 (usually from the top) and screw in M10 eye bolts. We recommend five eye bolts: four to fly the subwoofer and one as a redundant safety bond.



Install suitably rated fixings, such as sleeve anchors for ceilings or girder clamps for trusses and scaffolding.

Install the safety bond fixing in a different place from the main fixings, so that it can support the cabinet if the main fixings fail.

3. Use suitably rated steel rope or shackles and chains to connect each eye bolt and fixing.





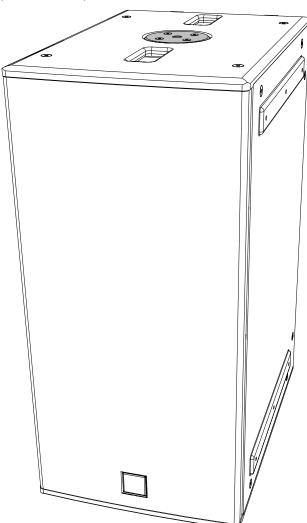
Pole mounting

The SX215 has an M20 top-mounted thread plate for installing a pole.

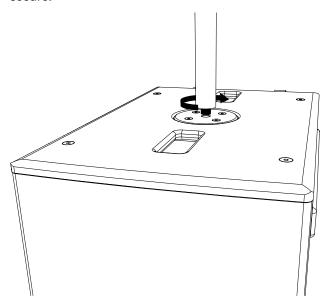
The Martin Audio wind-up telescopic pole ASF20071 (page 4) supports speakers with a top hat fitting up to 35 kg (77.2 lbs), such as CDD-LIVE, XD, WPM and MLA Mini. With the pole at or below the level marked "Preset", you can mount up to four cabinets of WPM or MLA Mini. At this level the maximum load is 56 kg (123.5 lbs).

To install a pole

1. Place the cabinet on a secure platform with the round plate on the top.



2. Screw the threaded pole into the M20 plate until secure.





System controllers

For system controllers, we recommend the Martin Audio DX0.4 or DX0.6, or for larger installations the DX4.0. If you are using an iKON amplifier, you don't need a system controller as these amplifiers have on-board system processing. For further details, see our website martin-audio.com.

Using other controllers

If you use a controller from another manufacturer, you need to configure settings such as crossovers, limiters and equalisation points. You can find these settings in our **Loudspeaker parameter spreadsheet**, which we provide as a free download. For details of how to use the spreadsheet, read the instructions in the spreadsheet or watch the video guide.

To download the loudspeaker parameter spreadsheet

- 1. Go to our website martin-audio.com.
- 2. Select Support > Loudspeaker Settings.
- Scroll to CURRENT-PRODUCT-PARAMETERS and click DOWNLOAD.

To view the video guide to the parameter spreadsheet

- 1. Go to our website martin-audio.com.
- 2. Select Support > Loudspeaker Settings.
- 3. Scroll to PARAMETER VIDEO and click VIDEO.



System design

To design your system and decide on the best positions for speakers and subs, we recommend Martin Audio **Display 3** software, which we provide as a free download from our website.

Display 3 allows you to model your space and experiment with various system configurations and speaker positions. Display 3 predicts the performance of your experimental configurations, allowing you to optimise the performance of your system at the design stage.

To download Display 3

- 1. Visit our website martin-audio.com.
- 2. Select Support > Software/Firmware.
- 3. Scroll to Display 3 and click Download.

EASE Focus data

For acoustic modeling of the SX215, we recommend **Display 3** rather than EASE Focus (see above). If you do wish to use EASE Focus, we provide a zip file of high-resolution GLL files as a free download.

To download GLL files

- 1. Visit our website martin-audio.com.
- 2. Select Support > Measurement Data.
- 3. Scroll to SX Series and click Download.

3D SketchUp file

For modelling the SX215 in **Sketchup**, we provide a 3D SketchUp file as a free download.

To download the 3D Sketchup file

- 1. Visit our website martin-audio.com.
- 2. Select Products > Product List and click on SX215.
- Select the Technical drawings & 3D models section and click SKP-BLACK.
- For accessories, select the Accessories section and click SKP-B.

Revit family

For modelling the SX215 in Revit, we provide a Revit family as a free download.

To download the Revit family

- 1. Visit our website martin-audio.com.
- 2. Select Products > Product List and click on SX215.
- Select the Technical drawings & 3D models section and click REVIT FILE.

DWG file

For viewing the SX215 technical drawing in CAD software (such as AutoCAD), we provide a DWG file as a free download.

To download the DWG file

- 1. Visit our website martin-audio.com.
- 2. Select Products > Product List and click on SX215.
- Select the Technical drawings & 3D models section and click DWG.
- For DWG files for accessories, select the Accessories section and click DWG.



Other SX subwoofers

The SX Series subwoofers are a range of sub bass enclosures designed to complement Martin Audio full range systems. The range encompasses installation and touring subs, from the 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 larger models are built to be weather resistant and when used with an optional connector cover are suitable for occasional outdoor use as a portable system or for installation outdoors as long as they are not directly exposed to the elements.

The range includes two powered, Dante equipped subwoofers. These are an ideal partner for CDD-LIVE. The range also includes three marine passive subwoofers for use in saltwater environments such as cruise ships and beach-side locations.

The optional accessories include eye bolts for flying smaller models, frames for flying larger models, and castors and rugged transit covers for use in touring.

For further details, visit our website martin-audio.com.

Passive SX subwoofers

		Castors	Transit cover	Weatherised connector cover	Marine version available
SX110	10" passive subwoofer	No	No	No	
SX210	Dual 10" passive subwoofer	No	No	No	
SX112	12" passive subwoofer	No	No	No	Yes
SX212	Dual 12" passive subwoofer	No	No	No	
SX115	15" passive subwoofer	Optional	Optional	Optional	
SXC115	15" passive cardioid subwoofer	Optional	Optional	No	
SXCF115	15" passive cardioid flown subwoofer	Optional	Optional	No	
SX215	Dual 15" passive subwoofer	Optional	Optional	Optional	
SX118	18" passive subwoofer	Optional	Optional	Optional	Yes
SXC118	18" passive cardioid subwoofer	Optional	Optional	Optional	
SXCF118	18" passive cardioid flown subwoofer	Optional	Optional	Optional	
SX218	Dual 18" passive subwoofer	Optional	Optional	Optional	Yes
SXH218	Hybrid® horn/reflex, dual 18" passive subwoofer	Supplied	Optional	Optional	
SXHF218	Hybrid® horn/reflex, dual 18" passive flown subwoofer	Supplied	Optional	Optional	

Powered SX subwoofers

		Castors	Transit cover	Rain cowl
SXP118	18" powered portable subwoofer	Optional	Optional	Optional
SXP218	Dual 18" powered portable subwoofer	Optional	Optional	Optional



SX215 specification

	-
Туре	Dual driver, direct radiating subwoofer
Frequency response ¹	$45~Hz - 100~Hz \pm 3~dB, -10~dB @ 36~Hz$
Drivers	LF: 15" with 4" voice coil, ferrite motor system
Rated power ²	1,600 W AES, 6,400 W peak
Recommended amplifier	iK42
Sensitivity ³	103 dB
Maximum SPL ³	135 dB continuous, 141 dB peak, 147 dB peak with crest factor 4
Nominal impedance	4 ohms
Dispersion	Omni-directional or cardioid when paired
Crossover frequency	100 Hz
Enclosure	Birch plywood
Finish	Black (RAL 9005)
Grille	Perforated steel
Connectors	2 x NL4
Fittings	Two skids on base with mating channels on top M20 top-mounted thread plate for optional pole Four pocket handles 24 x M10 mounting points for optional eye bolts 16 x M8 inserts for optional castors
Dimensions	(W) 961 mm x (H) 463 mm x (D) 679 mm (807 mm with castors) (W) 37.83 in x (H) 18.23 in x (D) 26.73 in (31.77 in with castors)
Weight	64 kg (141 lbs)
Optional accessories	Pack of four castors (WHEELKIT) Weatherised kit (WRKIT) Transit cover (SX215TC) M10 eye bolts (HTKCT06) Wind-up telescopic pole (ASF20071)
1	

 $^{^{1}\}mbox{On-axis}$ in open space (4 pi) at 1 m.



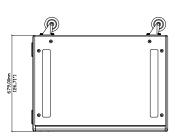
²AES Standard ANSI S4.26-1984.

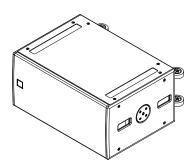
 $^{^3\}mbox{In}$ half space (2 pi) at 1 m with 1 W input and band-limited pink noise.

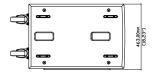
SX215 technical drawing

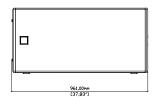
The drawing below shows the SX215 with the optional castors fitted.

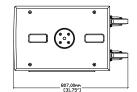
To load this drawing into CAD software, see DWG files (page 11).



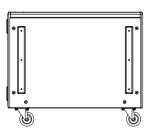












SX215



Troubleshooting

 Sound not right. Check the input and output connectors to make they are plugged into the sockets completely. Check the sound quality with headphones at the amplifier or preamp.

Technical support

- For technical support, contact either your supplier or Martin Audio technical support.
- For Martin Audio technical support, go to our website martin-audio.com and select Support > Support Contacts.

Service

 For service details, go to our website martin-audio.com and select Support > Service & Returns.

Warranty

 For warranty details, go to our website martinaudio.com and select Support > Service & Returns.

Unpacking

After unpacking, carefully check your speakers for any signs of transit damage. If you find any issues, inform your dealer straight away. If possible, keep the packaging for future use.

Recycling

When the product reaches the end of its life, please dispose of it responsibly at a recycling centre.



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