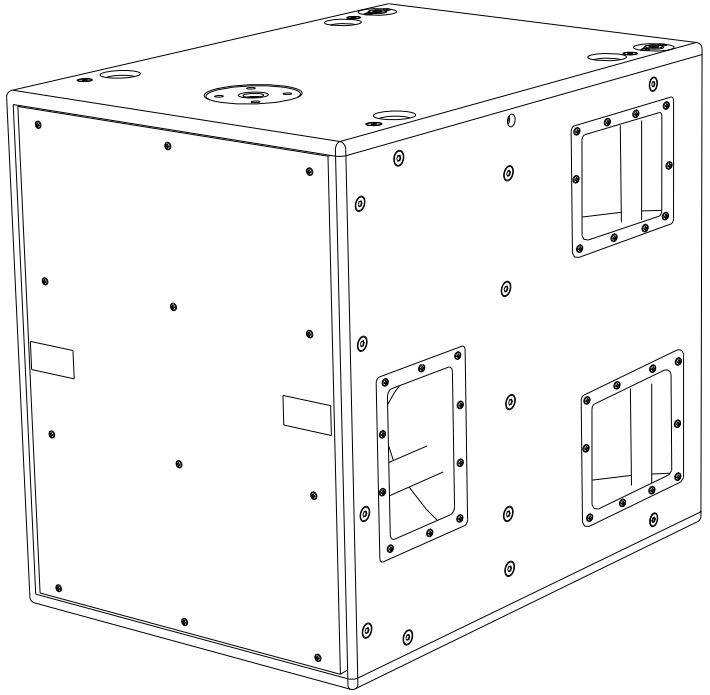
# VMS10dp

**ACTIVE SUBWOOFER**



digipro digital power

**MANUALE d'USO - Sezione 1**
**USER MANUAL - Section 1**
**BEDIENUNGSANLEITUNG - Abschnitt 1**
**CARACTERISTIQUES TECHNIQUES - Section 1**

CE Made in Italy

COD. 420120164 Rev. 5

dB TECHNOLOGIES
THE SOUND OF EXPERIENCE

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E-mail: info@dbtechnologies-aeb.com

## CONTROLS AND FUNCTIONS

1) **"MAINS FUSE" FUSE CARRIER**
Mains fuse housing.

2) **“FULL RANGE MAINS INPUT" POWER SOCKET**
For connecting the power cable provided.
The connector used for mains connection is a POWER CON® (blue)

3) **“LINK” RELAUNCH POWER SOCKET**
For relaunching the mains power. The output is connected in parallel with input (2) and can be used to power another amplified speaker.
The connector uses a POWER CON® (grey)

4) **COOLING GRILLE**
These grilles permit cooling the amplifier during operation.
Do not block accesses and clean the grilles whenever necessary to ensure correct air circulation.

5) **" BALANCED MAIN INPUT” INPUT CONNECTOR**
Balanced input at line level (0 dBu).
It is able to accept “XLR” sockets.

6) **"LINK” OUTPUT CONNECTOR**
The “XLR” connector connected in parallel with input (5) can be used to send the input audio signal to another amplified speaker.

7) **”BALANCED X-OVER OUTPUT” OUTPUT CONNECTOR**
Internal crossover balanced output. The signal from this output can be sent to any other amplified speaker.
The crossover frequency can be selected by means of the “SUB X-OVER” switch (8).

8) **“SUB X-OVER” SWITCH**
This switch permits selection of crossover frequency between the sub woofer and the speakers connected to the ”BALANCED X-OVER OUTPUT” connector.
The crossing frequency is selected to 90Hz or 120Hz with a slope of 24dB/oct.
The frequency choice depends to the sound reproduction desire.

9) **“SUB PHASE ” SWITCH**
This switch permits 180° rotation of the audio signal reproduced by subwoofer.
Rotation makes for easier optimization of low-frequency reproduction even in the most difficult installation situations. After completing installation, reproduce a piece of music and adjust the switch to obtain the best low-frequency sound.

10) **“ON” INDICATOR LIGHT**
The “ON” indicator light comes on green to indicate the amplifier is switched on and it is working properly.

11) **“SGN” INDICATOR LIGHT**
This indicator comes on green to indicate the presence of the audio signal (at a level of -20dB).

12) **“LIM” INDICATOR LIGHT**
This indicator comes on red to indicate that the internal limiter circuit has tripped.
This prevents amplifier distortion and protects the speakers against overloads.
It is lights for a few seconds during the switching on.

13) **“SUB WOOFER LEVEL” INPUT SENSITIVITY CONTROL**
This control regulates the sensitivity of the signal at amplifier input.
This control does not affect the “LINK” and “BALANCED X-OVER OUTPUT” output levels

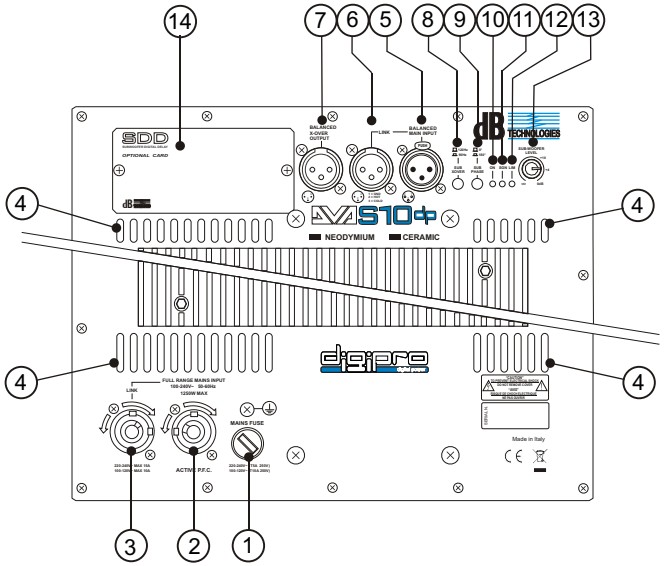
14) **DIGITAL DELAY “SDD - SUBWOOFER DIGITAL DELAY” OPTION**
The DVA S10dp loudspeaker can be equipped with a delay module (SDD - SUBWOOFER DIGITAL DELAY) that allows to delay the sound signal reproduced by the subwoofer. This circuit allows sound-alignment between line array and sub by balancing the various positions.
The circuit also includes a balanced “XLR” output that sends the delayed audio signal to other subwoofers. By using a single delay module it is possible to delay several subwoofers at the same time.
This module can also be used to create cardioid configuration systems. The cardioid configuration provides a remarkable attenuation of the low frequencies radiated by the rear side of the subs, without changing the direct radiated signal on the fronside.
This configuration needs at least 3 subwoofers (two with front radiation and one with rear radiation equipped with SDD module). See appendix for more details.

***EMI CLASSIFICATION***

*According to the standards EN 55103 this equipment is designed and suitable to operate in E3 (or lower E2, E1) Electromagnetic environments.*

## TECHNICAL SPECIFICATION

| | |
|---|---|
| System | Active |
| Type of amplifier | Digital - Class D (DIGIPRO®) |
| RMS power | 1000 W |
| Musical power | 2000 W |
| Frequency responce +/-3dB | 40-150Hz |
| Crossover | 90 - 120Hz (24dB/oct) selecting |
| Sound pressure (SPL) | 136dB peak |
| Woofer | 1 x woofer 18” - 4” voice coil<br>Neodymium or Ceramic |
| Input sensitivity nominal | 0 dBu |
| Impedance input Balanced<br>Unbalanced | 20Kohm<br>10Kohm |
| Power supply | Full-range with PFC, 100-240Vac, 50-60Hz |
| Speaker shape | rectangular |
| Dimension [WxHxD] | 515x640x770mm |
| Weight<br>Weight (with SRK10 Fly kit) | Neodymium 42Kg - Ceramic 48Kg<br>Neodymium 47,2Kg - Ceramic 53,2kg |



## INSTALLATION

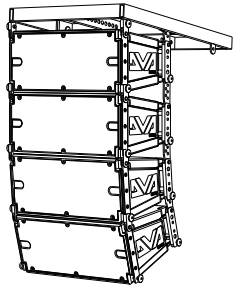
**DVA system has obtained the TÜV certification for suspension of DVA T4 and DVA S10dp speakers through flybar stirrup DRK 10.**
**The report certifies that the maximum weight applying to DRK 10 flybar is 250Kg.**

**DVA T4 configuration**

The DRK 10 flybar attests that the maximum number of DVA T4 is 16.
Refer to table 1 to determine the total weight borne by flybar according to the different DVA T4 configurations.

*Table 1*

| Quantity DVA T4 | Weight [kg] | [lbs.] |
|---|---|---|
| 1 | 15 | 33 |
| 2 | 30 | 66 |
| 3 | 45 | 99 |
| 4 | 60 | 132 |
| 5 | 75 | 165 |
| 6 | 90 | 198 |
| 7 | 105 | 231 |
| 8 | 120 | 264 |
| 9 | 135 | 297 |
| 10 | 150 | 330 |
| 11 | 165 | 363 |
| 12 | 180 | 396 |
| 13 | 195 | 429 |
| 14 | 210 | 462 |
| 15 | 225 | 495 |
| 16 | 240 | 528 |



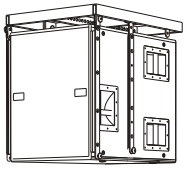
**DVA S10dp configuration**

The DRK 10 flybar attests that the maximum number of DVA S10dp with Neodymium woofer is 4 and DVA S10dp with Ceramic woofer is 5.
Refer to table 2 to determine the total weight borne by flybar according to the different DVA S10dp configurations.

| Quantity DVA S10dp (Neodymium woofer) | Weight [kg] | [lbs] |
|---|---|---|
| 1 | 48 | 106 |
| 2 | 96 | 212 |
| 3 | 144 | 317 |
| 4 | 192 | 423 |
| 5 | 240 | 528 |

| Quantità DVA S10dp (Ceramic woofer) | Weight [kg] | [lbs] |
|---|---|---|
| 1 | 54 | 119 |
| 2 | 108 | 238 |
| 3 | 162 | 357 |
| 4 | 216 | 476 |

*Table 2*



**Mixed configuration with DV A T4 and DV A S10dp (Neodimium woofer)**

The modular structure of DV A system permit s mixed suspension configuration between DVA T4 and DVA S10dp. It is necessary to consider that one DVA S10dp hanging subwoofer corresponds, in weight terms, to about four DVA T4 speakers.
For this reason it is necessary to calculate the total weight according to the different configurations.
Examples:

| | Quantity | Weight x qty | Configuration weight |
|---|---|---|---|
| DVA T4<br>DVA S10dp (Neodimium woofer) | 8<br>2 | 120Kg<br>96Kg | **216Kg** |

| | Quantity | Weight x qty | Configuration weight |
|---|---|---|---|
| DVA T4<br>DVA S10dp (Neodymium woofer) | 12<br>1 | 180Kg<br>48Kg | **228Kg** |



**Structural modification of DRK 10 flybar**

No structural modifications may be made without the manufacturer's consent.
Use only dB Technologies original parts

**Original parts dB Technologies**

Use only dB Technologies original parts.
The TÜV authorizing body has not certificated any other parts for use!
Always install parts in accordance with these installation instruction!
Compile and store all DVA system documents in a safe place!

**Warning**
If the security norms and total weight calculations are not observed, dB Technologies is not responsible for any possible damage to people and things.

**Note**

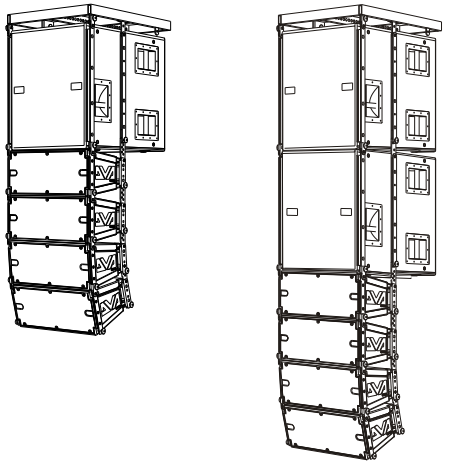
During installation ensure that carrying structure of the system has added in the total weight also the DRK 10 flybar weight, chain hoists, motors, cables and further weights.

**Initiation and Operation**

The safety regulation “§ 39, VBG 9a” of the German employers' liability insurance association's accident prevention regulations requires that load-carrying equipment be inspected by a qualified expert and possible defects be eliminated prior to initial commissioning by the recipient.

The safety regulation “§ 41, VBG 9a” requires that load-carrying equipment be subjected to a non-routine inspection following damage, repair work and other incidents that can affect load-carrying capacity.

**Warning**
The safety regulations might be different in other countries. Please check with your national safety authority the valid regulations!

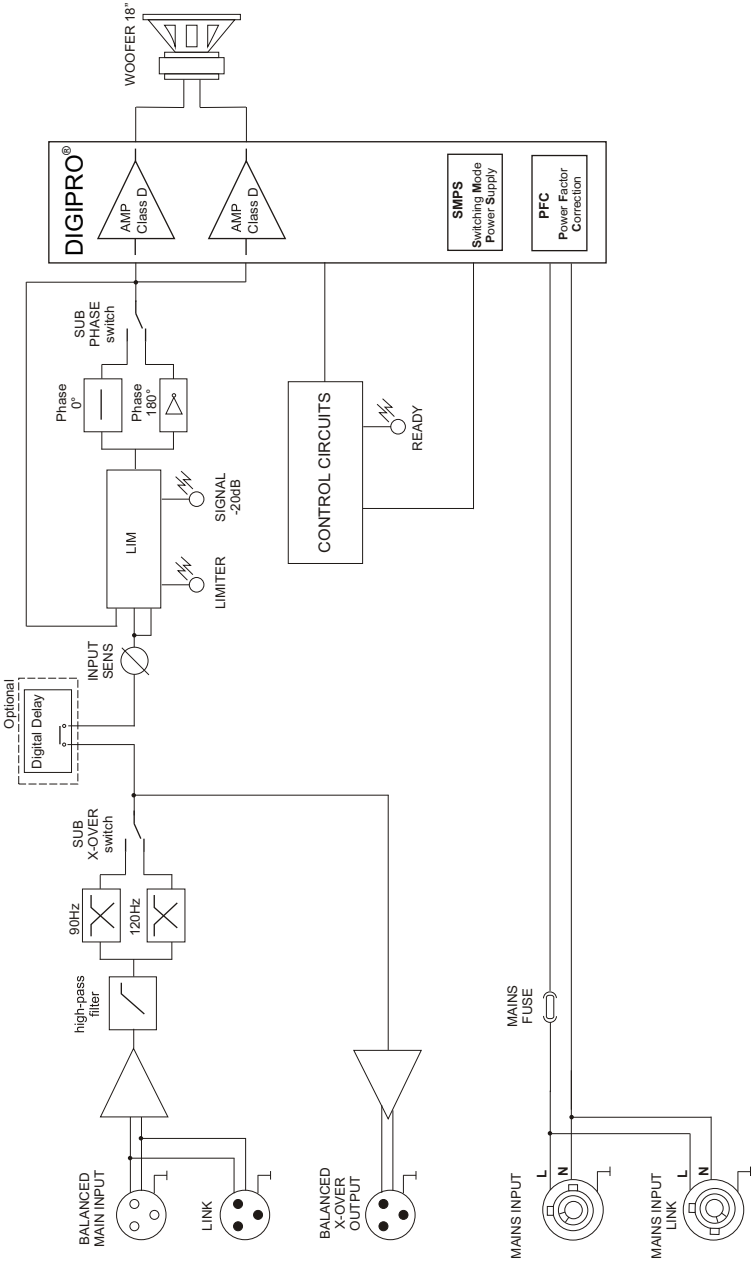


**DVA Composer Acoustical Simulation and aiming for DVA Systems**

DVA Composer is a 2D software for aiming and simulating acoustical response of all line arrays and Subwoofers from DVA Series.
The software allows you to set up a stereo system composed by tops and subs, and simulates separately the acoustical response of both.
DVA Composer also gives to the user all the information about phase alignment between flown systems and ground stacked subwoofers, as well as it suggests an optimized aiming of the line arrays modules and their suggested EQ presets, in order to guarantee maximum performances even for non-expert customers.

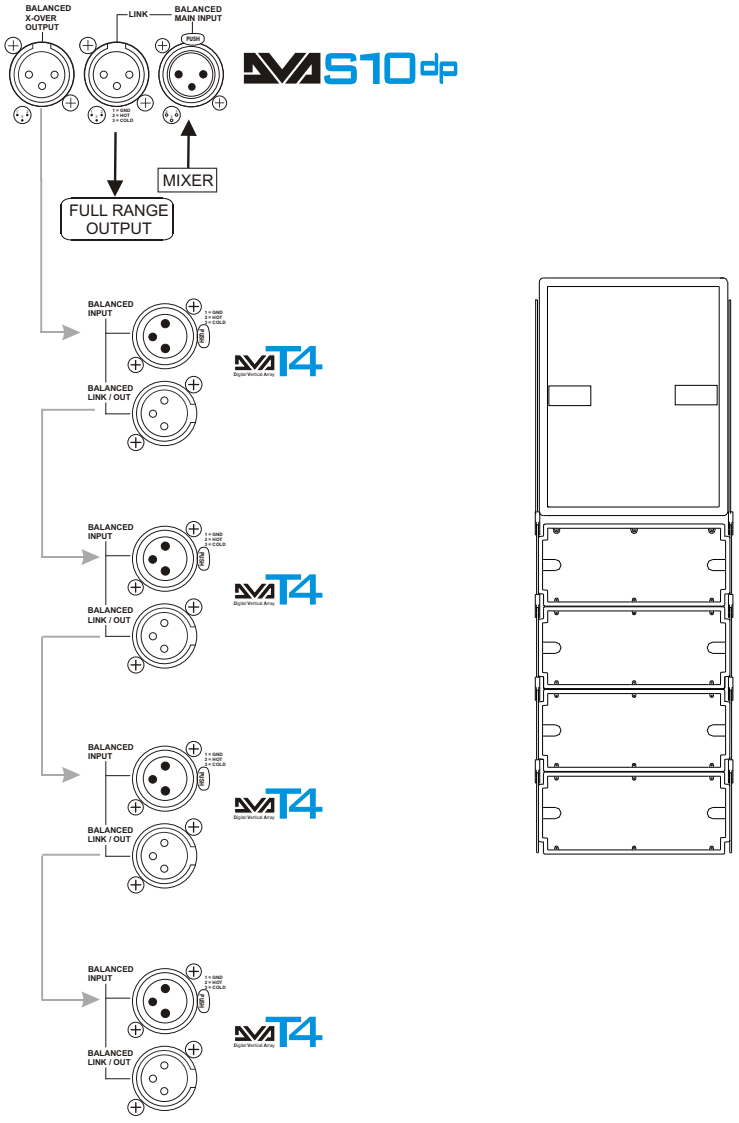
It is recommended to download DVA_Composer free software directly from dB Technologies (www.dbtechnologies.com) in the special section « Software & Controller»

## SCHEMA A BLOCCHI
## BLOCK DIAGRAM
## BLOCKSCHALTBILD
## DIAGRAMA EM BLOQURES

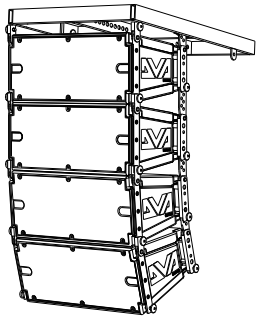


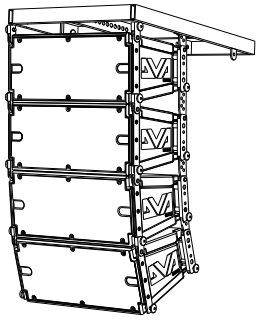


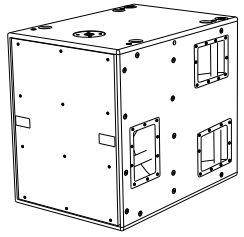

## COLLEGAMENTI
## CABLE CONNECTIONS
## VERKABELUNG
## CABLAGE



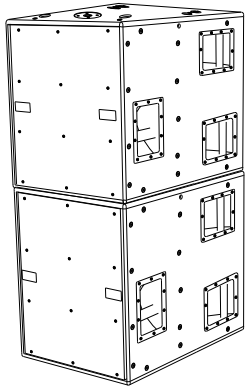
# INSTALLAZIONE
# INSTALLATION
# INSTALLATIONEN
# INSTALLATIONS



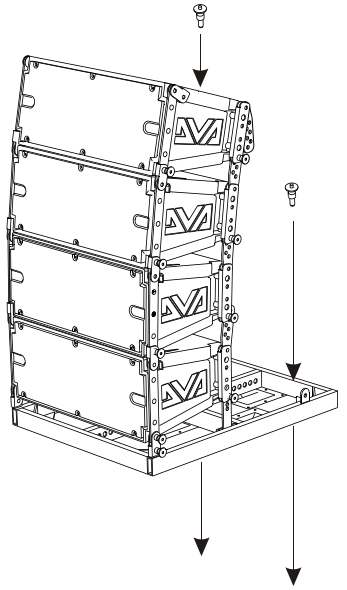


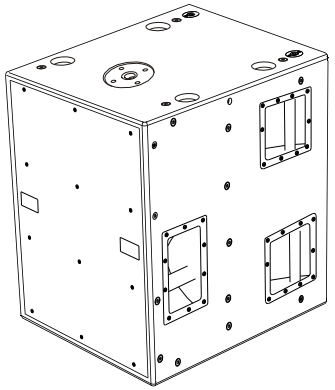


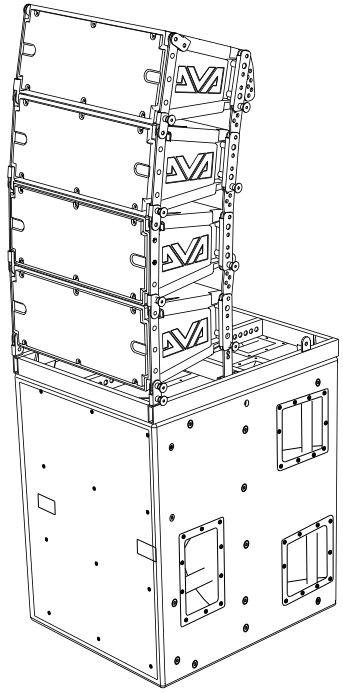
In appoggio
Groundstack



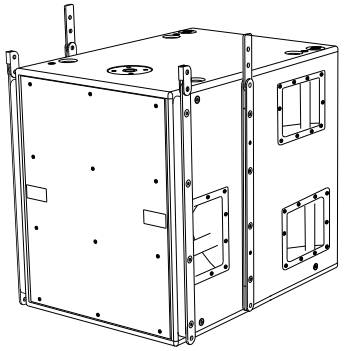
In appoggio - impilato
Groundstack - stacked

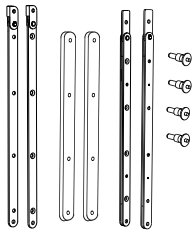




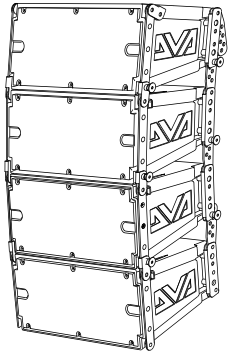


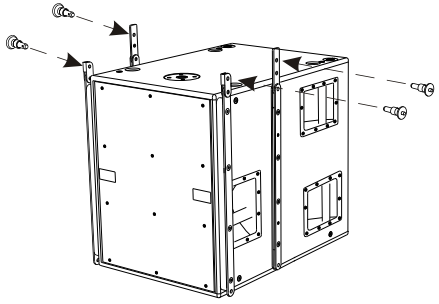
In appoggio con flybar (opzione DRK 10)
Groundstack with flybar (DRK 10 option)

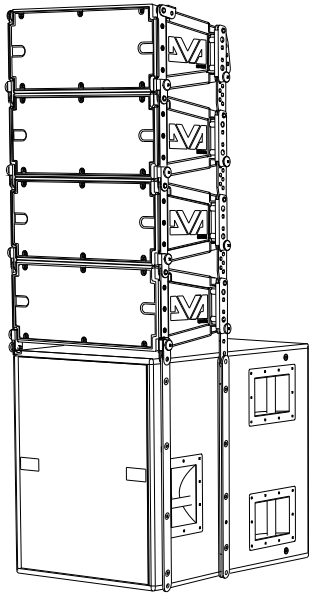




Kit staffe- opzione SRK 10
Kit stirrups - SRK-10 option

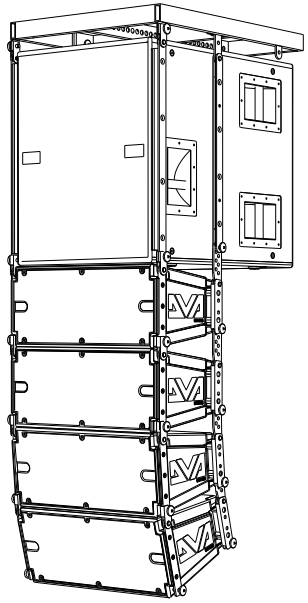


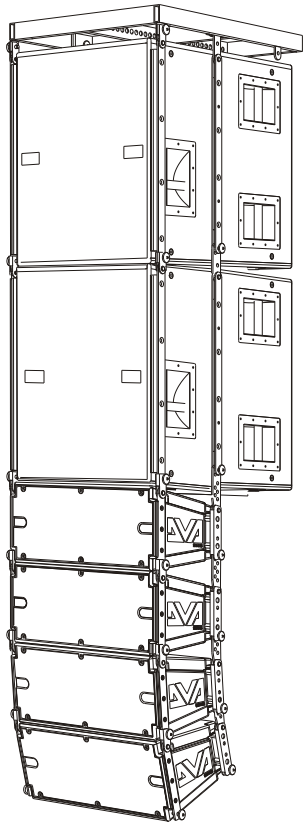


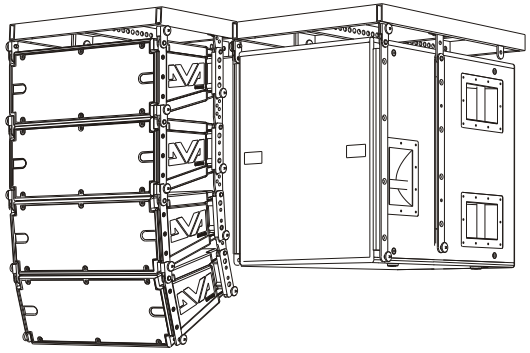


In appoggio con kit staffe
Groundstack with kit stirrups



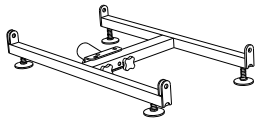




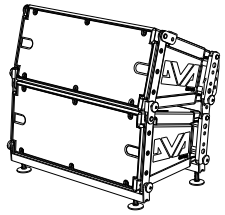


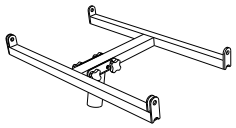
Appeso con kit staffe (opzione SRK-10) e flybar (opzione DRK-10)
Hang with stirrups kit (SRK-10 option) and flybar (DRK-10 option)

**Opzione DSA 4**
**DSA 4 Option**

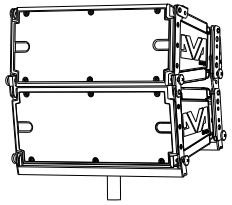


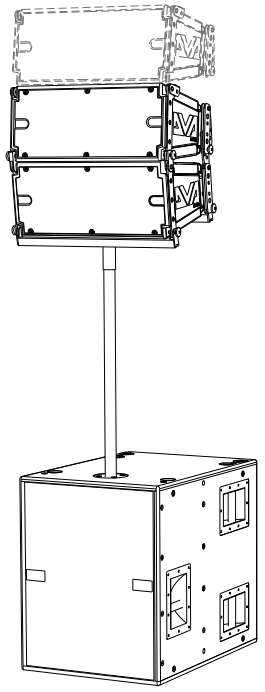
In appoggio
Floor stack

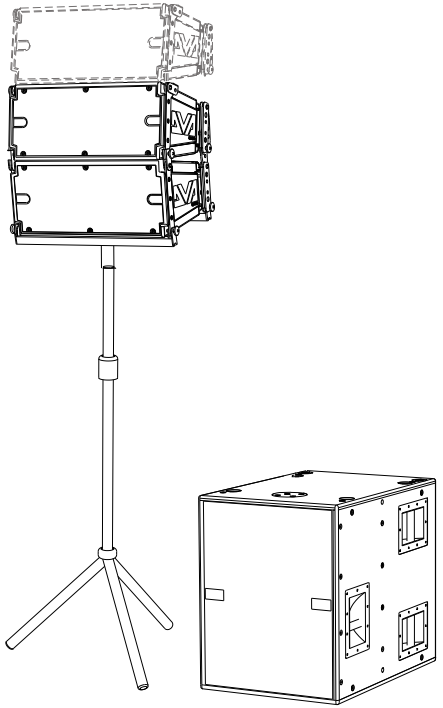




Per supporto asta
Stack adaptor

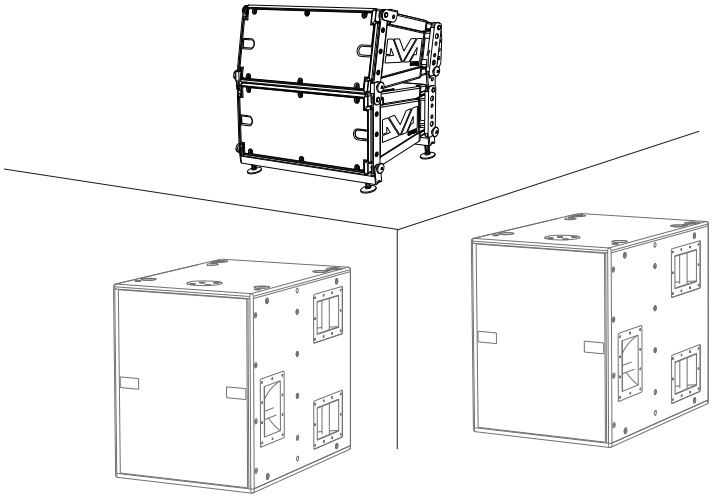




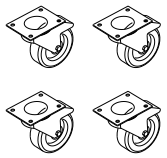


In appoggio son supporto su asta
per Groundstack with stand adaptor

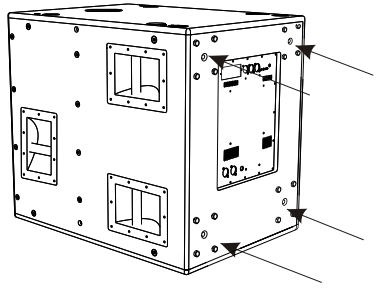


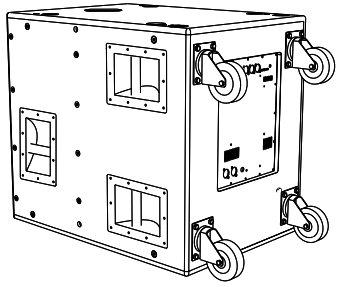


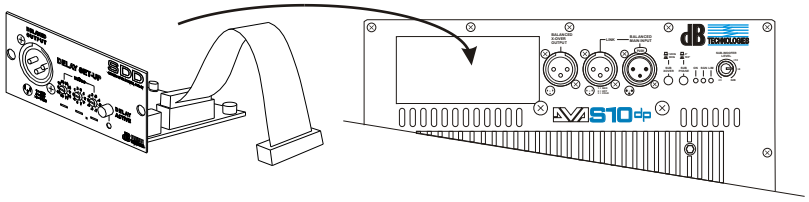
In appoggio a pavimento con supporto asta provvisto di piedi
Groundstack to floor with stand adaptor with feet



Set di 4 ruote - opzione DWK 20
Set of 4 wheels - DWK 20 option

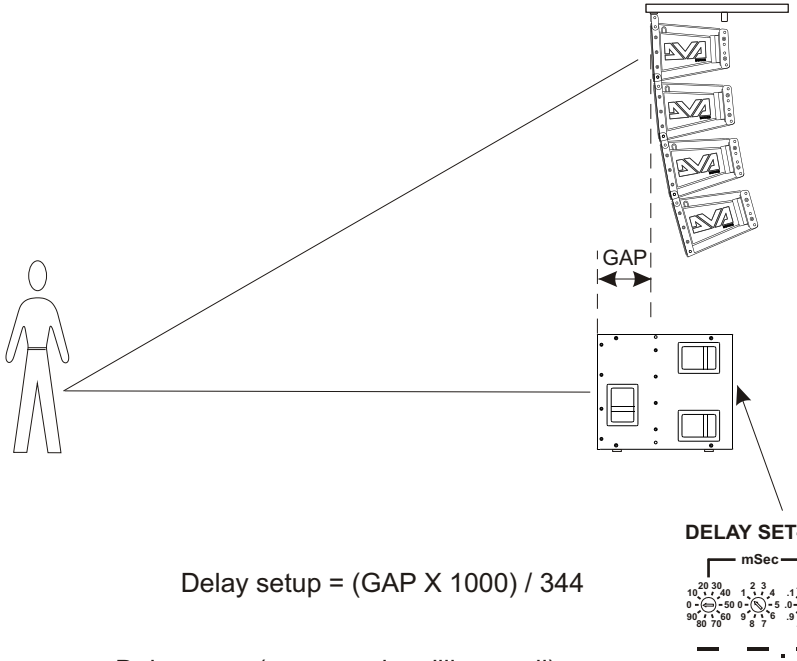






Digital Delay subwoofer - opzione SDD
Subwoofer Digital Delay - SDD option

ALLINEAMENTO SEGNALE AUDIO
ALIGNAMENT AUDIO SIGNAL




Delay setup = (GAP X 1000) / 344

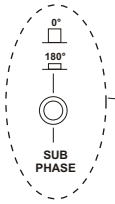
Delay = ms (espresso in millisecondi)
GAP = m (espresso in metri)
Velocità suono = 344 m/s

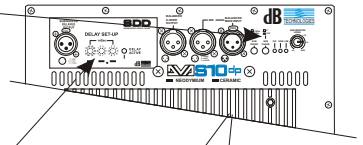
Delay = ms (specify milliseconds)
GAP = m (specify meters)
Sound speed = 344 m/s



CONFIGURAZIONE CARDIOIDE
CARDIOID CONFIGURATION

Ruotare la fase di 180°
Rotate 180° phase



Impostare il delay a 4,5msec
Set delay to 4,5msec

