

WASP

User Manual



Systems:

WASP
WASP-S12
WASP-S18

Contents



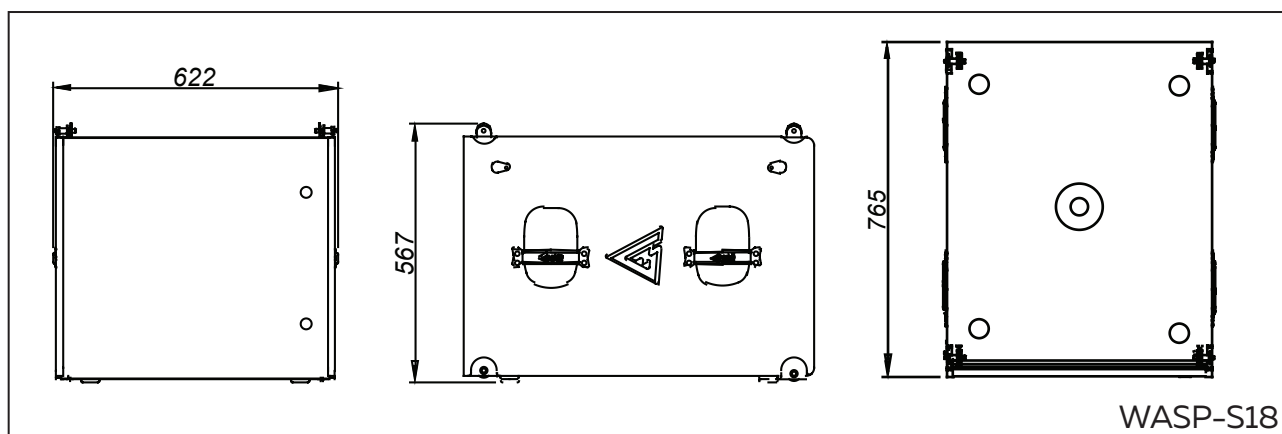
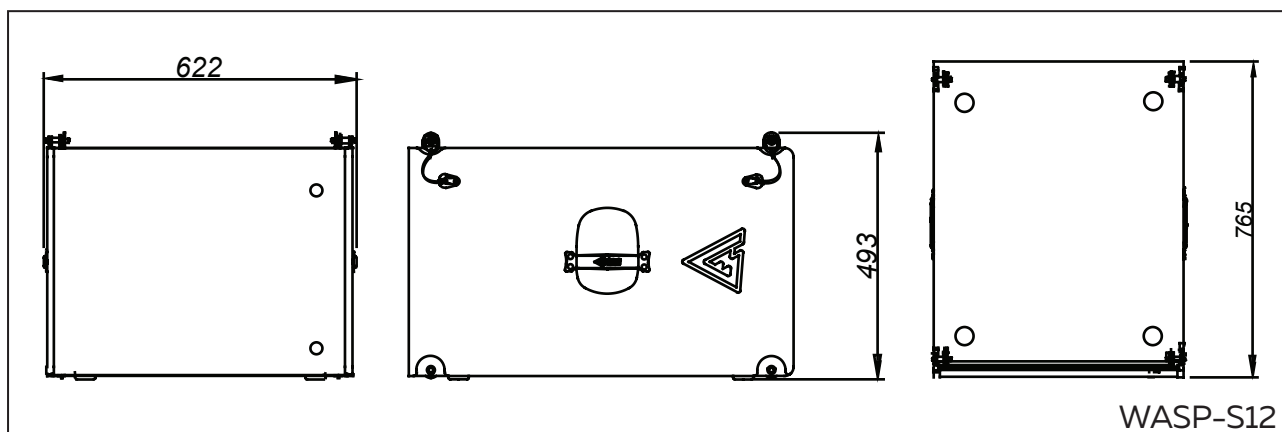
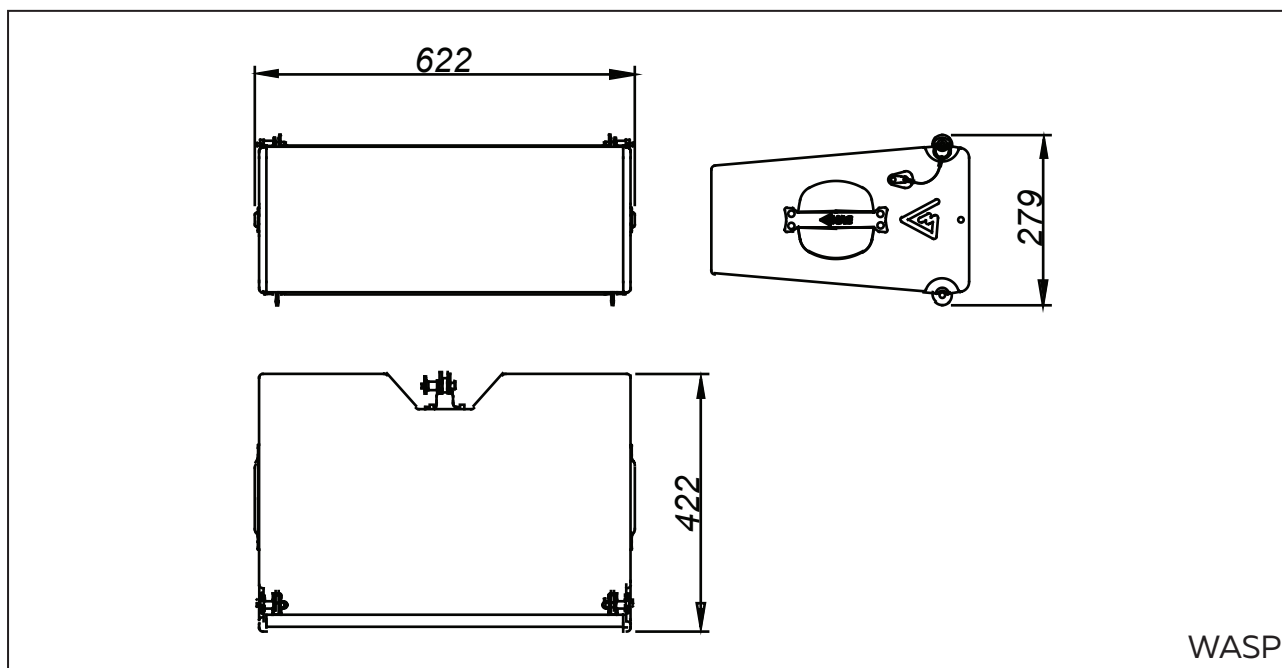
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Panel A. Dimensions



1. Safety instructions



EXPLANATIONS OF GRAPHICAL SYMBOLS



The triangle with the lightning bolt is used to alert the user to the risk of electric shock.



The triangle with the exclamation point is used to alert the user to important operating or maintenance instructions.



The CE-mark indicates the compliance with the low voltage and electromagnetic compatibility.



Symbol for earth/ground connection.



Symbol indicating that the equipment is for indoor use only.



Symbol for conformity with Directive 2002/96/EC and Directive 2003/108/EC of the European Parliament on waste electrical and electronic equipment (WEEE).



WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT ATTEMPT TO OPEN ANY PART OF THE UNIT. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



TO COMPLETELY DISCONNECT THIS APPARATUS FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE.



THE MAINS PLUG OF THE POWER SUPPLY CORD MUST REMAIN READILY ACCESSIBLE.



DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE, DRIPPING OR SPLASHING LIQUIDS. OBJECTS FILLED WITH LIQUIDES, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.



CONNECTIONS TO THE MAINS SHALL BE DONE ONLY BY AN ELECTROTECHNICALLY SKILLED PERSON ACCORDING TO THE NATIONAL REQUIREMENTS OF THE COUNTRIES WHERE THE UNIT IS SOLD.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions carefully.
 2. Keep these instructions.
 3. Heed all warnings.
 4. Follow all instructions.
 5. Do not use this equipment near water.
 6. Clean only with dry cloth.
 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
 8. Do not use near heat sources such as stoves, heat registers, radiators or other equipment (including amplifiers) that produces heat.
 9. Do not use the unit near open fire sources.
 10. Connect the unit only to the electric network with grounding. Use only electric plugs that provide grounding.
 11. Protect the power cord from being walked on, pinched, or otherwise damaged.
 12. Use only accessories specified by the manufacturer.
 13. Unplug this unit during lightning storms or when unused for long periods of time.
 14. Refer all servicing to qualified service personnel. Servicing is required when the system has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the unit, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.
 15. **WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS SYSTEM UNIT TO RAIN OR MOISTURE.**
- THIS UNIT CONTAINS POTENTIALLY LETHAL VOLTAGES. TO PREVENT ELECTRIC SHOCK OR HAZARD, DO NOT REMOVE THE AMPLIFIER MODULE. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. ¹
- INSTALLING OF THIS UNIT MUST BE PERFORMED ONLY BY QUALIFIED TRAINED PERSONNEL FOLLOWING APPLICABLE SAFETY RULES. DO NOT ALLOW INSTALLATION OF THIS UNIT IF INSTALLATION HARDWARE IS BROKEN, BENT, PARTS ARE MISSING OR IS OTHERWISE DAMAGED.

¹ – for powered speakers only

2. Regulatory information



FCC COMPLIANCE NOTICE

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

EC DECLARATION OF CONFORMITY

Manufacturer:
MAG Audio LLC
Merezhna 2
Bila Tserkva, Kyiv region
09112 Ukraine

We declare under our sole responsibility that products:

Models: WASP, WASP-S12, WASP-S18

Intended use: Professional Speaker System

Are in conformity with the provisions of the following EC Directives, including all amendments, and with national legislation implementing these directives:

- 2006/95/EC Low Voltage Directive
- 2004/108/EC Electromagnetic Compatibility Directive
- 2002/95/CE RoHs Directive

The following harmonized standards are applied:

EN 55103-1:2009 /A1:2012
EN 55014-1:2006 /A1:2009 /A2:2011
EN 55022:2010 /AC:2011
EN 61000-3-2:2006 /A1:2009 /A2: 2009
EN 61000-3-3:2013
EN 61000-3-11:2000
EN 61000-3-12:2011
EN 55103-2:2009 /IS:2012
EN 61000-4-2:2009
EN 61000-4-3:2006 /A1:2008 /IS1:2009 /A2:2010
EN 61000-4-4:2012
EN 61000-4-5:2006
EN 61000-4-6:2014
EN 61000-4-11:2004
EN 60065:2002 /A1:2006 /A11:2008 /A2:2010 /A12:2011

Bila Tserkva,
22 January 2019

Alexey Asanov
CEO

For compliance questions: info@mag-audio.com

3. WASP series



3.1. Introduction

WASP line array is a versatile array for any installation size, as small as restaurant or a bar, and as big as concert hall or a stadium.

Dual 8-inch system with 1.5-inch throat HF driver, WASP has received the most advanced components to assist with task of creating the ultimate compact line-array solution. Thoroughly designed cabinets, most advanced proprietary mounting system, and wide selection of mounting and connectivity accessories was called in to provide the fast mounting/dismounting times, as well as ease of transportation and storage.

Complete amplification solution is available for WASP as well. Ready-to-go touring racks are fitted with signal and power distribution, and are based on state-of-the-art touring amplifiers from Powersoft®. WASP system usability is further extended with available presets as well as GLL files for fast system performance prediction.

WASP modules are backed with WASP-S12 and WASP-S18 flown or stacked subwoofers, and additionally compatible with several models from Subwoofer series.

3.2. WASP series speaker models

WASP user manual covers usage of following models:

WASP part number 00-0003869

WASP-S12 part number 00-0008340

WASP-S18 part number 00-0007201

4. Specifications



System	WASP Passive line array module	WASP-S12 Arrayable passive sub-woofer	WASP-S18 Arrayable passive sub-woofer
Frequency Response (-10dB)	70 - 20000 Hz	42 - 140 Hz	32 - 200 Hz
Max SPL ¹	141 dB (single cabinet)	140 dB	141 dB
Sensitivity (1W/1m)	98 dB Low / 110 dB High	101 dB	98 dB
LF Driver	2x 8", 2,5" VC	12", 4" VC	18", 4" VC
HF Driver	1,5", 2,8" VC	-	-
Impedance	16 Ohm Low / 16 Ohm High	8 Ohm	8 Ohm
Horizontal coverage	100°	-	-
Vertical coverage	Depends on the number of cabinets	-	-
Nominal power ²	600 W Low / 100 W High	950 W	1300 W
Connectors	2x Neutrik Speakon	4x Neutrik Speakon	4x Neutrik Speakon
Dimensions (W×H×D), mm	622x279x422 mm	622x493x765 mm	622x567x765 mm
Net weight, kg	22 kg	44,6 kg	47,8 kg
Shipping weight, kg	25 kg	47,6 kg	50,8 kg
Mounting	Integrated flying hardware; 0° - 10° splay angle	Integrated flying hardware	Integrated flying hardware, M20 distance pole adapter
Enclosure material	Plywood; wear-resistant paint	Plywood; wear-resistant paint	Plywood; wear-resistant paint
Grill	Steel grill, synthetic acoustically transparent cloth	Steel grill, synthetic acoustically transparent cloth	Steel grill, synthetic acoustically transparent cloth

¹ - peak value, calculated according to AES 2 - 2012

² - based on transducer power measured according to AES 2 - 2012

5. System operation

5.1. Rigging

WASP line array comes with built-in mounting hardware for ground stack and flying cluster installation options.

Rigging must be performed only by trained personnel following the established safety rules.

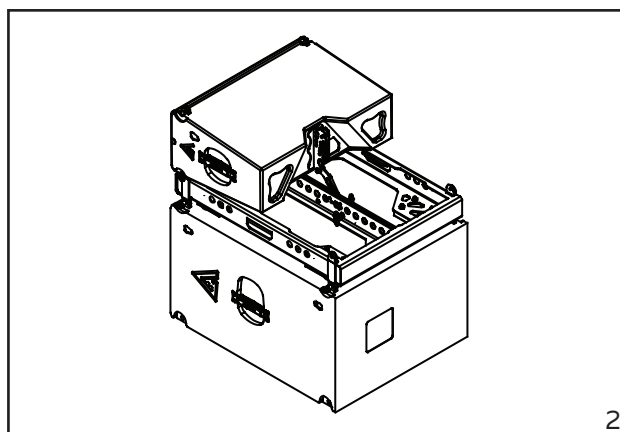
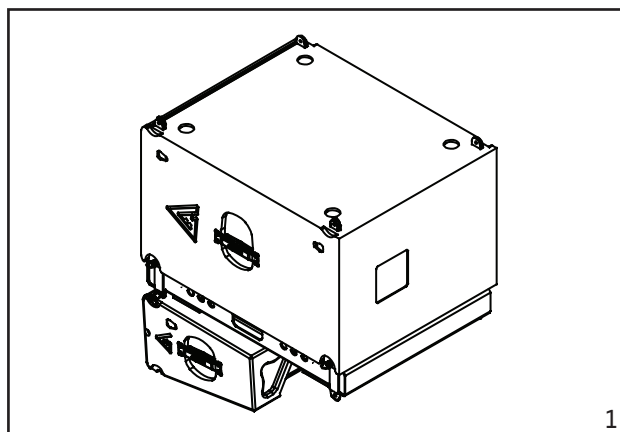
MAXIMUM WEIGHT RESTRICTIONS MUST BE FOLLOWED AT ALL TIMES!

MAKE SURE THE SUPPORT STRUCTURE IS CAPABLE OF HOLDING THE APPLIED WEIGHT WHILE SUSPENDING THE SYSTEM!

5.1.1. Connecting WASP modules to WASP-S12 or WASP-S18 subwoofers

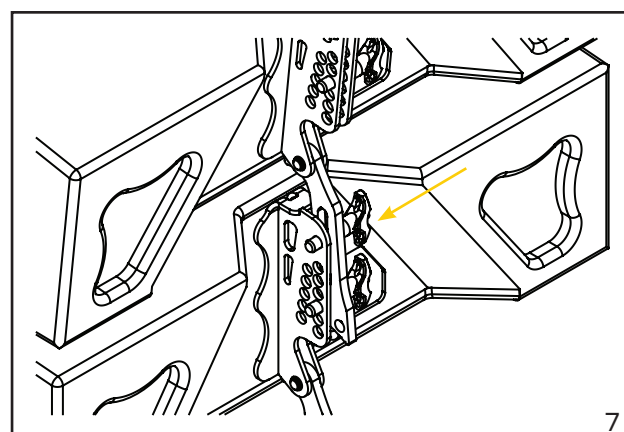
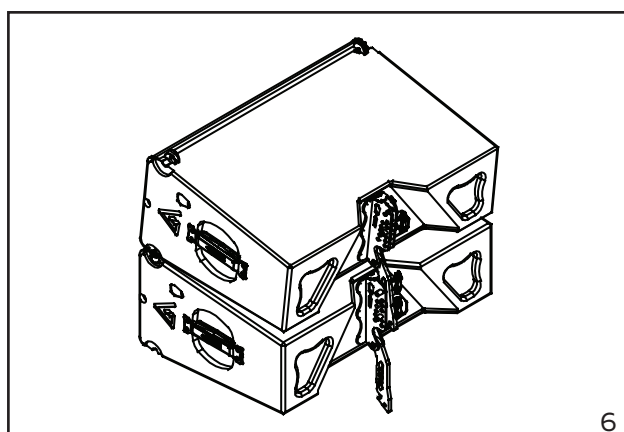
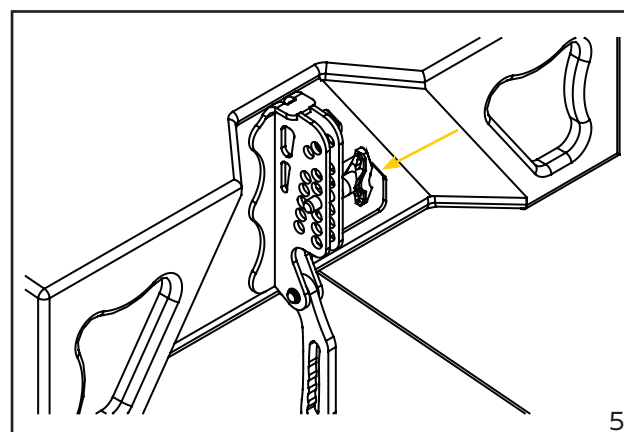
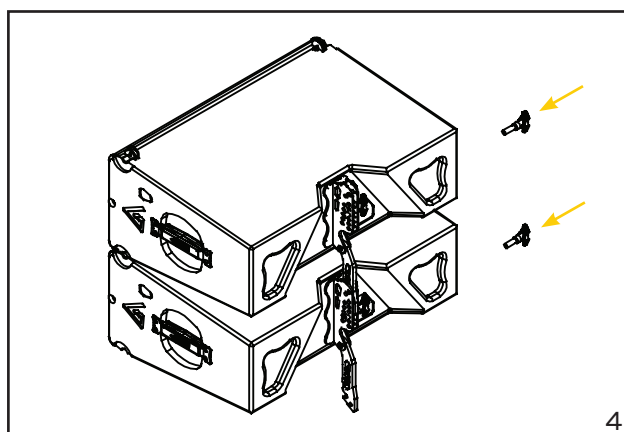
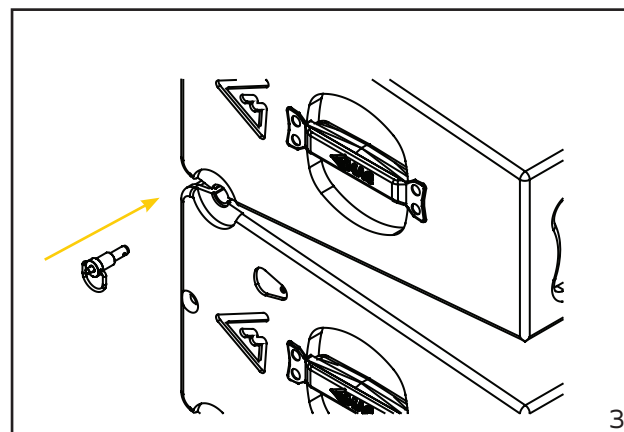
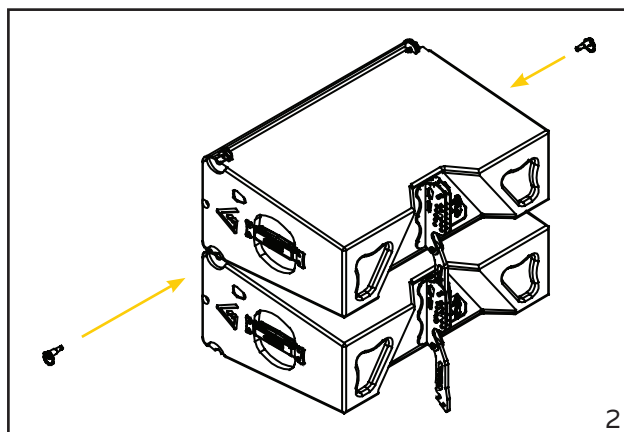
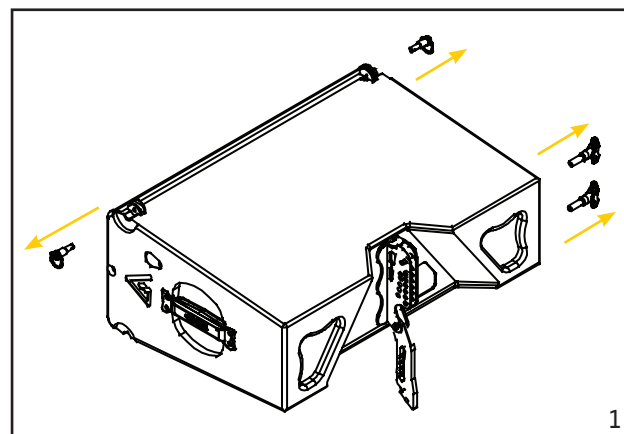
WASP line array is a versatile product allowing creation of ground stack as well as flying cluster configurations.

In both cases, connection of WASP modules and WASP-S12 (WASP-S18) subwoofers must be performed using an intermediate WSF-02 frame.



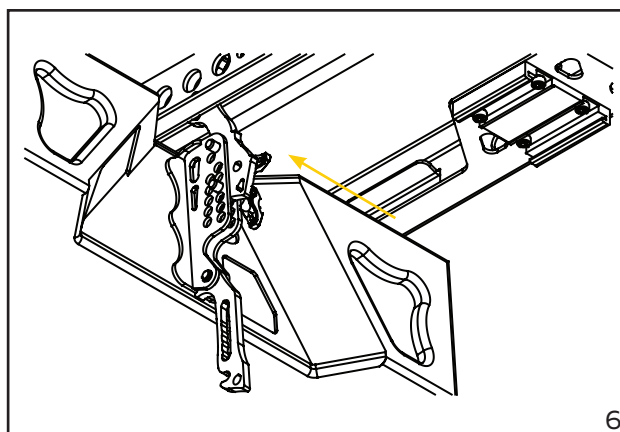
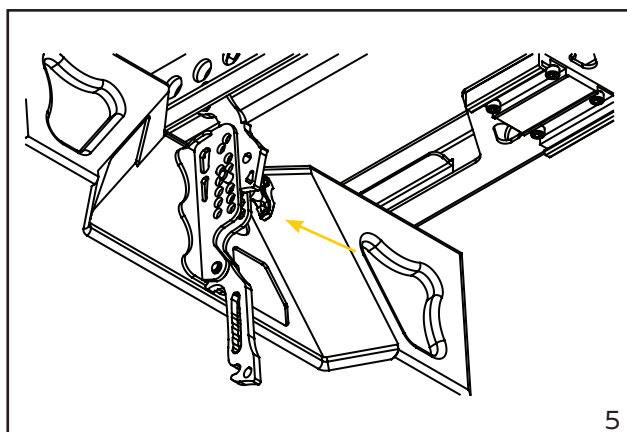
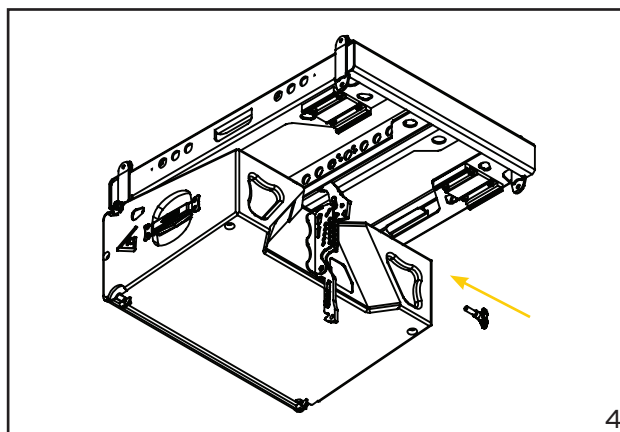
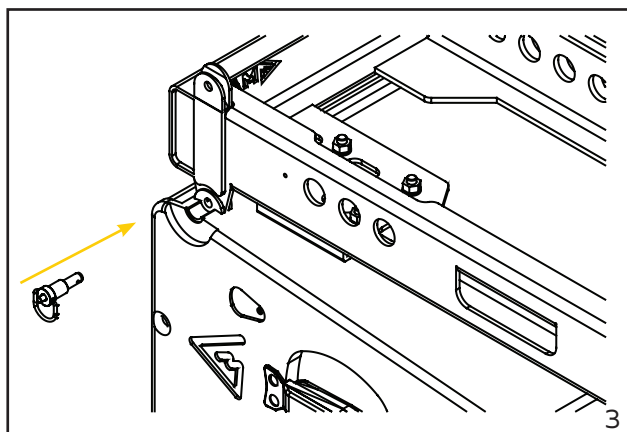
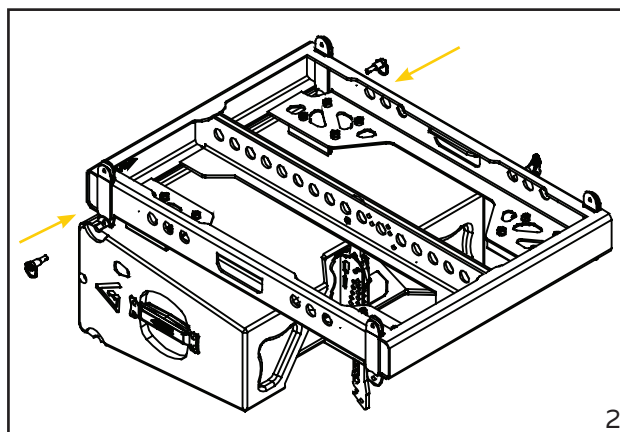
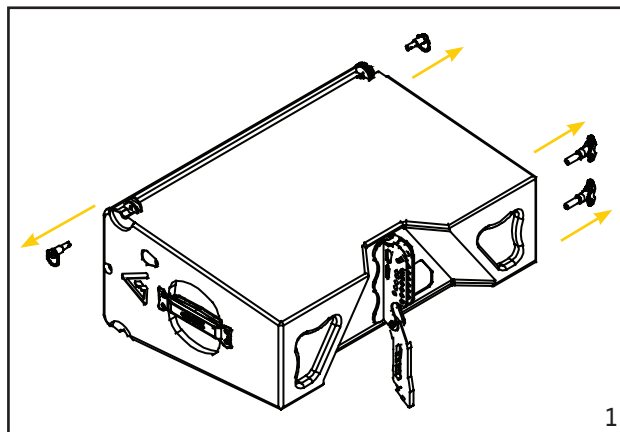
5.1.2. Connecting two WASP modules

- Release two VA-0018 10 mm pins on the rear link and two VA-0010 8 mm pins on the front link. (Pic. 1)
- Bring together two cabinets, then insert two VA-0010 8 mm pins into front link from the sides of the cabinets. (Pic. 2, 3)
- For each cabinet, insert one VA-0018 10 mm pin into a slot for required splay angle. (Pic. 4, 5)
- Bring together, and then extend rears of all cabinets to allow rear link to hook. Secure rear connection with one VA-0018 10 mm pin. (Pic. 6, 7)



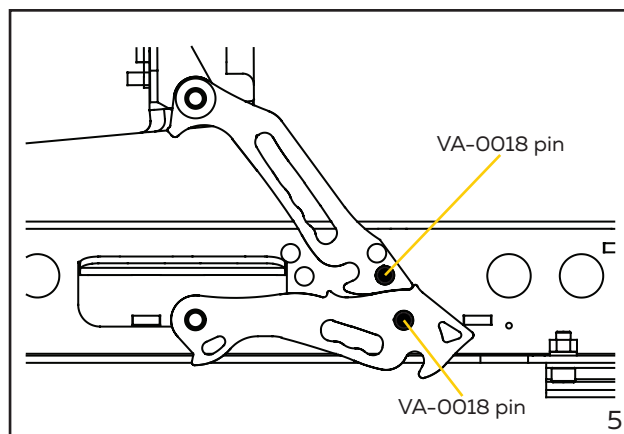
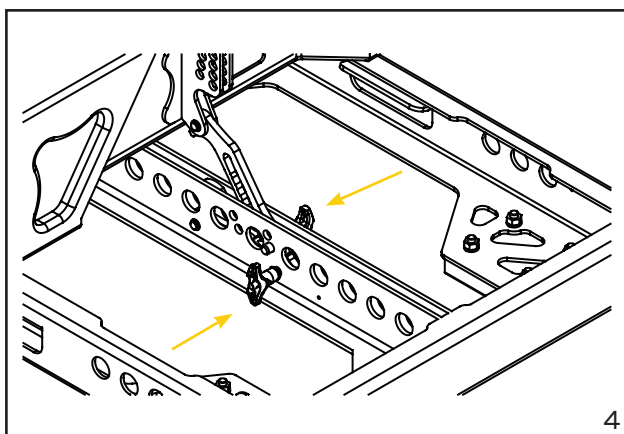
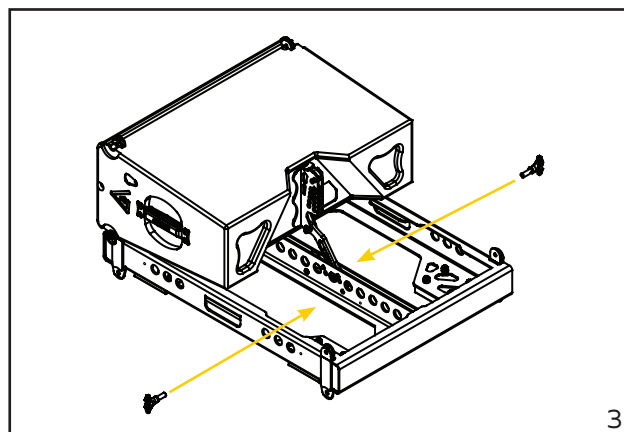
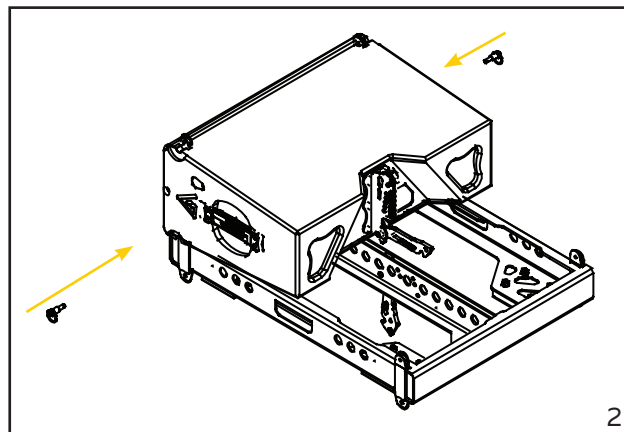
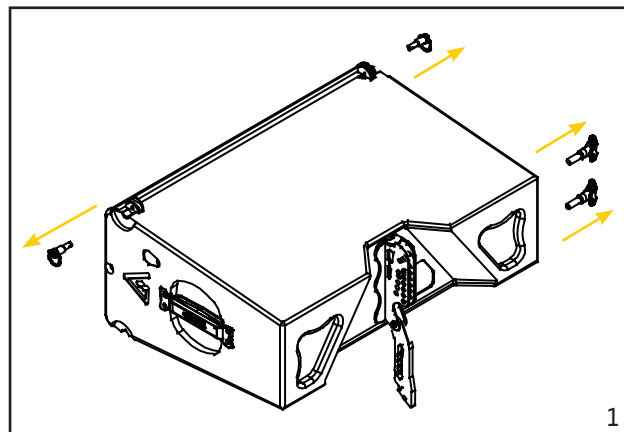
5.1.3. Connecting a flying frame on the top of a WASP module

- Release two VA-0018 10 mm pins on the rear link and two VA-0010 8 mm pins on the front link. (Pic. 1)
- Attach WSF-02 flying frame on the top of the cabinet and insert two VA-0010 pins in the front. (Pic. 2, 3)
- Insert a VA-0018 10 mm pin into cabinet's rear link. Choose the angle of the tilt. (Pic. 4, 5)
- Hook the link of frame onto the cabinet's rear hardware, and secure with second VA-0018 10 mm pin. (Pic. 6, 7)



5.1.4. Connecting a flying frame on the bottom of a WASP module

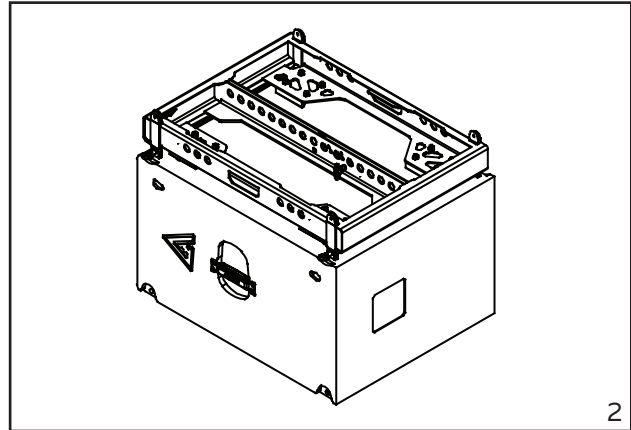
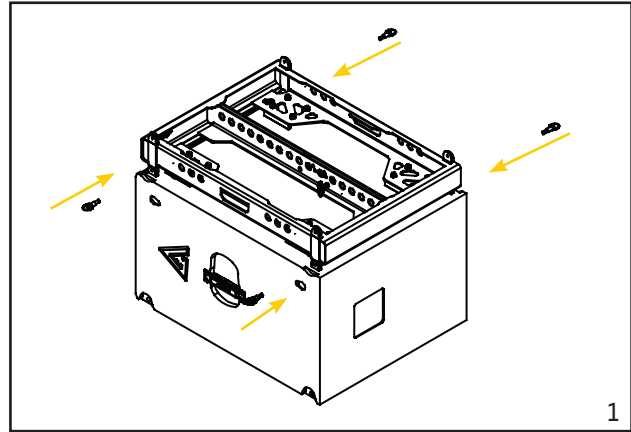
- Release two VA-0018 10 mm pins on the rear link and two VA-0010 8 mm pins on the front link. (Pic. 1)
- Place the cabinet on the top of the WSF-02 frame, and insert two VA-0010 8 mm pin into the front links. (Pic. 2).
- Use a VA-0018 10 mm pin to secure frame's link into hidden position. Use another VA-0018 10 mm pin to attach cabinet's link to the frame. (Pic. 3, 4, 5).



5.1.5. Connecting a flying frame on the top of a WASP-S12 or WASP-S18

- Place the WSF-02 flying frame on the top of a WASP-S12 (WASP-S18), align so front and rear links of a WASP-S12 (WASP-S18) fit into receptacles of the frame (Pic. 1).

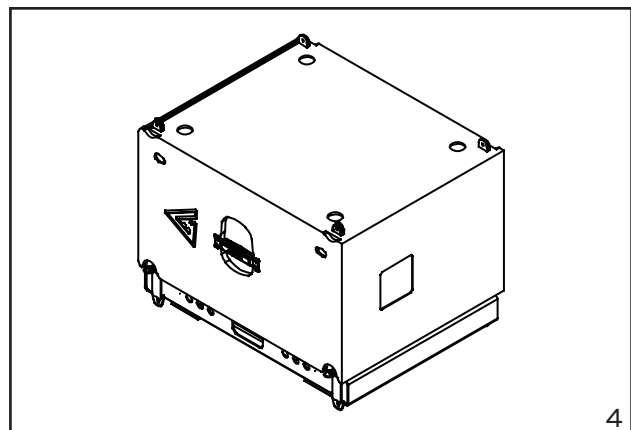
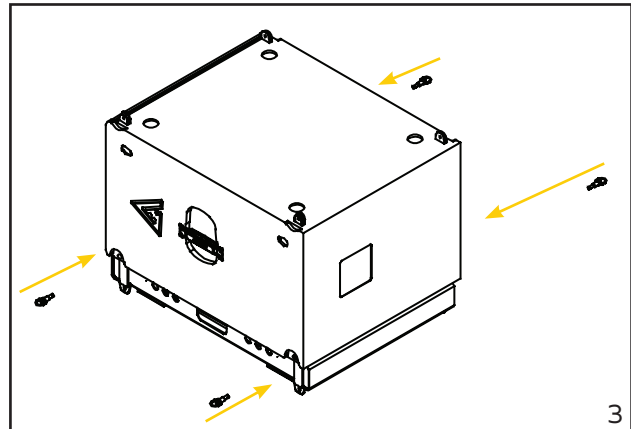
- Insert four VA-0010 8 mm pins into front and rear links of the WASP-S12 (WASP-S18).



5.1.6. Connecting a flying frame on the bottom of a WASP-S12 or WASP-S18

- Place the WSF-02 flying frame on the bottom of a WASP-S12 (WASP-S18), align so front and rear links of a WASP-S12 (WASP-S18) fit into receptacles of the frame (Pic. 1).

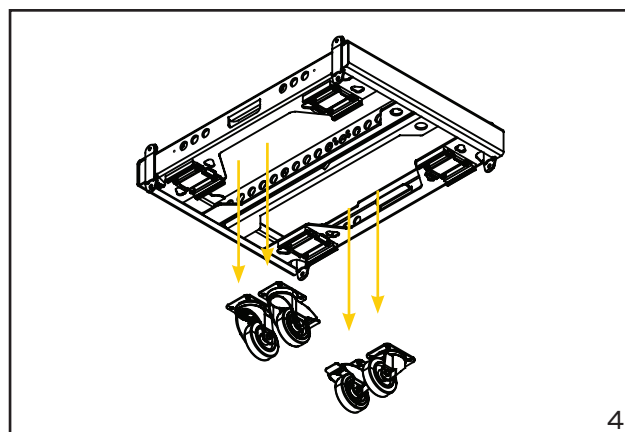
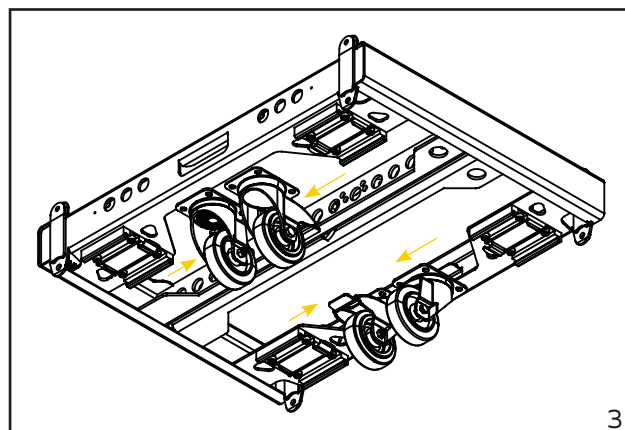
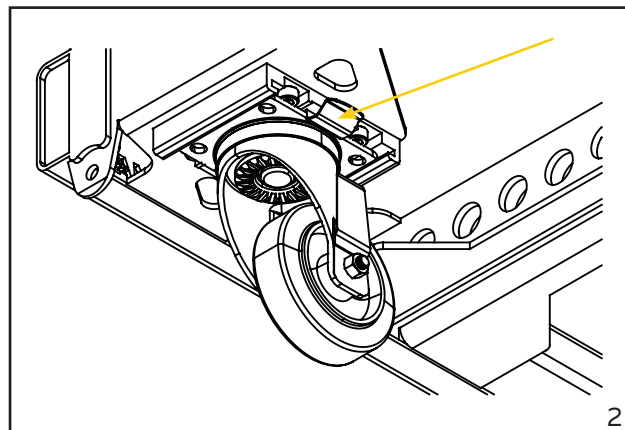
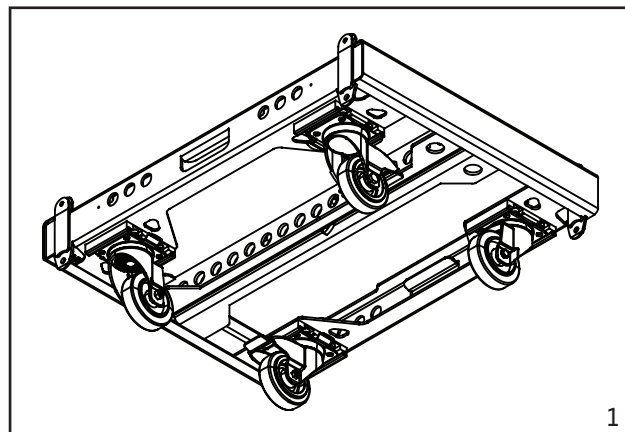
- Insert four VA-0010 8 mm pins into front and rear links of the WASP-S12 (WASP-S18).



5.1.7. Connecting castor wheels to WSF-02 frame

WSF-02 flying frame can be fitted with four 100 mm castor wheels to easily transport WASP, WASP-S12 or WASP-S18 stacks.

- In order to remove the castor wheel from the frame, press the lock on the frame, and pull the wheel to the center of the frame.



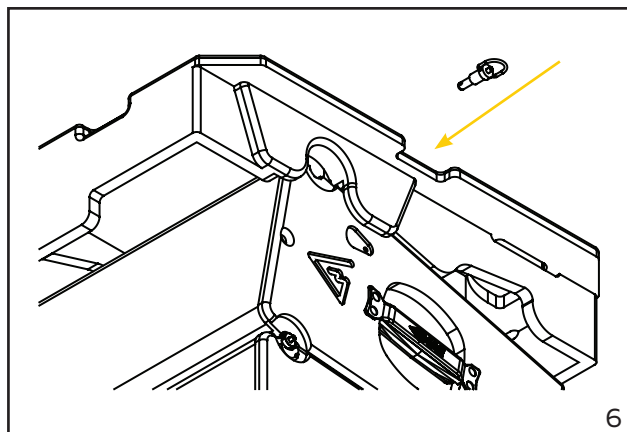
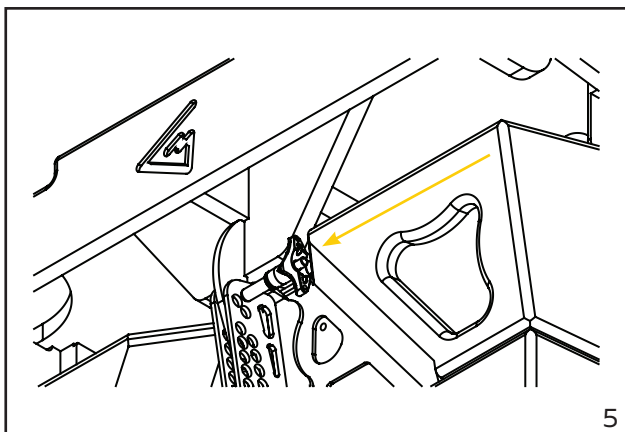
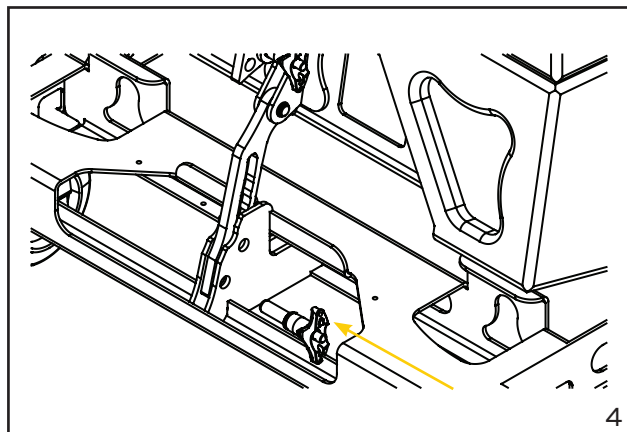
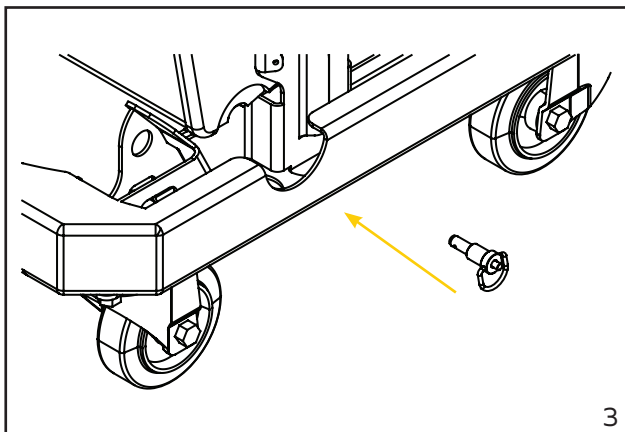
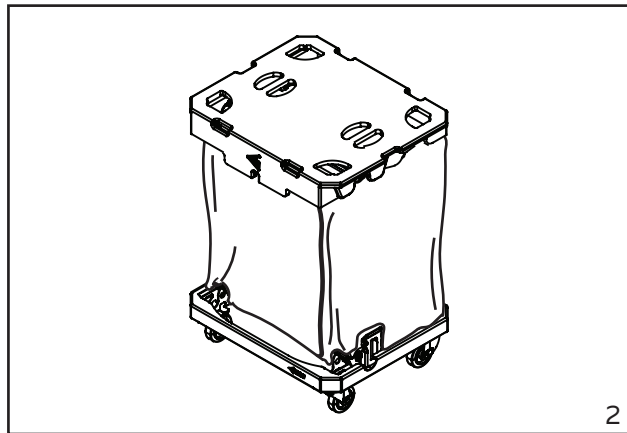
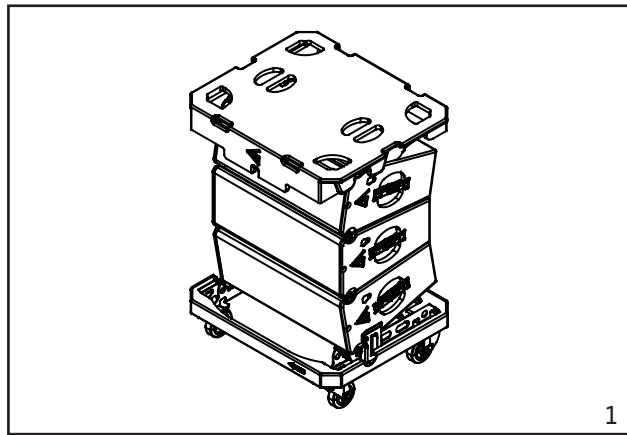
5.1.8. Using WSC-34 (WSC-34A) transportation cart

WSC-34 (WSC-34A) is a covered cart that can be used for convenient storage and easy transportation of WASP line array stacks. (Pic. 1)

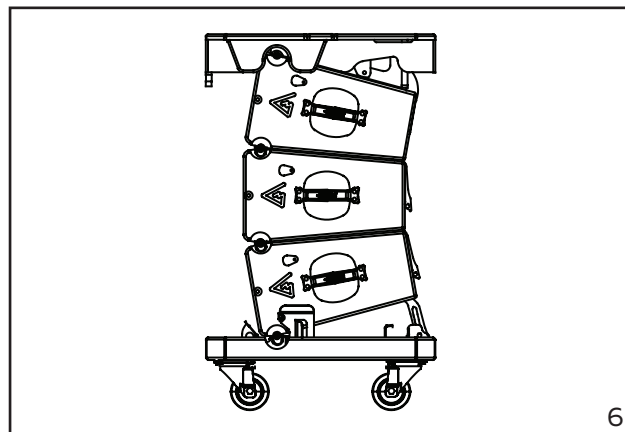
WASP-TB3 and WASP-TB4 transportation covers are available for 3 and 4 unit WASP stacks to be transported with WSC-34 (WSC-34A). (Pic. 2)

- Attach the lower WASP module to the WSC-34 (WSC-34A) by inserting two VA-0010 8 mm pins to the front links and securing the rear link with one VA-0018 10 mm pin. (Pic. 3, 4)

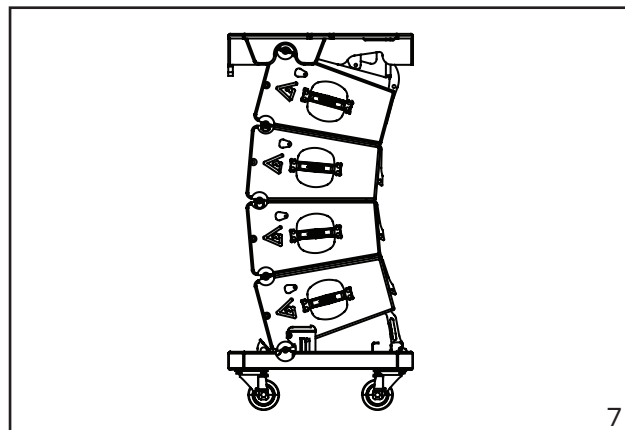
- Attach the upper WASP module to the WSC-34 (WSC-34A) wooden cover by inserting two VA-0010 8 mm pins to the front links and securing the rear link with one VA-0018 10 mm pin. (Pic. 5, 6)



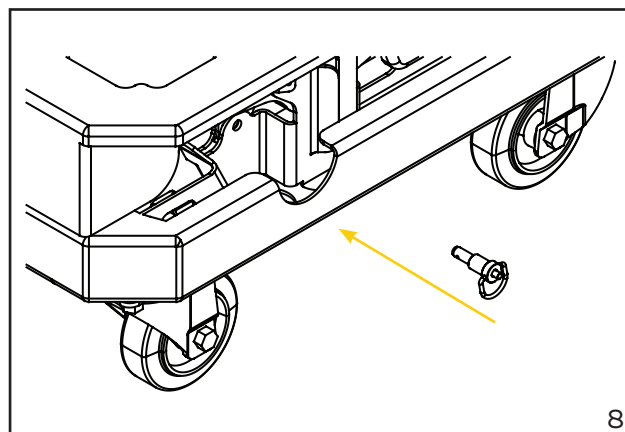
- For 3 module WASP stacks, choose 10° angle between cabinets. (Pic. 6)



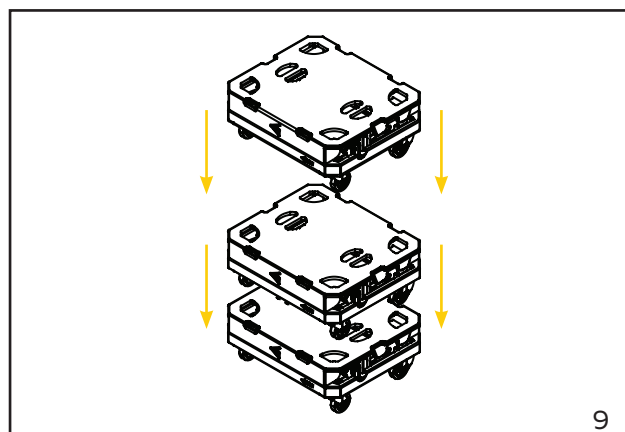
- For 4 module WASP stacks, choose 10° angle between cabinets. (Pic. 7)



- For storage of WSC-34 (WSC-34A), link wooden cover with steel cart using two VA-0010 pins. (Pic. 8)



- For compact storage, WSC-34 (WSC-34A) can be stacked on one another using sockets for castor wheels for positioning. (Pic. 9)

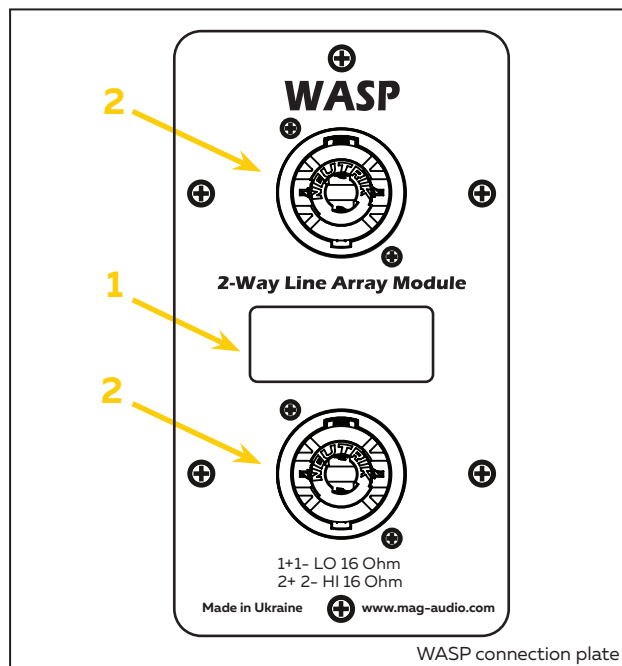


5.2. Passive speakers

5.2.1. Connection plate

1. SERIAL NUMBER FIELD. Sticker with the systems serial number is located here. NEVER REMOVE THE SERIAL FROM THE SYSTEM, AS IT IS AN IMMEDIATE WARRANTY VOID.

2. PARALLEL INPUTS. The pair of parallel Neutrik® Speakon connectors. Use this connectors to connect power amplifier and to feed the signal to the parallel systems.



5.2.2. Passive connections

Suggested accessories:

CN-0021 (part No. 00-00004268)

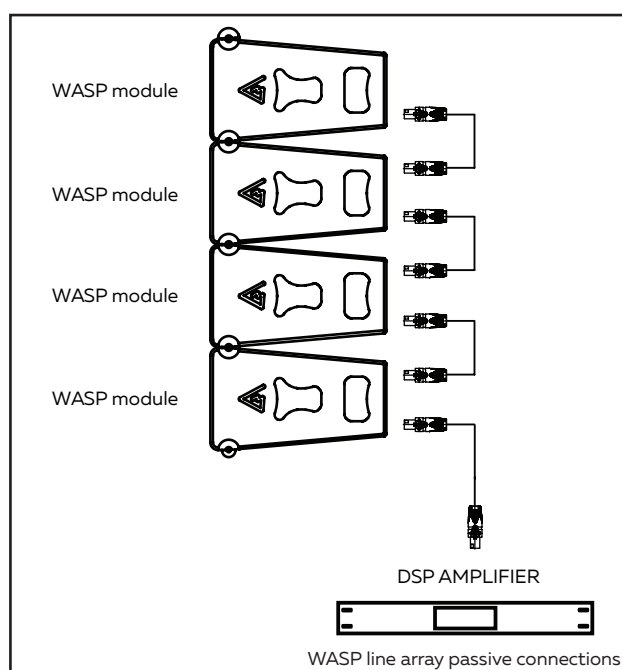
CN-0031 (part No. 00-00004271)

CN-0032 (part No. 00-00004272)

Use power amplifier with DSP or power amplifiers with external speaker processor with WASP line array.

MAKE SURE TO USE HIGH PASS FILTER FOR WASP TO PREVENT EXCESSIVE CONE MOVEMENT, RESULTING IN TRANSDUCER DAMAGE OR FAST DETERIORATION.

Recommended HPF settings, suggested power amplifier ratings, and connection pins are found in the table below.



5.2.3. Connection details

System	Amplifier power	Amplifier impedance	Connection pins	Recommended HPF
WASP LF	600 - 1200 W	16 Ohm	+1 -1	Specified by preset
WASP HF	100 - 200 W	16 Ohm	+2 -2	Specified by preset
WASP-S12	950 - 1900 W	8 Ohm	Rear +1 -1	Specified by preset
WASP-S12	Link		Rear +2 -2	
WASP-S12	Link		Front +1 -1	
WASP-S12	950 - 1900 W	8 Ohm	Front +2 -2	Specified by preset
WASP-S18	1300 - 2600 W	8 Ohm	Rear +1 -1	Specified by preset
WASP-S18	Link		Rear +2 -2	
WASP-S18	Link		Front +1 -1	
WASP-S18	1300 - 2600 W	8 Ohm	Front +2 -2	Specified by preset

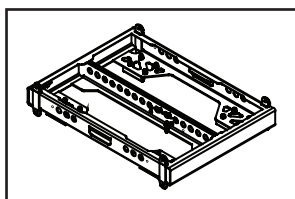
6. Standard contents

Please check complete complement of your WASP system upon receiving the package.

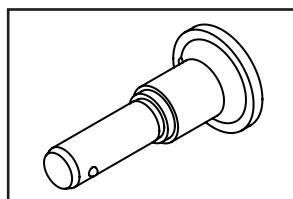
Standard contents of a WASP line array module:

System	WASP user manual	Mounting pins	Plastic bag	Carton box
WASP	+	VA-0010 8 mm pin - 4 pcs. VA-0018 10 mm pin - 2 pcs.	+	+
WASP-S12	+	VA-0010 8 mm pin - 4 pcs.	+	+
WASP-S18	+	VA-0010 8 mm pin - 4 pcs.	+	+

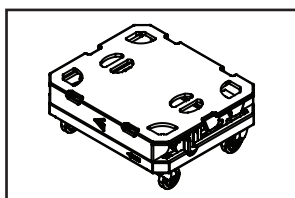
7. Accessories



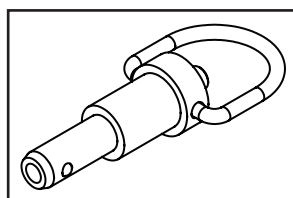
WSF-02
Versatile frame
Part No. 00-0004068



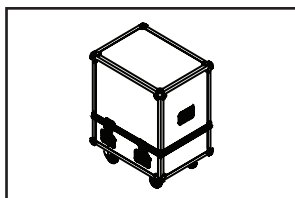
VA-0018
10 mm pin
Part No. 00-00002877



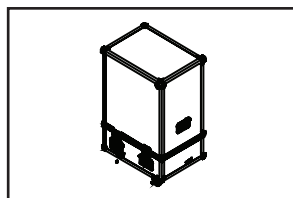
WSC-34
Transportation cart
Part No. 00-0008633
WSC-34A
Transportation cart w/ auto wheels
Part No. 00-0008634



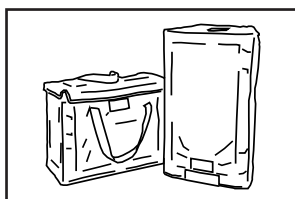
VA-0010
8 mm pin
Part No. 00-00002878



WASP-FC3
WASP 3x Flying case
Part No. 00-0006207



WASP-FC4
WASP 4x Flying case
Part No. 00-0003967



WASP-S12-TB3 - Transportation cover for 3x WASP-S12 - Part No. 00-0008347
WASP-S12-TB2 - Transportation cover for 2x WASP-S12 - Part No. 00-0008348
WASP-S18-TB3 - Transportation cover for 3x WASP-S18 - Part No. 00-0008349
WASP-S18-TB2 - Transportation cover for 2x WASP-S18 - Part No. 00-0008350
WASP-TB3 - Transportation cover for 3x WASP - Part No. 00-0008351
WASP-TB4 - Transportation cover for 4x WASP - Part No. 00-0008352

8. Warranty and assistance



8.1. Product warranty

1. By this warranty MAG Audio grants that all equipment manufactured under the MAG Audio trademark is free from defects in material, components and factory workmanship under the normal use and maintenance for the time as specified below.

2. All warranty repairs and maintenance of MAG Audio products shall be carried out at MAG Audio production sites or by MAG Audio authorized personnel at no cost for the product purchaser.

3. Warranty period for cone transducers, high frequency drivers and crossovers, whether sold separately or as a component of a speaker system, is 60 months from the production date.

4. Warranty period for enclosures, grills, connection plates and accessories, whether sold separately or as a component of a speaker system, is 60 months from the production date.

5. Warranty period for built-in power amplifiers, whether sold separately or as a component of a speaker system, is 36 months from the production date.

6. Warranty repairs or maintenance will be performed only if a) MAG Audio product was purchased from an official MAG Audio distributor / dealer and b) warranty card with specified serial number, production date, realization date, vendor's signature and stamp is presented.

7. Warranty shall not cover following: damage caused by accident, misuse or failure to follow exploitation rules stated in technical manual; repairs performed by non-authorized personnel; mechanical damage caused by shipping accidents and normal tear and wear.

8. Warranty shall not be applicable to any product with defaced, removed, or modified serial number.

9. If your MAG Audio product needs repairs or maintenance, contact your official MAG Audio distributor / dealer. Please do not ship your MAG Audio product without prior authorization.

8.2. Assistance

There are no user-serviceable parts in your device. Refer servicing to qualified technical personnel. In addition to in-house service department, MAG Audio supports the chain of distributors, authorized in repairs and service. If your device needs repair contact your MAG Audio dealer or distributor.

Occasionally, due to the nature of the failure, it might be necessary to return defective products to MAG Audio for repair. In this case, before shipping, please kindly contact your MAG Audio distributor or dealer, or MAG Audio directly. You will be provided the RMA number code and detailed instructions regarding your particular case. Please do not send products without a prior authorization.

Thank you for your understanding, cooperation and choice of MAG Audio products.

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