SX115 User Guide





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Introduction



and iK81). If you use a DX series controller, you also need an amplifier, such as the VIA5002.

The SX115 is available exclusively in black. With the addition of an entire of

on-board processing of the iKON amplifiers (iK41, iK42

The SX115 is available exclusively in black. With the addition of an optional connector cover, the SX115 is weather resistant and suitable for outdoor use. Castors and transit cover are available as optional accessories.

The SX115 is a versatile, passive subwoofer featuring a powerful long-excursion 15" (380 mm) and 4" (100 mm) voice coil driver with a water-resistant cone and triple roll surround. It delivers dynamic low-frequency performance from a very compact enclosure. Four reflex ports increase LF output efficiency and have a large frontal area to reduce turbulent air noise at high levels.

The durable plywood enclosure is finished in hardwearing textured paint and incorporates threaded inserts for eye bolt suspension of a single enclosure, as well as safety points. Inserts are also provided for the attachment of side rigging strips to assemble a flown installed array of up to four enclosures.

Ergonomic pocket handles assist handling and installation, and the driver is protected by a coated steel grille with an acoustically transparent fabric backing. An M20 threaded plate on the top surface allows polemounting of Martin Audio full-range enclosures.

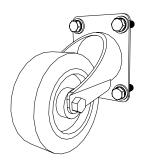
The SX115 can be used as a stand-alone subwoofer or stacked using locating skids and mating channels at the base and top of each enclosure. Cardioid operation can be achieved by arranging the SX115 in forward and rearfacing pairs, with each enclosure powered individually in conjunction with dedicated DSP presets.

With a response of 45 Hz -100 Hz \pm 3 dB, the SX115 is ideal for use with Martin Audio point source systems (up to 12"), constant curve systems (such as TORUS 8) and line array systems (such as WPM). For crossover and EQ functions for a full-range system, we recommend the DX series controllers (DX0.4, DX0.6 and DX4.0) or the



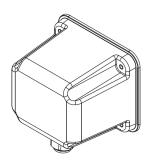
Optional accessories

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: SX115TC
- Tour grade transit cover
- Cut outs for easy access to handles
- Protects the SX115 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

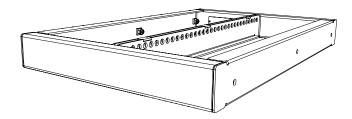


Product code: ASF20071



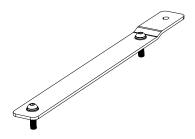
- Wind-up handle for raising speakers to required height
- Rugged steel construction
- Locking screw and safety button
- 35 mm diameter to fit standard portable speaker tophat fittings
- M20 threaded base fitting

Flying grid



- Product code: SXGRIDI15
- Flown arrays of SX115 or SXC115
- Flown arrays of SX115 or SXC115 above WPM
- Flown arrays of SX115 or SXC115 above TORUS T8
- Installation not touring
- One- or two-point pick-up
- Available in black (SXGRIDI15) or white (SXGRIDI15-W)
- Previously product code SXC115GRIDI

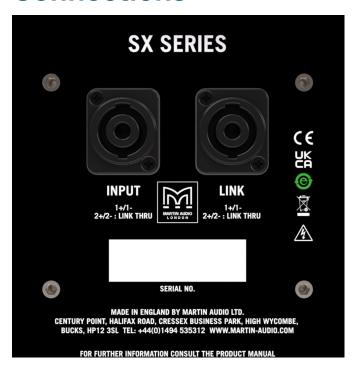
Flying strips



- Product code: FKIT450
- Flying kit for SX115 only
- Installation not touring
- Each kit contains four bolt-on strips and all fittings



Connections



The SX115 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.



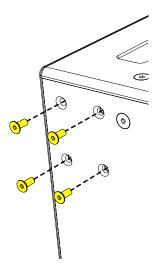
Fitting castors

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

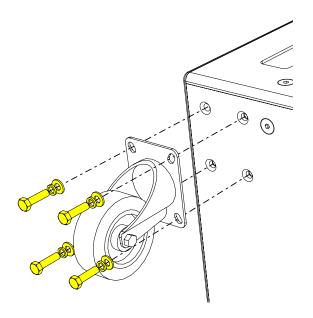
Make sure you use the bolts from the kit, not the screws from the cabinet.

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 SX115

To fly individual SX115 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.

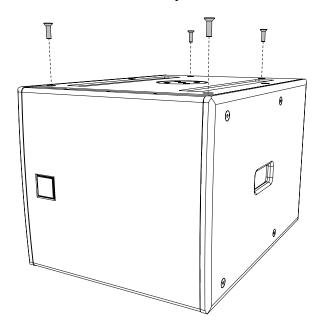
The SX115 has 24 M10 inserts: six on the top, six on the bottom, four on each side and four on the back.



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 SX115

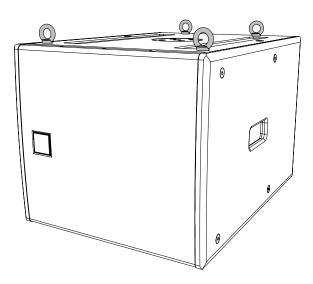
 Remove M10 counter-sunk screws from the SX115 (usually from the top) and screw in M10 eye bolts. We recommend five eye bolts: four to fly the subwoofer and one as a redundant safety bond.



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.





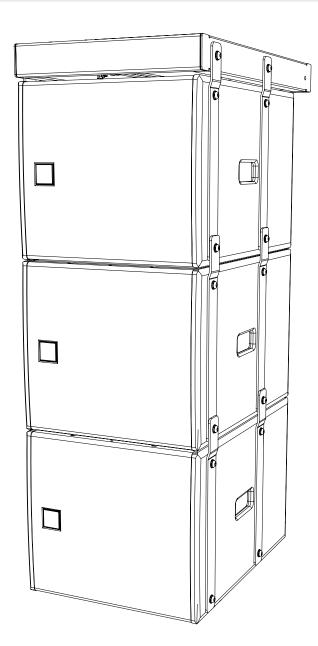
Flying an array of SX115

To fly an array of SX115 subs, you need the following optional accessories:

- One SXGRIDI15 flying frame for the top of the array.
- One FKIT450 flying kit for each SX115 sub.



You can fly up to four SX115 subs using these accessories.



With a small array, it is easiest to stack the SX115 subs first and attach the fittings, as explained in the next section. If you don't want to stack the subs (for example, if you are on your own), you can attach the fittings to one sub, use a hoist to raise this sub in the air and then slide the next sub underneath. You can also use this method to create a large array by adding subs underneath a small array.

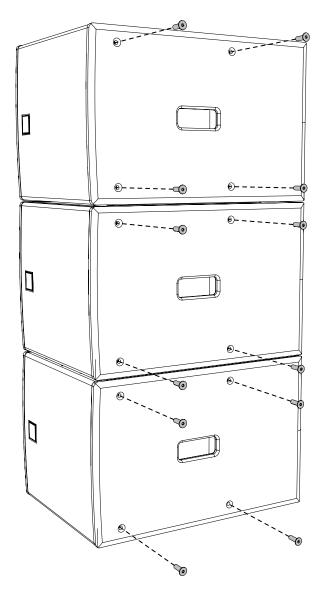


Flying heavy equipment in public spaces is dangerous. Make sure the installer uses appropriately rated equipment and has suitable qualifications and experience.

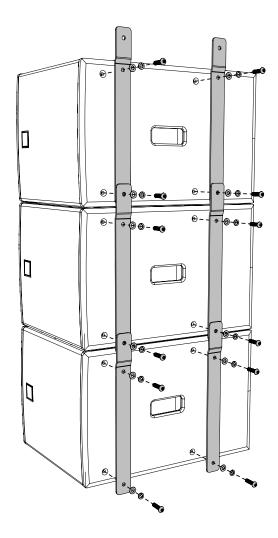


To fly an array of SX115

1. Remove the M10 bolts from the sides of the cabinets, four from each side.



Each flying strip overlaps the flying strip on the cabinet above, so you may find it easiest to attach the strips from the bottom of the array.



2. Secure two FKIT450 flying strips on each side of each sub using the M10 screws and washers provided in the kit.

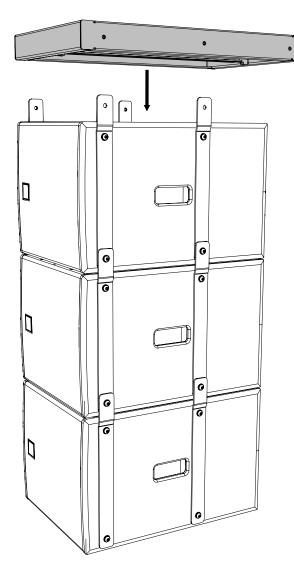
Order of fittings: flying strip, flat washer, spring washer, screw.



Use the screws provided in the flying kit. The screws from the cabinet aren't suitable.



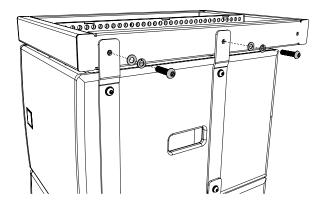
3. Place the SXGRIDI15 on top of the array.



4. Align the holes in the flying strips and the grid, and secure on both sides using the screws and washers provided in the kit.

Order of fittings: flying strip, flat washer, spring washer, screw.

Use this order of fittings: flying strip, flat washer, spring washer, screw.



5. Attach a hoist and raise the array into the air.

To add subs to the array

- 1. Use a hoist to raise an array (or a single sub) into the air as described in the previous section.
- 2. Slide a sub under the array and lower the array onto this sub.
- 3. Unscrew the four lowest screws from the four lowest flying strips, ready to attach the lowest sub.
- 4. Secure the four flying strips to the lowest sub using two screws for each strip. Use this order of fittings: flying strip, flat washer, spring washer, screw.
- Use four screws to attach the four flying strip overlaps to the cabinet on top of the lowest sub. Use this order of fittings: flying strip, flat washer, spring washer, screw.
- 6. To attach any further subs, repeat steps 1 to 5.



Flying SX115 above WPM

To fly an array of SX115 above WPM, you need the following optional accessories:

- One SXGRIDI15 flying frame for the top of the array.
- One FKIT450 flying kit for each SX115 sub.
- One WPMTRIGI transition grid between the subs and the WPM cabinets.



You can fly up to three SX115 above up to 12 WPM using these accessories.



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

To fly SX115 above WPM

- 1. Create an array of SX115 as described in the section Flying an array of SX115 (page 9).
- 2. Use a hoist to lift the array from the ground.
- 3. Secure the WPMTRIGI transition grid to the bottom of the array using the M10 bolts supplied with the grid.
- 4. Attach the WPM cabinets to the transition grid as described in the **WPM user guide**. To download this user guide, visit our website martin-audio.com.



Flying SX115 above Torus T8

To fly an array of SX115 above Torus T8, you need the following optional accessories:

- One SXGRIDI15 flying frame for the top of the array.
- One FKIT450 flying kit for each SX115 sub.
- One T8TRIGI transition grid between the subs and the Torus T8 cabinets.



You can fly up to three SX115 above up to six Torus T8 cabinets.



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

To fly SX115 above Torus T8

- 1. Create an array of SX115 as described in the section Flying an array of SX115 (page 9).
- 2. Use a hoist to lift the array from the ground.
- 3. Secure the T8TRIGI to the bottom of the array using the M10 bolts supplied with the grid.
- 4. Attach the Torus T8 cabinets to the transition grid as described in the **Torus T8 rigging manual**. To download this manual, visit our website martin-audio.com.



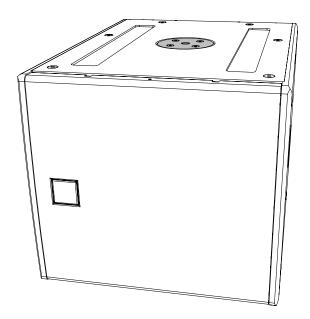
Pole mounting

The SX115 has an M20 top-mounted thread plate for installing a pole.

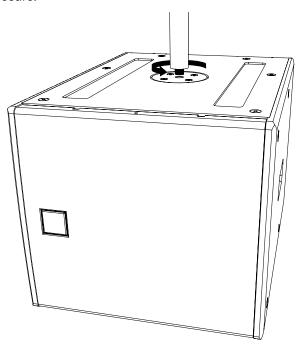
The Martin Audio wind-up telescopic pole ASF20071 (page 4) supports speakers with a top hat fitting up to 35 kg (77.2 lbs), such as CDD-LIVE, XD, WPM and MLA Mini. With the pole at or below the level marked "Preset", you can mount up to four cabinets of WPM or MLA Mini. At this level the maximum load 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 SX115, 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 SX115 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 SX115.
- 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 SX115 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 SX115.
- Select the Technical drawings & 3D models section and click REVIT FILE.

DWG file

For viewing the SX115 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 SX115.
- 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 |



SX115 specification

| Туре | Direct radiating subwoofer |
|---------------------------------|--|
| Frequency response ¹ | $45~\text{Hz} - 100~\text{Hz} \pm 3~\text{dB}, -10~\text{dB} \ @\ 36~\text{Hz}$ |
| Drivers | LF: 15" with 4" voice coil, ferrite motor system |
| Rated power ² | 800 W AES, 3,200 W peak |
| Recommended amplifier | iK41 |
| Sensitivity ³ | 100 dB |
| Maximum SPL ³ | 129 dB continuous, 135 dB peak, 141 dB peak with crest factor 4 |
| Nominal impedance | 8 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 Two pocket handles 24 x M10 mounting points for optional eye bolts 16 x M8 inserts for optional castors |
| Dimensions | (W) 500 mm x (H) 451 mm x (D) 678 mm (806 mm with castors) (W) 19.7 in x (H) 17.8 in x (D) 26.7 in (31.7 in with castors) |
| Weight | 36.5 kg (80.5 lbs) |
| Optional accessories | Pack of four castors (WHEELKIT) Weatherised kit (WRKIT) Transit cover (SX115TC) M10 eye bolts (HTKCT06) Wind-up telescopic pole (ASF20071) Flying grid (SXGRIDI15) Flying strips (FKIT450) |
| | |

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



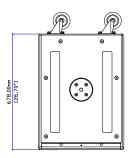
²AES Standard ANSI S4.26-1984.

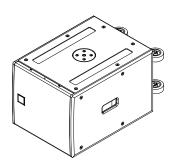
 $^{^{3}\}mbox{ln}$ half space (2 pi) at 1 m with 2.83 V input and band-limited pink noise.

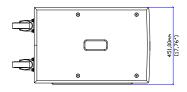
SX115 technical drawing

The drawing below shows the SX115 with the optional castors fitted.

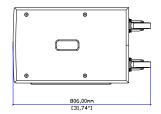
To load this drawing into CAD software, see DWG files (page 16).

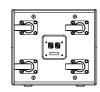














SX115



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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