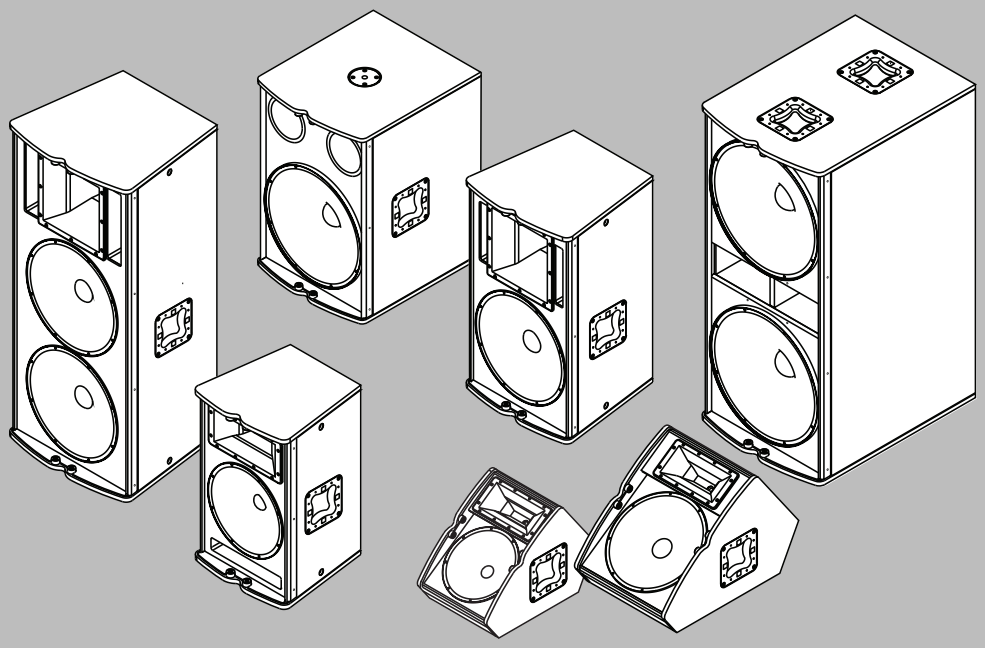
Electro-Voice

Tour X Series Loudspeakers



en User manual

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1 Safety

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water other than explicitly called out in this manual.
6. Clean only with a dry cloth.

1.1 Suspension

The Electro-Voice TX1122 , TX1152 , and TX2152 have threaded points that can be used for suspension. Please refer to ... on properly suspending Tour X models prior to installation.

Warning!
Suspending any object is potentially dangerous and should only be attempted by individuals who have a thorough knowledge of the techniques and regulations of suspending objects overhead. Electro-Voice strongly recommends that loudspeakers be suspended taking into account all current national, federal, state, and local laws and regulations. It is the responsibility of the installer to ensure all loudspeakers are safely installed in accordance with all such requirements. When loudspeakers are suspended, Electro-Voice strongly recommends the system be inspected at least once per year or as laws and regulations require. If any sign of weakness or damage is detected, remedial action should be taken immediately. The user is responsible for making sure the wall, ceiling, or structure is capable of supporting all objects suspended overhead. Any hardware used to suspend a loudspeaker not associated with Electro-Voice is the responsibility of others.

Stand mount
The Electro-Voice TX1122 and TX1152 include 1-3/8-inch stand mounts for use with tripod stands.

1. Check the specifications of the speaker stand to be certain it is capable of supporting the weight of the speaker.
2. Place the speaker stand on a flat, stable surface and be sure to fully extend the legs of the stand.
3. Do not try to make the stand “taller” and compromise its structural integrity.
4. Do not attempt to suspend more than one speaker on a stand designed for a single speaker.
5. Unless you are confident that you can safely handle lifting the weight of the speaker onto the stand, ask another person to help you place it.
6. Route cables and position the stand so that performers, production crew and audience members will not trip over the stand or cables and pull the speaker system over.
7. Secure the cables with wire ties or tape whenever possible.

Ground stack
The Electro-Voice TX2152 can be vertically stacked on a TX2181 to elevate the horn above the audience.

1. Unless you can safely lift the weight of the loudspeaker on to the ground stack, have another person to help you place it.
2. The ground stack should be placed on a solid, level surface.
3. When using subs on a surface that is hard or slick, take precautions to prevent the stacks from “walking”.

4. When using a ground stack in windy outdoor conditions, when the surface is slippery, or when in adverse conditions, Electro-Voice recommends using a ratchet strap to secure the speakers.

Caution!
Hearing exposure
Electro-Voice Tour X loudspeakers are capable of producing sound pressure levels sufficient to produce permanent hearing damage. Caution should be taken to avoid prolonged exposure to sound pressure levels exceeding 90 dB.

Warning!
Moisture
Electro-Voice does not recommend using Tour X loudspeakers in the rain or in high moisture environments without protection.

2 Short information

Thank you for choosing an Electro-Voice loudspeaker system. Please take time to consult the manual to understand all the features built into your EV system and fully utilize its performance capabilities.

2.1 Applicable products

This manual is applicable to these products:

CTN	Description
TX1122	12" 2-way passive loudspeaker
TX1152	15" 2-way passive loudspeaker
TX2152	Dual 15" 2-way passive full-range loudspeaker
TX1181	18" passive subwoofer
TX2181	Dual 18" passive subwoofer
TX1122FM	12" passive floor monitor
TX1152FM	15" passive floor monitor

3 Description

The Electro-Voice Tour X professional loudspeakers are a unique and highly-functional package of pro audio performance, versatility and aesthetics. Many of the design features are taken from EV ’s many years of experience in designing transducers and loudspeaker systems for high quality concert touring applications.
The TX1122 , TX1152 , and TX2152 are multipurpose full-range loudspeakers that are equally suited for portable and fixed installation applications. The TX1181 and TX2181 subwoofers are designed for low frequency reinforcement of the full-range loudspeakers. The TX1122FM and TX1152FM are purpose-built vertical floor monitors with (patent pending) Signal Synchronized Transducers (SST) for small to medium sized stages.

3.1 Features

- Low distortion, high excursion SMX and EVS woofers.
- DH3 and ND2 compression drivers mated to Constant Directivity horns.
- Lightweight and durable enclosures with EVCoat.
- High strength, 16GA steel “backbone” design grilles with rotatable logos.
- High order crossovers with equalization and HF protection.
- Dual NL4 input connectors.
- Multi grip handles.
- High sensitivity and power handling.
- Six (6) M10 threaded points for eyebolt suspension (TX1122 , TX1152 , and TX2152 only).
- Signal Synchronized Transducers (TX1122FM and TX1152FM only).

4 Installation

4.1 Suspending the loudspeaker

The TX1122 , TX1152 , and TX2152 enclosures have six (6) M10 threaded points: three (3) points on the top of the enclosure and three (3) points on the bottom (Figure 1).

- Use forged shoulder eyebolts rated for overhead suspension, such as the EBK-1 or EBK-3 accessory, to suspend an individual loudspeaker.

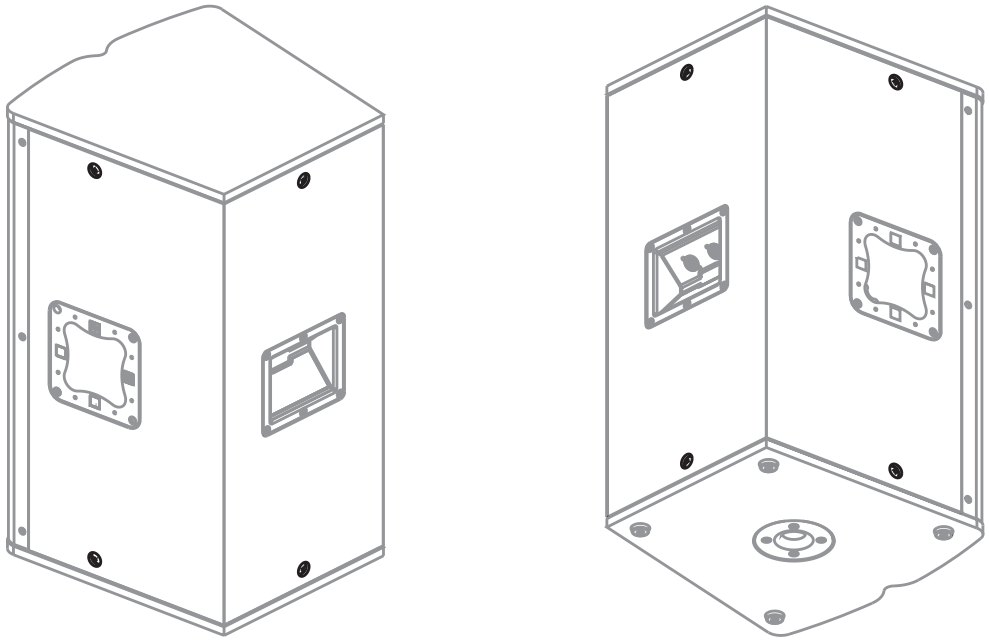


Figure 4.1: Right-top and left-bottom views of Tour X suspension points

Prior to use, inspect the suspension points and associated hardware for any cracks, deformations, broken welds, corrosion, missing or damaged components which could reduce the suspension points strength. Replace any damaged hardware. Never exceed the limitations or maximum recommended load intended for the suspension points. As an added safety measure, it is suggested the user install an extra suspension point back to the building structural supports. This redundant safety point should have as little slack as possible (less than one inch is preferable). Prior to each use, inspect the loudspeaker enclosures for any cracks, deformations, missing or damaged components, which could reduce enclosure strength. Replace any loudspeaker systems that are damaged or missing hardware.

To install the eyebolts:

1. Remove the M10 screw in the desired locations.
2. Replace with the fender washer and eyebolt (Figure 2).

Notice!

If the eyebolts are removed, reinstall the screw; otherwise, air leaks will occur in the enclosure, resulting in undesirable performance.

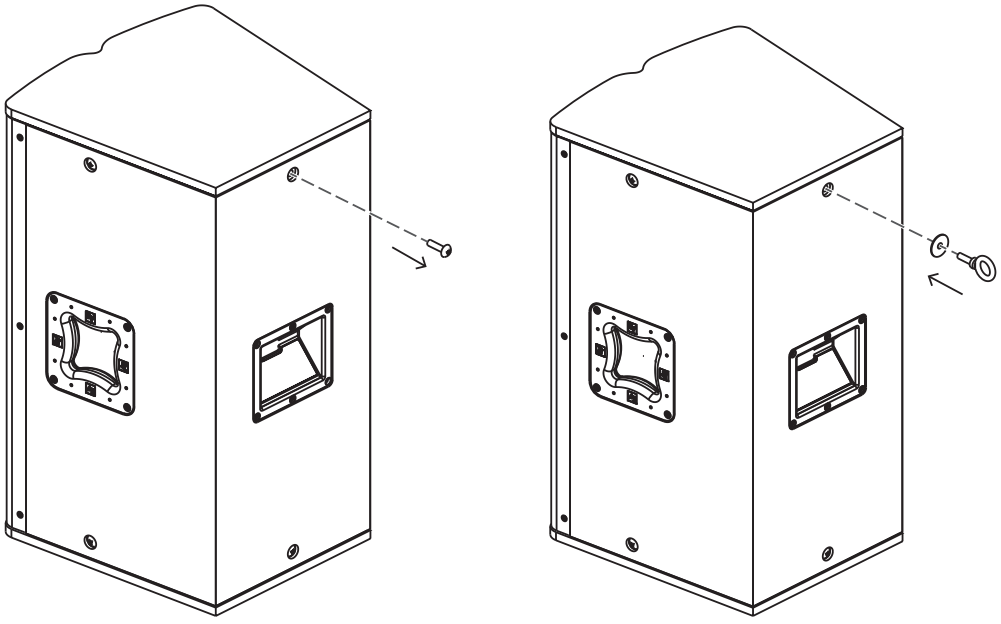


Figure 4.2: Removing the M10 screws and installing the fender washers and eyebolts

4.1.1 Recommended suspension methods

Warning!
Eyebolts must be fully seated and oriented in the plane of pull. Always use fender washers at least 1.5 inch in diameter and 1/16 inch thick under the eyebolt to distribute the load on the enclosure.

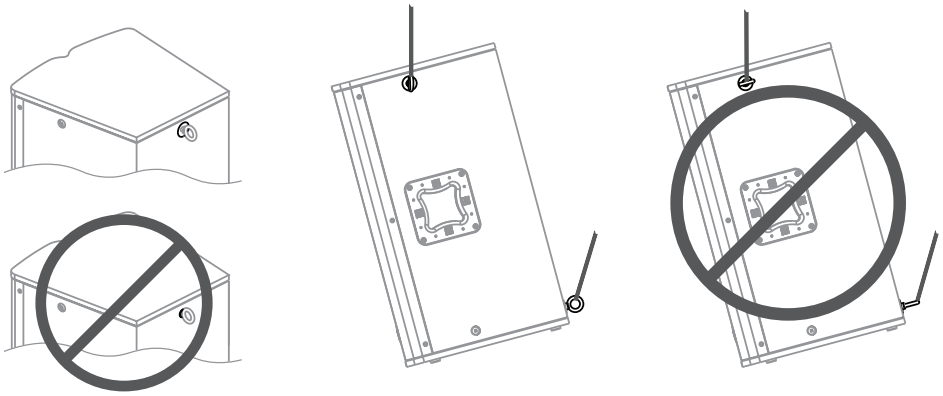


Figure 4.3: Eyebolt with and without washer. Eyebolts oriented in the plane of pull: correct and incorrect.

Maximum working load

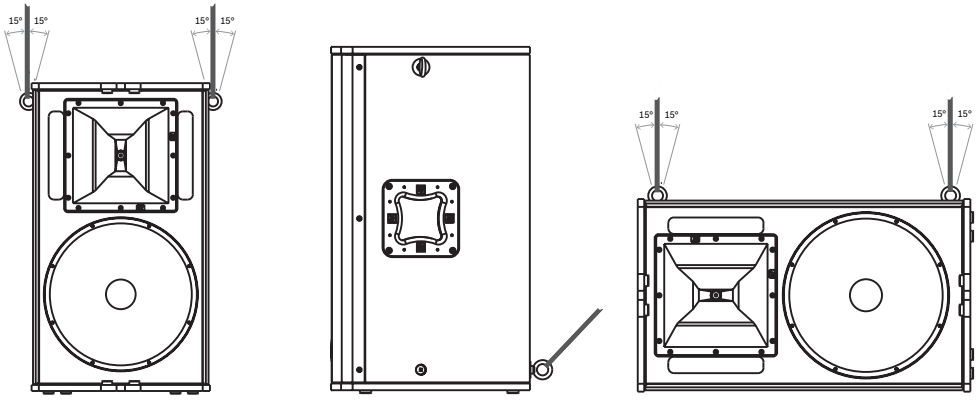
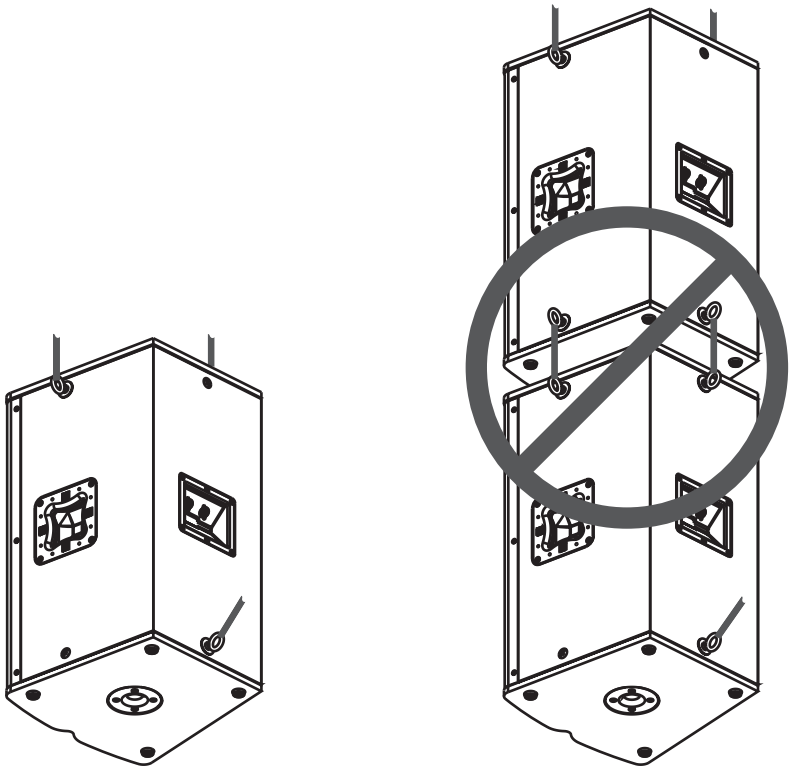
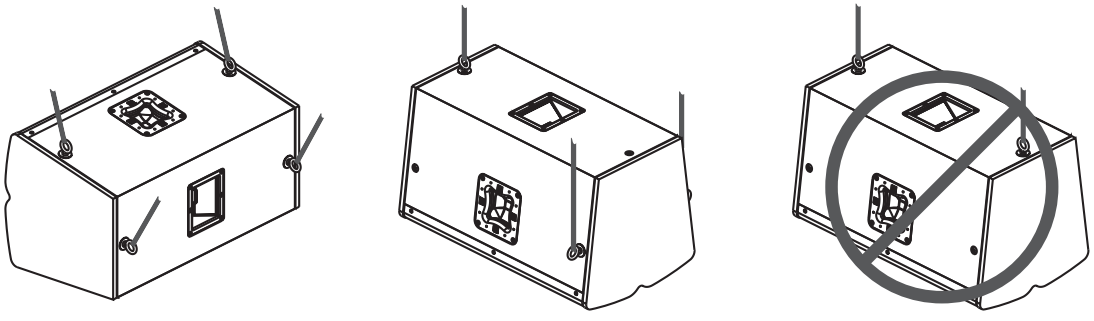


Figure 4.4: Vertical orientation, pull-back (rear) point and horizontal orientation

Vertical suspension



Horizontal suspension



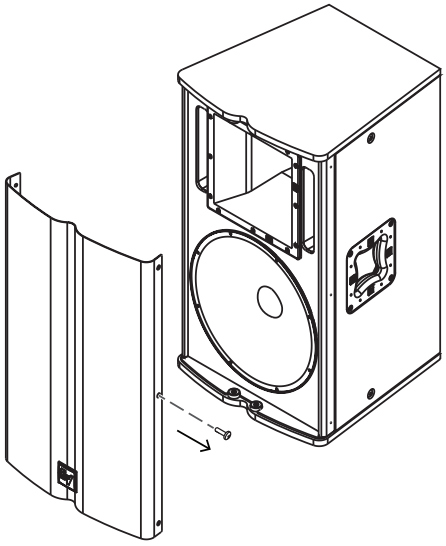
Warning!
Suspension points are to be used for a single enclosure only, never arrays. Never exceed the limitations or maximum recommended working load for Electro-Voice loudspeakers.

4.2 Rotating the horn

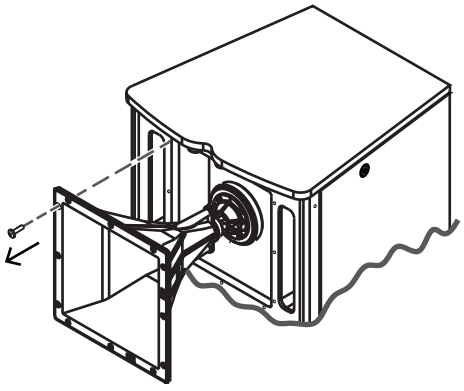
The TX1152 and TX2152 loudspeakers have horns that can be rotated to change the coverage pattern. The coverage pattern angles are indicated on the horn flange.

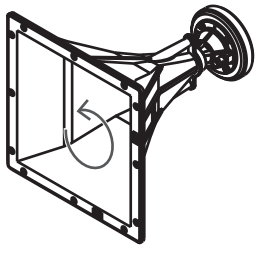
To rotate the horn:

1. Remove the (6 or 8) screws that attach the grille to the enclosure.



2. Remove the (12) screws that attach the horn to the enclosure, and disconnect the wires that attach the compression driver to the input panel.
3. Rotate the horn 90° to the desired vertical coverage pattern.





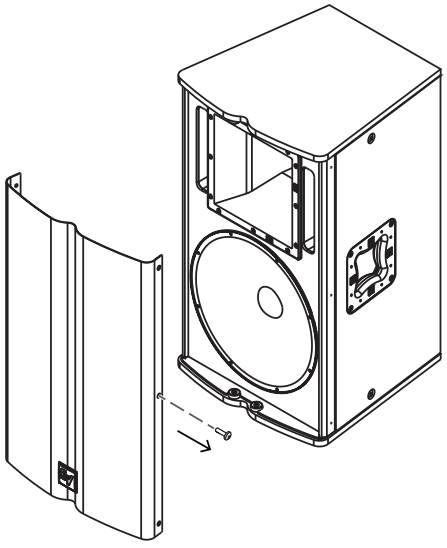
4. Reconnect the wires that attach the compression driver to the input panel.
   The yellow wire corresponds to the positive terminal, and the yellow and black wire corresponds to the negative terminal.
5. Reattach the horn to the enclosure using the (12) screws.
6. Reattach the grille using the (6 or 8) screws.

4.3 Rotating the logo

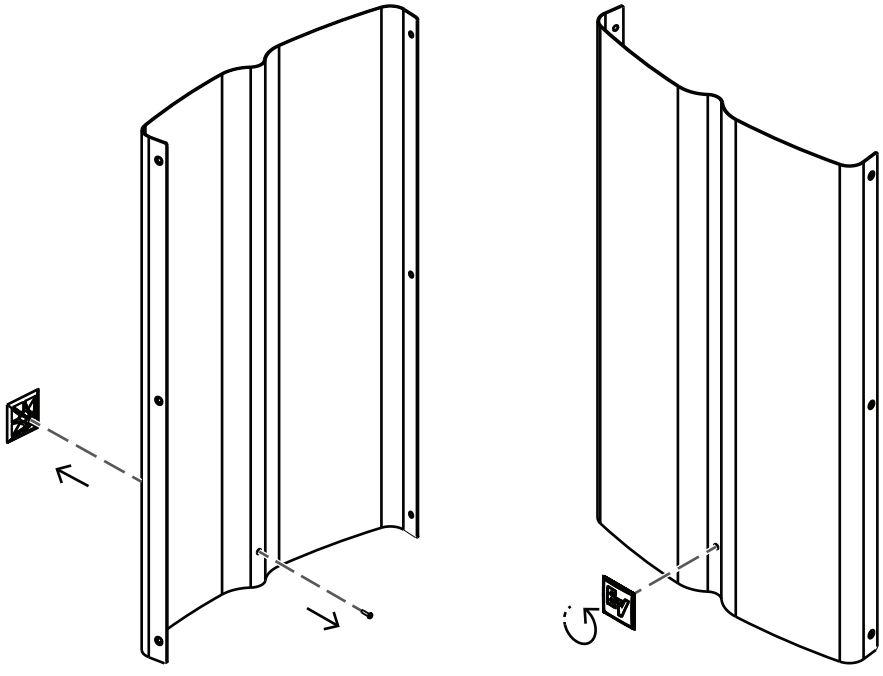
All Tour X loudspeakers have logos that can be rotated (horizontally or vertically) to the user's desired orientation. The logo is mounted on a spacer that has the signature "backbone" notch profile of Tour X grilles.

To rotate the logo:

1. Remove the six (6) or eight (8) screws that attach the grille to the enclosure (Figure 8).



2. Remove the one (1) screw on the back of the grille that attaches the spacer to the grille.
3. Rotate the logo and spacer (in increments of 90°) to the desired orientation.



4. Reattach the spacer to the grille using the one (1) screw.
   Be sure that the screw is tight enough so as not to rattle during use, but not so tight the logo warps inward.
5. Reattach the grille using the six (6) or eight (8) screws.

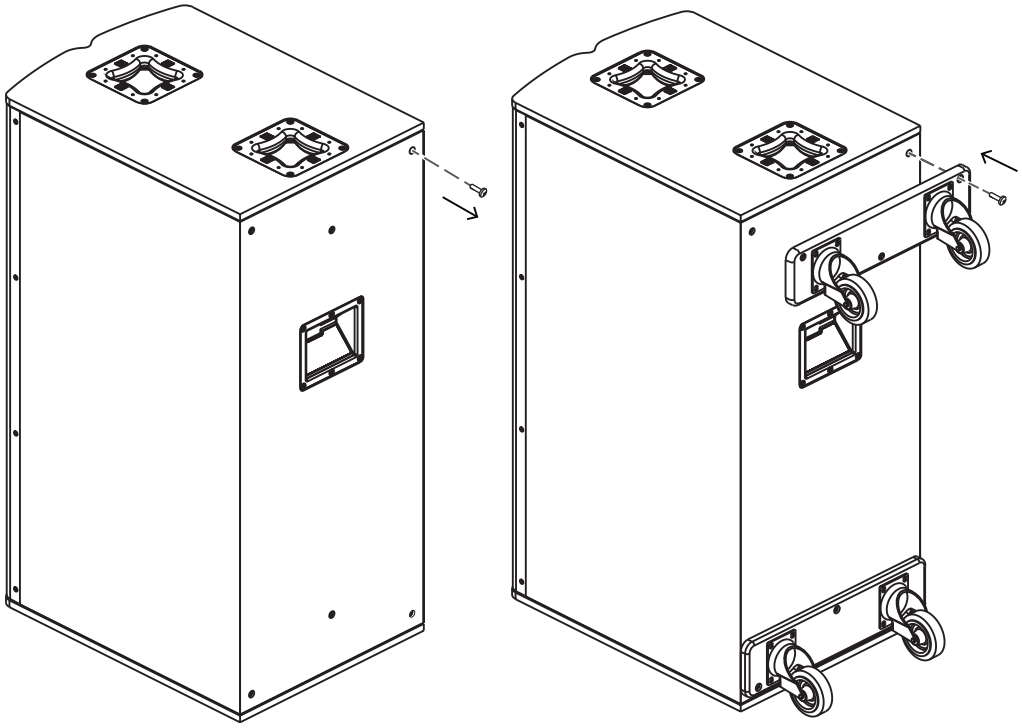
4.4 Attaching the wheel kit

The TX1181 and TX2181 loudspeakers have six (6) mounting points for the TX-W1 Wheel Kit on their rear panels.

The TX-W1 Wheel Kit is made up of two (2) skid plates with two (2) castors on each skid plate. When mounted on the rear of a TX1181 or TX2181 , they can greatly reduce setup time and virtually eliminate the need to carry subwoofers.

To attach the wheel kit:

1. Remove the six (6) screws on the rear of the TX1181 or TX2181 loudspeaker.
2. Align the three (3) holes at the top of the loudspeaker with the three (3) holes of the skid plate.
3. Install three (3) screws back into the rear of the TX1181 or TX2181 loudspeaker.
4. Repeat step 2 and 3 at the bottom of the loudspeaker, ensuring all six (6) screws are tight.



5 Recommended configurations

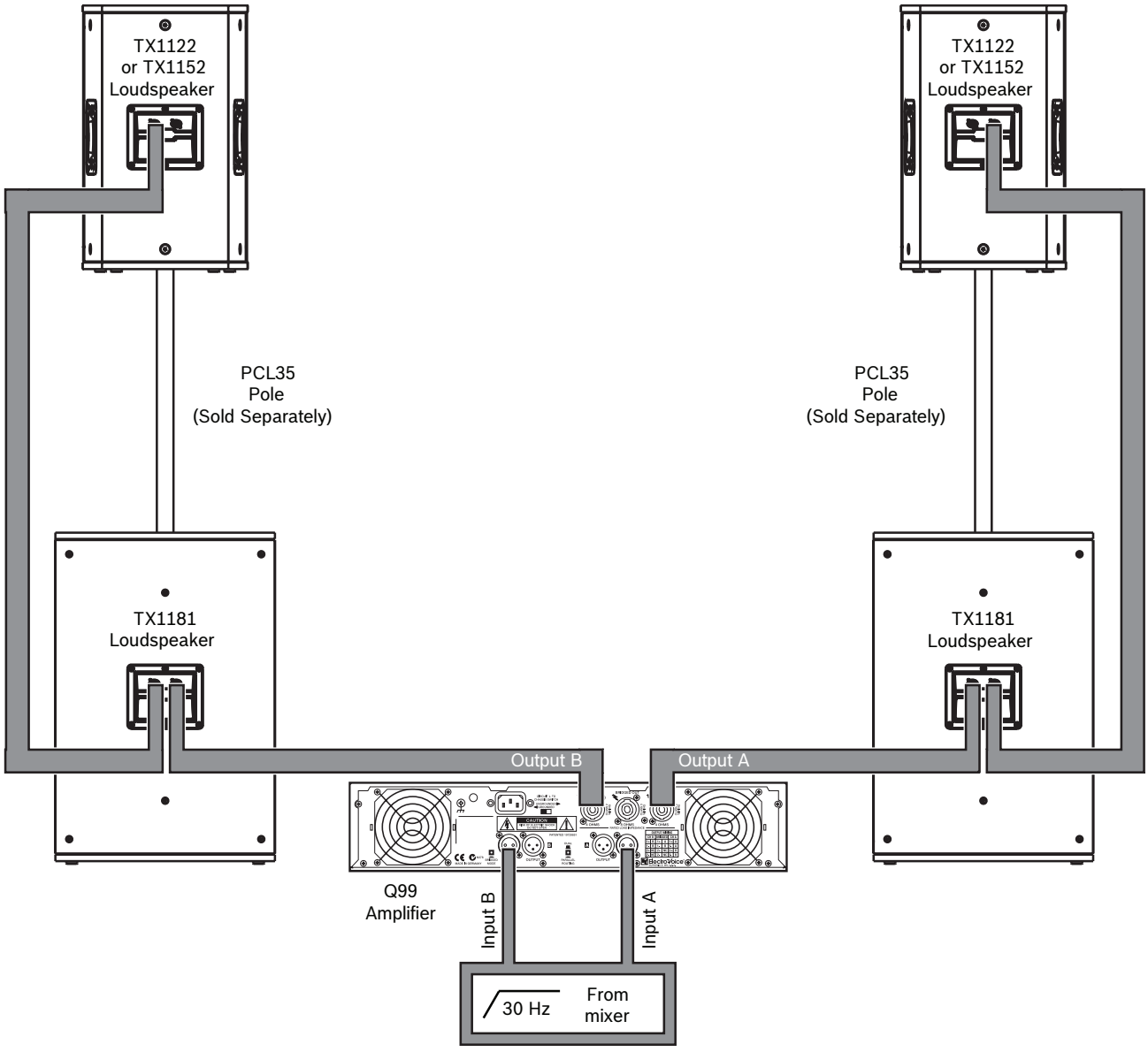


Figure 5.1: One (1) TX1122 (or TX1152) and one (1) TX1181 per side, paralleled, on one (1) Q99 amplifier

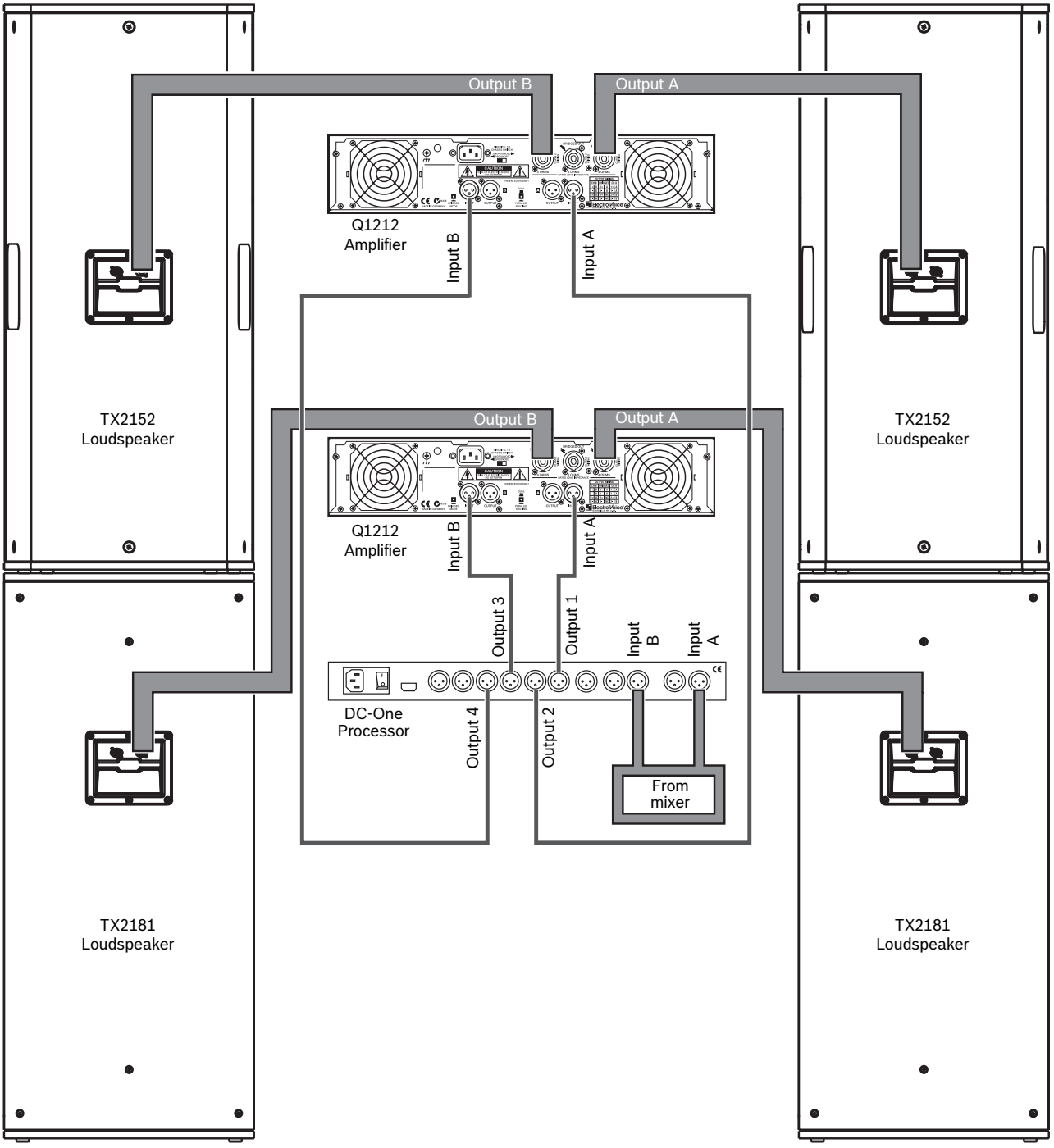


Figure 5.2: One (1) TX2152 and one (1) TX2181 per side, on two (2) Q1212 amplifiers and one (1) DC-One processor

Notice!

Processor settings are available at http://www.electrovoice.com.

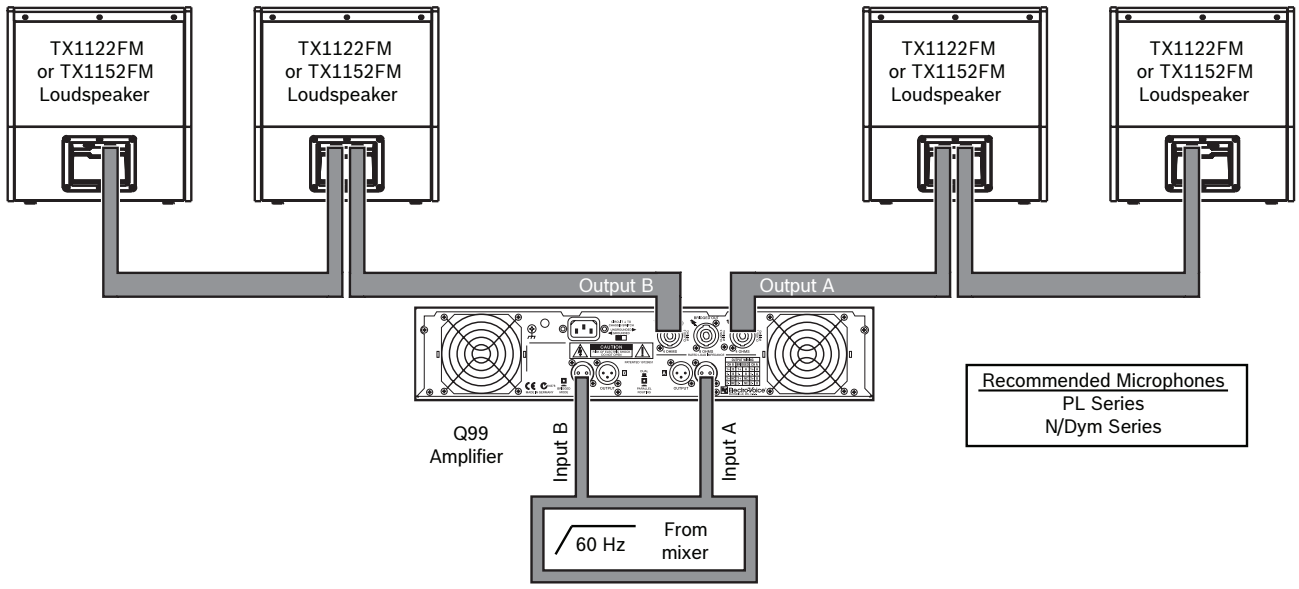


Figure 5.3: Four (4) TX1122FM (or TX1152FM) paralleled on one (1) Q99 amplifier

6 Technical data

	TX1122
Freq. response (-3 dB)[1]:	60 Hz - 20 kHz
Frequency range (-10 dB)[1]:	45 Hz - 20 kHz
Rec. high pass frequency:	45 Hz
Axial sensitivity[1]:	97 dB (1W/1m)
Max. calculated SPL:	130 dB
Coverage angle (H x V):	90° x 50°
Power handling:	500 W continuous, 2000 W peak
LF transducer:	SMX2120, 12 in. (305 mm) driver
HF transducer:	DH3, 1 in. (25.4 mm) exit compression driver
Crossover frequency:	1750 Hz
Nominal impedance:	8 Ohms
Minimum impedance:	5.4 Ohms
Connectors:	(2) Neutrik Speakon NL4
Enclosure material:	Plywood with MDF with EVCoat
Grille material:	16GA Steel, black powder coat, with rotatable logo
Suspension:	6 M10 threaded points - 2 on each side of enclosure, and 2 on rear of enclosure
Dimensions (H x W x D):	618 mm x 382 mm x 380 mm 24.3 in. x 15.0 in. x 15.0 in.
Net weight:	20.2 kg 44.5 lb
Shipping weight:	22.7 kg 50.0 lb
Accessories:	EBK-1 EBK-3 TSP-1 TSS-1

[1] Half space measurement.

	TX1152	TX2152
Freq. response (-3 dB)[1]:	55 Hz - 20 kHz	55 Hz - 13 kHz
Frequency range (-10 dB)[1]:	40 Hz - 20 kHz	50 Hz - 18 kHz
Rec. high pass frequency:	40 Hz	40 Hz
Axial sensitivity[1]:	100 dB (1W/1m)	103 dB (1W/1m)
Max. calculated SPL:	133 dB	139 dB
Coverage angle (H x V):	60° x 40° or 40° x 60°	
Power handling:	500 W continuous 2000 W peak	1000 W continuous 4000 W peak
LF transducer:	SMX2120, 12 in. (305 mm) driver	
HF transducer:	DH3, 1 in. (25.4 mm) exit compression driver	ND2, 1 in. (25.4 mm) exit neodymium compression driver
Crossover frequency:	1650 Hz	1750 Hz
Nominal impedance:	8 Ohms	4 Ohms
Minimum impedance:	5.6 Ohms	3.1 Ohms
Connectors:	(2) Neutrik Speakon NL4	
Enclosure material:	Plywood with MDF with EVCoat	
Grille material:	16GA Steel, black powder coat, with rotatable logo	
Suspension:	6 M10 threaded points - 2 on each side of enclosure, and 2 on rear of enclosure	
Dimensions (H x W x D):	778 mm x 446 mm x 446 mm 30.6 in. x 17.5 in. x 17.5 in.	1156 mm x 508 mm x 471 mm 45.5 in. x 20.0 in. x 18.5 in.
Net weight:	27.8 kg 61.2 lb	42.8 kg 94.3 lb
Shipping weight:	31.2 kg 68.7 lb	48.0 kg 105.8 lb
Accessories:	EBK-1 EBK-3 TSP-1 TSS-1	EBK-1 EBK-3

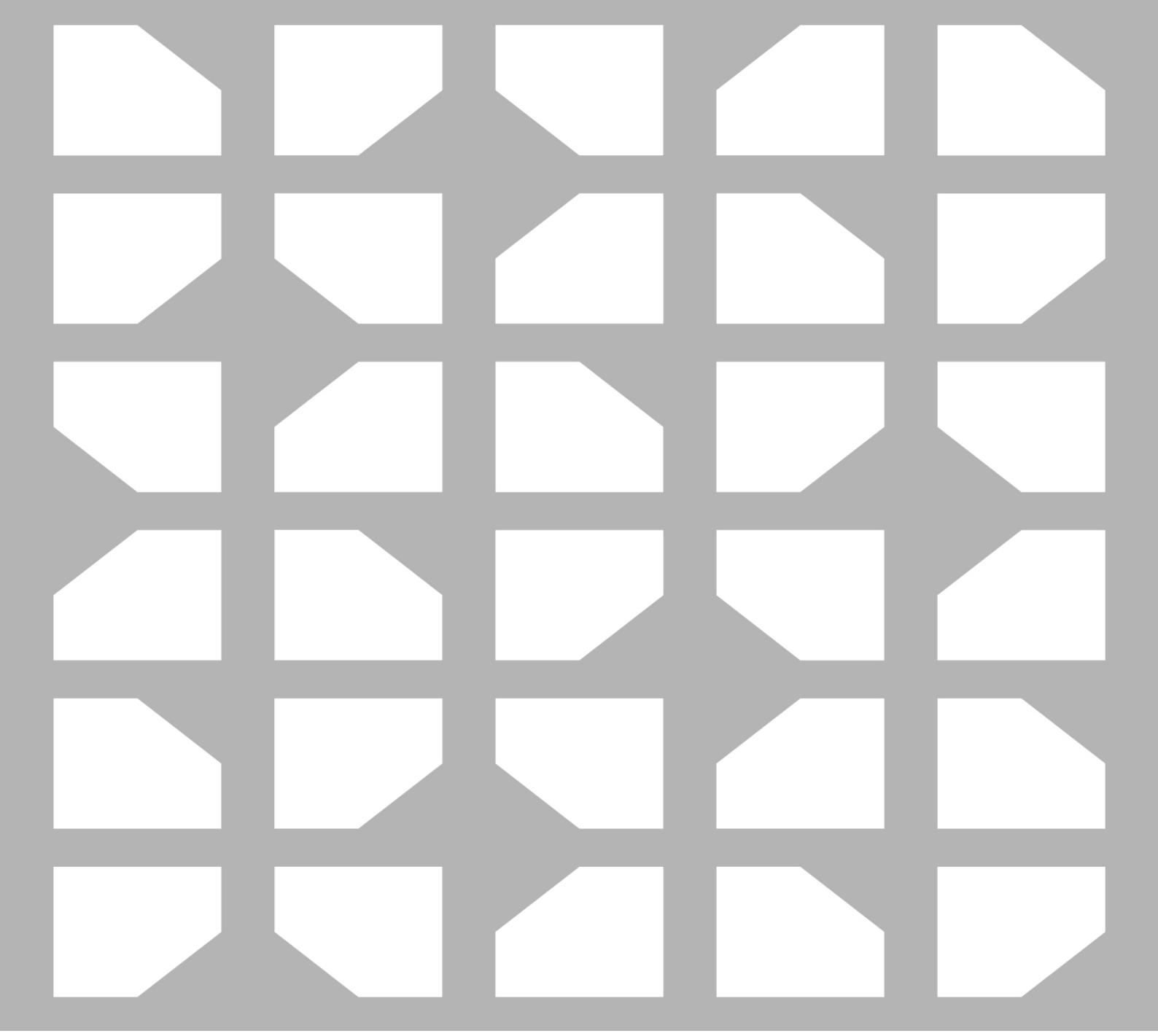
[1] Half space measurement.

	TX1181	**TX2181**
Freq. response (-3 dB)[1]:	50 Hz - 160 Hz	
Frequency range (-10 dB)[1]:	45 Hz - 700 Hz	40 Hz - 1.5 kHz
Rec. high pass frequency:	30 Hz	n/a
Rec. low pass frequency:	n/a	80 Hz - 120 Hz
Axial sensitivity[1]:	100 dB (1W/1m)	103 dB (1W/1m)
Max. calculated SPL:	132 dB	138 dB
Coverage angle (H x V):	Omnidirectional	
Power handling:	500 W continuous 2000 W peak	1000 W continuous 4000 W peak
LF transducer:	EVS-18S 18 in. (457 mm) driver	2 EVS-18S 18 in. (457 mm) driver
HF transducer:	n/a	
Crossover frequency:	n/a	
Nominal impedance:	8 Ohms	4 Ohms
Minimum impedance:	7.5 Ohms	2.9 Ohms
Connectors:	(2) Neutrik Speakon NL4	
Enclosure material:	Plywood with MDF with EVCoat	
Grille material:	16GA Steel, black powder coat, with rotatable logo	
Suspension:	n/a	
Dimensions (H x W x D):	769 mm x 508 mm x 591 mm 30.3 in. x 20.0 in. x 23.3 in.	1156 mm x 508 mm x 691 mm 45.5 in. x 20.0 in. x 27.2 in.
Net weight:	33.8 kg 74.5 lb	56.1 kg 123.5 lb
Shipping weight:	40.0 kg 88.0 lb	63.1 kg 139.0 lb
Accessories:	TX-W1 PCL35	TX-W1

[1] Half space measurement.

	TX1122FM	TX1152FM
Freq. response (-3 dB)[1]:	70 Hz - 20 kHz	65 Hz - 20 kHz
Frequency range (-10 dB)[1]:	55 Hz - 20 kHz	45 Hz - 20 kHz
Rec. high pass frequency:	60 Hz	45 Hz
Rec. low pass frequency:	n/a	
Axial sensitivity[1]:	99 dB (1W/1m)	100 dB (1W/1m)
Max. calculated SPL:	132 dB	133 dB
Coverage angle (H x V):	90° - 50°	
Power handling:	500 W continuous, 2000 W peak	
LF transducer:	SMX2121 12 in. (305 mm) driver	SMX2151 15 in. (381 mm) driver
HF transducer:	DH3, 1 in. (25.4 mm) exit compression driver	
Crossover frequency:	1600 Hz	1750 Hz
Nominal impedance:	8 Ohms	
Minimum impedance:	6.4 Ohms	6.2 Ohms
Connectors:	(2) Neutrik Speakon NL4	
Enclosure material:	Plywood with MDF with EVCoat	
Grille material:	16GA Steel, black powder coat, with rotatable logo	
Suspension:	n/a	
Dimensions (H x W x D):	440 mm x 364 mm x 573 mm 17.3 in. x 14.3 in. x 22.6 in.	475 mm x 439 mm x 655 mm 18.7 in. x 17.3 in. x 25.8 in.
Net weight:	19.8 kg 43.7 lb	23.5 kg 51.9 lb
Shipping weight:	22.4 kg 49.2 lb	27.0 kg 59.4 lb
Accessories:	n/a	

[1] Half space measurement.



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