

## **FOCUS SERIES**

**User Manual** 



#### Systems:

Focus 12

Focus 12A

Focus 15

Focus 15A

Focus Sub

Focus Sub A

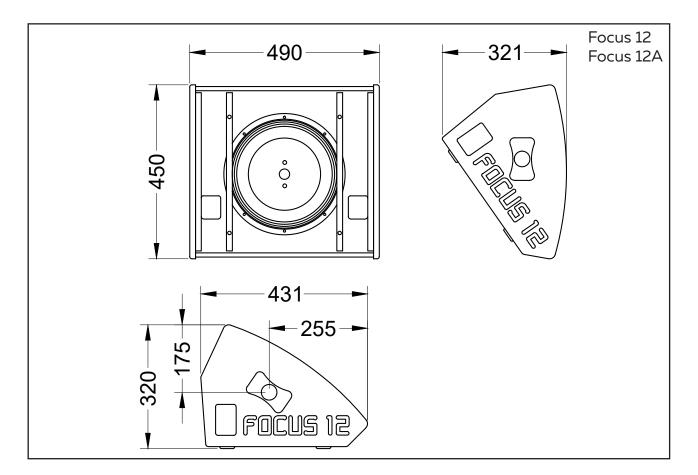
## **Contents**

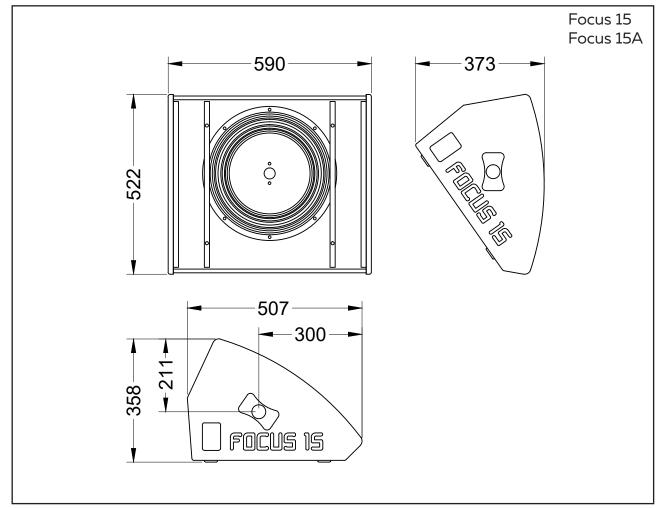


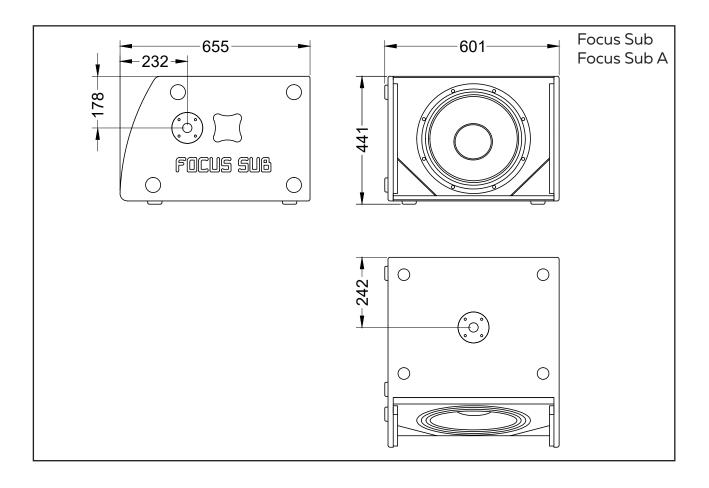
Contents	2
Panel A. Dimensions	4
1. Safety instructions	6
2. Regulatory information	
3. FOCUS series	8
3.1 Introduction	8
3.2 FOCUS series speaker models	8
4. Specifications	9
5. System operation	
5.1. Rigging	
5.2. FOCUS series assemblies	10
5.2.1 Assembling the monitoring stack	10
5.2.2 MONITORING series pole mounting	11
5.2.3. Wall and ceiling mounting	11
5.3. Passive speakers	12
5.3.1. Passive connections	12
5.4. Powered speakers	13
5.4.1. Preset description	
6. Standard contents	
7. Accessories	14
8. Warranty and assistance	15
8.1. Product warranty	
8.2. Assistance	

## 4

## **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 LIQUIDS, 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
- 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
- 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.

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.

## 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 distance between the equipment and receiver.
- Connect the equipment to 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 that under our sole responsibility the products:

Model Names: Focus 12, Focus 12A, Focus

15, Focus 15A, Focus Sub,

Focus Sub A

Intended use: Professional Speaker System

Are in conformity with the provisions of the following EC Directives, including all amendments, and with the 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

For compliance questions: info@mag-audio.com



### 3. FOCUS series

#### 3.1 Introduction

Coaxial line of low-profile stage monitors with no casual name - coaxial design of drivers provides perfect phase coherence and clear focused sound picture in front of performer. Vocal has never sounded so clearly and thoroughly before.

The series includes top-class monitors Focus 12, Focus 15 and a Focus Sub subwoofer. Almost reference sound quality of the monitors even in passive crossover mode allows to use them as all-purpose systems, for which case a pole mount adapter is conveniently provided.

Special 15" subwoofer Focus Sub boosts versality of Focuses even more: it creates powerful monitor set for a drummer together with Focus 15; or can be used for DJ monitoring and even FOH purposes due to distance pole adapters. Besides ideal sound quality and reproduction purity, we have paid much attention to appearance and ease of use. Modern look, rigid grill backed with acoustic foam, light weight and stable design make Focus monitors comfortable and practical in small installations as well as in big concert tours.

Neutrik speakON connectors are placed on both side of cabinet, making it convenient to create monitor chains. Also, passive/bi-amp crossover switches are optionally available for Focus 12 and Focus 15 along with the speaker processor packed with factory presets.

#### 3.2 FOCUS series speaker models

FOCUS series includes following speaker models:

Focus 12 part number 00-0001271

Focus 12A part number 00-00001272

Focus 15 part number 00-00001273

Focus 15A part number 00-00001274

Focus Sub part number 00-00001275

Focus Sub A part number 00-00001276

## 4. Specifications

System	<b>Focus 12</b> Versatile passive stage monitor	<b>Focus 15</b> Versatile passive stage monitor	<b>Focus Sub</b> Passive monitor subwoofer
Frequency Response (-10dB)	70 - 20000 Hz	60 - 19000 Hz	45 - 350 Hz
Max SPL <sup>1</sup>	131,5 dB	132 dB	134 dB
Sensitivity (1W/1m)	96,5 dB	97 dB	96,5 dB
Driver	12" coaxial	15" coaxial	15", 4" VC
Impedance	8 Ohm	8 Ohm	8 Ohm
Nominal coverage angle (Horizontal x Vertical)	40° x 60° or 60° x 40°, rotating horn selectable	40° x 60° or 60° x 40°, rotating horn selectable	-
Nominal power <sup>2</sup>	400 W	400 W	700 W
Connectors	2x Neutrik Speakon; Bi-amp / Passive switch	2x Neutrik Speakon; Bi-amp / Passive switch	2x Neutrik Speakon
Dimensions (W×H×D), mm	490x320x431 mm	590x358x507 mm	601x441x655 mm
Net weight, kg	18,5 kg	21 kg	34 kg
Shipping weight, kg	21 kg	22 kg	36 kg
Mounting	Pole mount adapter; U-Bracket flying mount (optional)	Pole mount adapter; U-Bracket flying mount (optional)	M20 distance adapter
Enclosure materials	Plywood; wear-resistant paint	Plywood; wear-resistant paint	Plywood; wear-resistant paint
Grill	Steel grill, polymere protective net	Steel grill, polymere protective net	Steel grill, polymere protective net

 $<sup>^{\</sup>rm 1}$  - peak value, calculated according to AES 2 - 2012  $^{\rm 2}$  - based on transducer power measured according to AES 2 - 2012

System	Focus 12A	Focus 15A Focus Sub A	
Туре	Versatile powered stage monitor	Versatile powered stage monitor	Powered monitor subwoofer
Frequency Response (-10dB)	70 - 18000 Hz	60 - 18000 Hz	45 - 200 Hz
Max SPL (calculated)	128,5 dB	129 dB	131 dB
Driver	12" Coaxial	15" Coaxial	15", 4" VC
Nominal Coverage Angle (Horizontal × Vertical)	$40^{\circ}$ x $60^{\circ}$ or $60^{\circ}$ x $40^{\circ}$ , rotating horn selectable	$40^{\circ}$ x $60^{\circ}$ or $60^{\circ}$ x $40^{\circ}$ , rotating horn selectable	-
Amplifier power	700 W	700 W	1500 W
Amplifier	Class D, fan cooling, DSP with phase-linear FIR	Class D, fan cooling, DSP with phase-linear FIR	Class D, fan cooling, DSP with phase-linear FIR
Input sensivity	+4 dBV	+4 dBV	+4 dBV
Connectors	XLR in + XLR out	XLR in + XLR out	XLR in + XLR out
Dimensions (W×H×D)	490x320x431 mm	590x358x507 mm	601x441x655 mm
Net weight	20 kg	22 kg	36 kg
Shipping weight	22 kg	24 kg	38 kg
Mounting	Pole mount adapter; U-Bracket flying mount (optional)	Pole mount adapter; U-Bracket flying mount (optional)	M20 distance pole adapter
Enclosure material	Plywood; wear-resistant paint	Plywood; wear-resistant paint	Plywood; wear-resistant paint
Grill	Steel grill, polymere protective net	Steel grill, polymere protective net	Steel grill, polymere protective net

## 5. System operation

#### 5.1. Rigging

There are numerous installation option available for FOCUS series.

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

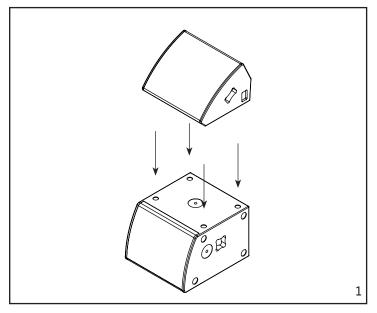
MAXIMUM WEIGHT RESTRICTIONS MUST BE FOLLOWED AT ALL TIMES!

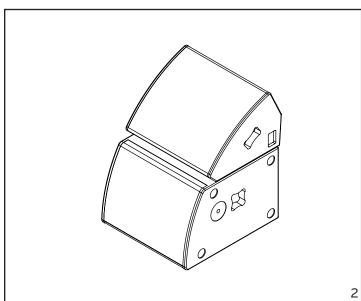
MAKE SURE THE SUPPORT STRUCTURE IS CAPABLE OF HOLDING THE APPLIED WEIGHT WHILE SUSPENDING THE SYSTEM!

#### 5.2. FOCUS series assemblies

#### **5.2.1** Assembling the monitoring stack

Focus 15 (A) can be assembled into the monitoring stack with Focus Sub (A) for additional low-frequence outputs for drummers, DJ, and other applications. Use 4 sockets to firmly position Focus 15 (A) onto the Focus Sub (A). (Pic. 1, 2).





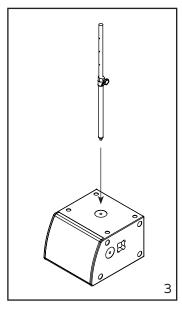
#### 5.2.2 MONITORING series pole mounting

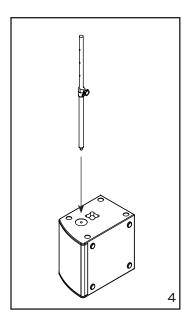
Accessories:

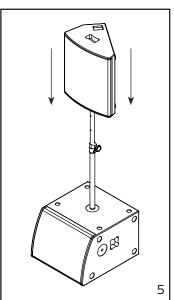
N-BOX-4 (part No. 00-00003474) SAT-3T (part No. 00-00003644)

Focus 12(A) and Focus 15(A) can be used as FOH speakers while installed onto Focus Sub(A) using distance pole.

- Insert distance pole into M20 socket on the upper panel of the Focus Sub(A). (Pic. 3)
- Alternatively, put subwoofer on the side and insert distance pole into M20 socket on the other side panel of the Focus Sub(A). (Pic. 4)
- Mount the Focus 12(A) or the Focus 15(A) onto the pole using the adapter found in the handle. (Pic 5)







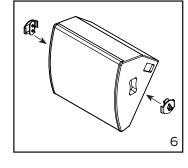
#### 5.2.3. Wall and ceiling mounting.

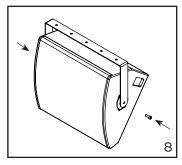
Accessories:

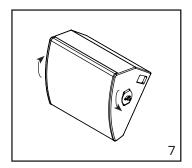
FCS-12 (part No. 00-00003746) FCS-15 (part No. 00-00003745)

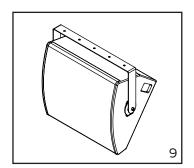
Focus 12(A) and Focus 15(A) can be mounted onto wall or ceiling using FCS-12M or FCS-15M mounting kits respectively.

- Release two M6 bolts on both handle adapters of FCS-12M (FCS-15M) enough to easily insert them into handles of Focus 12(A) or Focus 15(A). (Pic. 6)
- Rotate handle adapters by 90° and tighten two M6 bolts on both sides. (Pic. 7)
- Attach the bracket and secure it with M10 bolts on both sides. (Pic. 8)
- Use provided mounting holes of FCS-12M (FCS-15M) to attach assembly to wall or ceiling. (Pic. 9)









#### 5.3. Passive speakers

#### Focus 12 and Focus 15 connection plates

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- 1. LABEL FIELD. Name of the system, along with its basic parameters is noted here.
- 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 system (optional).
- 3. 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.

Focus Sub connection plate

4. PASSIVE/BI-AMP SWITCH.

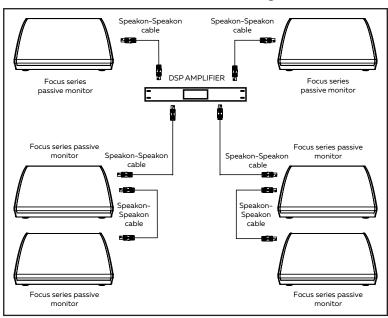
#### 5.3.1. Passive connections

Use power amplifier with DSP or power amplifiers with external speaker processor with Focus series systems.

MAKE SURE TO USE HIGH PASS FILTER FOR ALL NX SERIES SYSTEMS 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 table below:

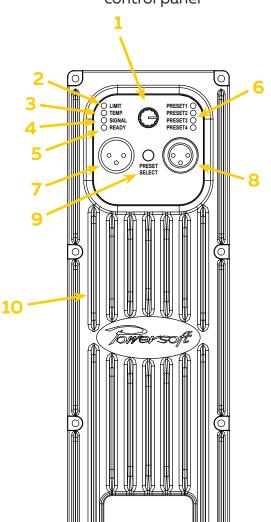
#### Focus series connection diagram



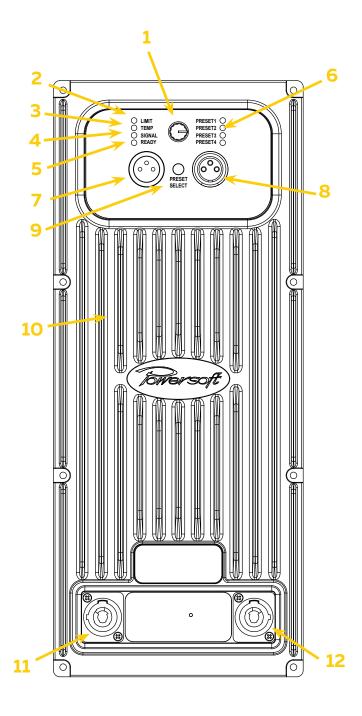
System	Amplifier power	Amplifier impedance	Connection pins	Recommended HPF
Focus 12	400 - 800 W	8 Ohm	+1 -1 Passive	65 Hz or higher, 18 dB/oct min
Focus 12	350 - 700 W	8 Ohm	+1 -1 Bi-amp	65 Hz or higher, 18 dB/oct min
Focus 12	75 - 150 W	8 Ohm	+2 -2 Bi-amp	1200 Hz or higher, 18 dB/oct min
Focus 15	400 - 800 W	8 Ohm	+1 -1 Passive	60 Hz or higher, 18 dB/oct min
Focus 15	350 - 700 W	8 Ohm	+1 -1 Bi-amp	60 Hz or higher, 18 dB/oct min
Focus 15	75 - 150 W	8 Ohm	+2 -2 Bi-amp	1200 Hz or higher, 18 dB/oct min
Focus Sub	700 - 1400 W	8 Ohm	+1 -1 Passive	40 Hz or higher, 18 dB/oct min

#### 5.4. Powered speakers

## Focus 12A and Focus 15A control panel



#### Focus Sub A control panel



1. VOLUME KNOB. Used for adjusting the volume of the system. Remember to turn the volume dowm before connecting/ disconnecting INPUT or LINK connectors.

11

- 2. LIMIT LED. Is lit when limiter is operational, indicating excessive signal through the system.
- 3. TEMP LED. Is lit when tempreture protection is in place, indicating overheating.
- 4. SINGAL LED. Is lit when signal is present on the INPUT connector.

- 5. READY LED. Is lit when system is fully operational.
- 6. PRESET LEDS. Indicate the currently selected system preset. For preset description, refer to the "5.4.1 Preset description" section of this manual, page 15.
- 7. LINK CONNECTOR. Used for linking additional compactible system to same signal source.
- 8. INPUT CONNECTOR. Used for connecting the system to the signal

- source (mixing console etc.)
- 9. PRESET SELECT BUTTON. Used for switching currently selected system preset.
- 10. HEAT SINK. Large heat sink for effective heat dissipation.
- 11. PowerCon A CONNECTOR. Used for connecting mains supply to the system.
- 12. PowerCon B CONNECTOR. Used for feeding the mains supply to the additional system.



#### 5.4.1. Preset description

FOCUS series powered speakers house ready presets for numerous applications.

Focus 12A and Focus 15A preset list:

Preset	Description
Preset 1	Primary stage monitor setting (+ additional fedback suppression for most popular vocal microphones)
Preset 2	Full-range speaker (For tripod stand mounting)
Preset 3	Drum fill (For use in ground stack with Focus SubA)
Preset 4	Full-range speaker with HPF for pole mounting on Focus SubA

#### Focus Sub A preset list:

Preset	Description
Preset 1	Standard - for pole mount assembly with Focus 12A or Focus 15A
Preset 2	Drum fill - for ground stacking with with Focus 15A
Preset 3	- not used -
Preset 4	- not used -

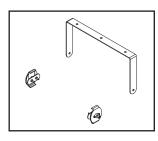
## 6. Standard contents

Please check complete complement of your FOCUS series system upon receiving the package. Standard contents of FOCUS series systems:

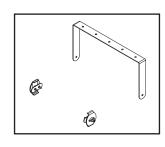
System	Supplied FOCUS series system	FOCUS series User Manual	CN-0010 PowerCon mains cable	Polyethylene bag	Carton Box
Focus 12	Focus 12 8 Ohm passive monitor	+		+	+
Focus 12A	Focus 12A powered monitor	+	+	+	+
Focus 15	Focus 15 8 Ohm passive monitor	+		+	+
Focus 15A	Focus 15A powered monitor	+	+	+	+
Focus Sub	Focus Sub 8 Ohm passive monitor subwoofer	+		+	+
Focus Sub A	Focus Sub A powered monitor subwoofer	+	+	+	+

## 7. Accessories

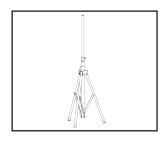
Various accessories are available for FOCUS series systems:



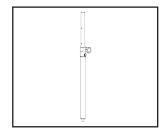
FCS-12M Focus 12(A) mounting kit Part No. 00-0004819



FCS-15M Focus 15(A) mounting kit Part No. 00-0004821



N-BOX-4 speaker stand Part No. 00-00003474



SAT-3T M20 Distance pole Part No. 00-00003644

## 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 the 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 repairing or maintaining, 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 repairing, 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 with 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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