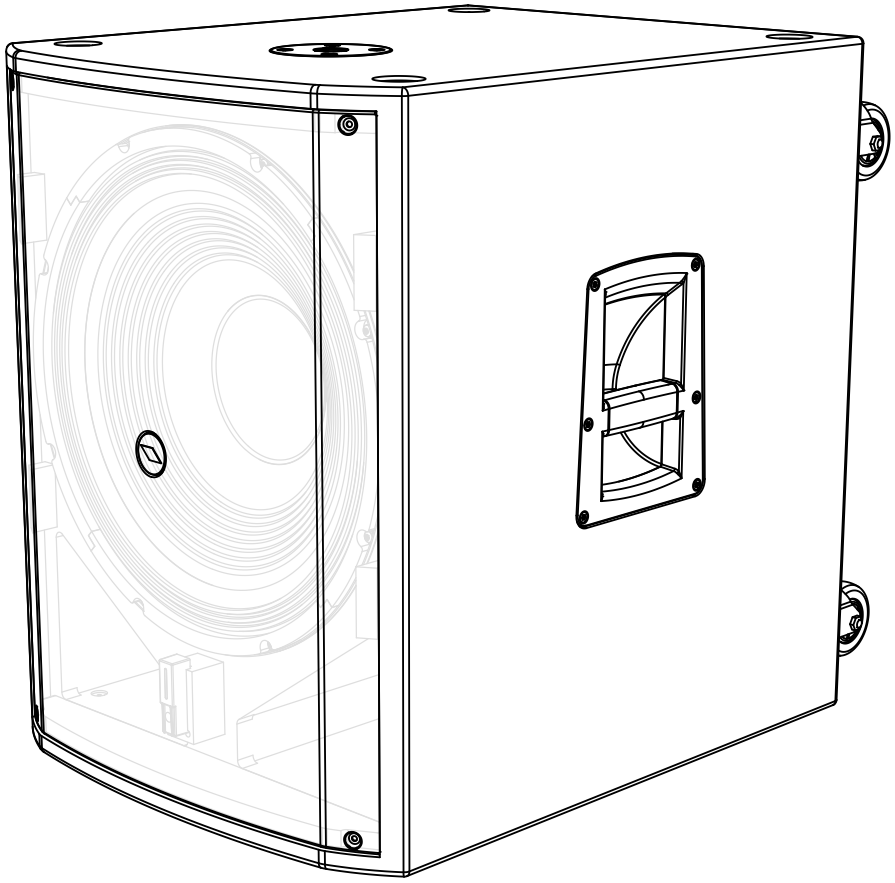
DIVA SUB18A

1500W PROCESSED ACTIVE SUBWOOFER

USER'S MANUAL
MANUALE D'USO



ENGLISH
ITALIANO

96MAN0196-REV.10/24

PROEL

ENGLISH

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ENGLISH

IMPORTANT SAFETY INSTRUCTIONS

Watch for these symbols:



- The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.
- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus 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 install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.



11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus 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 apparatus, the apparatus 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 apparatus to rain or moisture.
16. Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.
17. To completely disconnect this apparatus from the ac mains, disconnect the power supply cord plug from the ac receptacle.
18. The mains plug of the power supply cord shall remain readily operable.
19. This apparatus contains potentially lethal voltages. To prevent electric shock or hazard, do not remove the chassis, input module or ac input covers. No user serviceable parts inside. Refer servicing to qualified service personnel.
20. The loudspeakers covered by this manual are not intended for high moisture outdoor environments. Moisture can damage the speaker cone and surround and cause corrosion of electrical contacts and metal parts. Avoid exposing the speakers to direct moisture.
21. Keep loudspeakers out of extended or intense direct sunlight. The driver suspension will prematurely dry out and finished surfaces may be degraded by long-term exposure to intense ultra-violet (UV) light.
22. The loudspeakers can generate considerable energy. When placed on a slippery surface such as polished wood or linoleum, the speaker may move due to its acoustical energy output.
23. Precautions should be taken to assure that the speaker does not fall off a stage or table on which it is placed.
24. The loudspeakers are easily capable of generating sound pressure levels (SPL) sufficient to cause permanent hearing damage to performers, production crew and audience members. Caution should be taken to avoid prolonged exposure to SPL in excess of 90 dB.







This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.
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.

DECLARATION OF CONFORMITY

The product is in compliance with the following European Directives:
EMC 2014/30/EU, RED 2014/53/EU, LVD 2014/35/EU, RoHS 2011/65/EU and WEEE 2012/19/EU.

WARNING (EN 55032 CISPR 32)
This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.
Under the EM disturbance, the ratio of signal-noise will be changed above 10 dB.

LIMITED WARRANTY

Proel warrants all materials, workmanship and proper operation of this product for a period of two years from the original date of purchase. If any defects are found in the materials or workmanship or if the product fails to function properly during the applicable warranty period, the owner should inform about these defects the dealer or the distributor, providing receipt or invoice of date of purchase and defect detailed description. This warranty does not extend to damage resulting from improper installation, misuse, neglect or abuse. Proel S.p.A. will verify damage on returned units, and when the unit has been properly used and warranty is still valid, then the unit will be replaced or repaired. Proel S.p.A. is not responsible for any “direct damage” or “indirect damage” caused by product defectiveness.

- This unit package has been submitted to ISTA 1A integrity tests. We suggest you control the unit conditions immediately after unpacking it.
- If any damage is found, immediately advise the dealer. Keep all unit packaging parts to allow inspection.
- Proel is not responsible for any damage that occurs during shipment.
- Products are sold “delivered ex warehouse” and shipment is at charge and risk of the buyer.
- Possible damages to unit should be immediately notified to forwarder. Each complaint for package tampered with should be done within eight days from product receipt.

CONDITIONS OF USE

Proel do not accept any liability for damage caused to third parties due to improper installation, use of non-original spare parts, lack of maintenance, tampering or improper use of this product, including disregard of acceptable and applicable safety standards. Proel strongly recommends that this loudspeaker cabinet be suspended taking into consideration all current National, Federal, State and Local regulations. The product must be installed be qualified personal. Please contact the manufacturer for further information.

INTRODUCTION

Thank you for choosing a PROEL product. Please take some time to read this manual to understand all the features of your system and take advantage of all its performance capabilities. All PROEL products are CE approved and designed for continuous use in professional applications.

DESCRIPTION

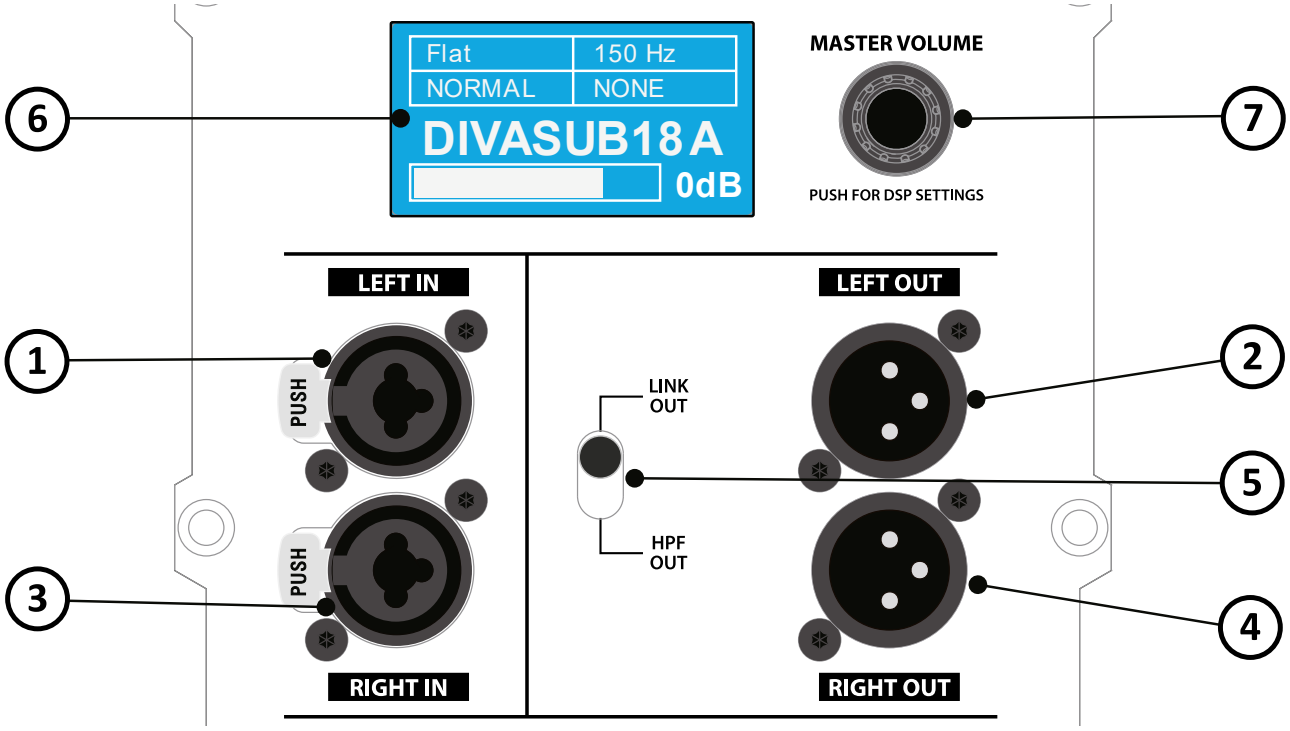
DIVASUB18A is a **digitally processed** active subwoofer designed as an ideal complement to the DIVA Series speakers, capable not only of increasing the extension of the low frequency response, but also of significantly increasing the efficiency and performance of the whole system.

The subwoofer uses a **custom 18" high efficiency woofer with 3" voice coil**, driven by a powerful **1500 W CLASS-D amplifier** with high headroom and dynamic control via DSP, for maximum output power without distortion and constant reliability.

The sophisticated preamp section includes advanced processing with a **high-performance DSP processor**, for linear response and high-definition sound. A user interface with **LCD display and single-knob control** is available, for quick selection and viewing of processor parameters. These parameters include the selection of crossover frequency, phase and **delay**, for perfect coupling with the satellite used. The **cardioid** configuration is also available, which allows the coupling of two DIVASUB18A to double the frontal efficiency of the system and, at the same time, drastically reduce the rear radiation.

DIVASUB18A is housed in a lightweight and ultra-resistant plywood cabinet, with steel protection grille, two ergonomic handles, flange for support pole with M20 connection and **4 professional wheels equipped with braking system** supplied as standard, for maximum ease of transport.

MAIN PANEL OPERATIONS



1. LEFT IN

This is a female combo connector, which accepts an XLR or a JACK plug from almost any type of equipment with a balanced or unbalanced output. The XLR input is wired as follows:

Pin 1 = shield or ground
Pin 2 = + positive or "hot"

Pin 3 = - negative or "cold"

The JACK input is wired as follows:

Tip = + positive or "hot"
Ring = - negative or "cold"
Sleeve = shield or ground

When connecting an unbalanced signal, wire them as follows:

Pin2 / Tip = + positive or "hot"
Pin 1-3 / Sleeve = shield or ground

NOTE: whenever possible, use always balanced cables. Unbalanced lines may also be used but they may result in noise over long cable runs. In any case, avoid using a balanced cable for one channel and an unbalanced one for the other.

2. LEFT OUT

This is a male XLR connector whose connection depends on the position of LINK OUT / HPF OUT switch:

- LINK OUT: it is connected in parallel to the respective input and it provides the same signal. Use it to connect a second subwoofer or to send to the satellite a full-range signal.
- HPF OUT: it provides the input signal filtered with a high-pass filter. Use it to send to a satellite speaker a filtered signal.

3. RIGHT IN

Same as above. Use both inputs and outputs when connecting a stereo system to a single subwoofer (1 sub + 2 sat). In the case of a mono system (1 sub + 1 sat for each channel) you can use left or right input without distinction.

4. RIGHT OUT

Same as above.

5. LINK OUT / HPF OUT SWITCH

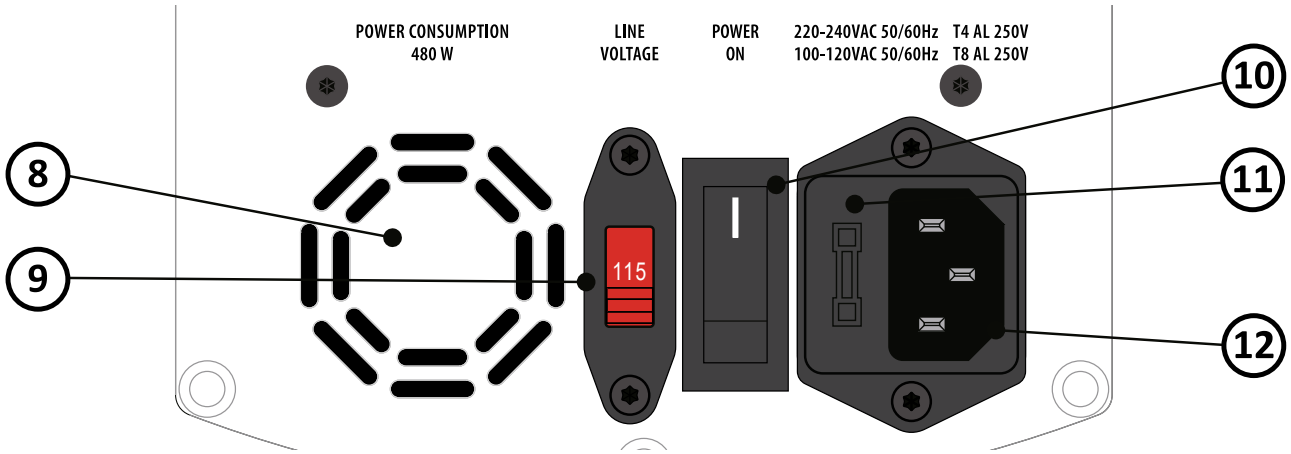
This switch allows you to select how the LEFT OUT and RIGHT OUT connectors operate (see point 2).

6. LCD DISPLAY

The LCD displays the current status of the DSP parameters and the attenuation level in dB. It also provides access to all available parameters which can be selected and modified using the MASTER VOLUME knob.

7. MASTER VOLUME KNOB

This knob sets the master level of the subwoofer: the attenuation ranges from 0dB to -80dB (mute). When pressed, it allows to access the DSP functions such as mode selection and system configuration. Press and rotate it to toggle between EXIT / EQ / MODE / XOVER / POLARITY / DELAY / LED / RESET / INFO, then press it again to access the available options.



8. FAN SLOTS

These are the ventilation slots of the internal fan. For correct cooling of the amplifier, make sure they always remain free and allow free circulation of air.

9. LINE VOLTAGE selector

This switch sets the AC voltage line of your country (usually it is set by factory and isn't necessary to change it). The 115V setting is for mains line in the range of 100-120V~ and 230V setting is for mains line in the range of 220-240V~.

WARNING: an incorrect setting of AC LINE VOLTAGE could damage seriously the internal electronics!

10. POWER

Use this switch to power ON or OFF the loudspeaker. It is "ON" when the switch is in the "I" position.

11. FUSE holder

Here is where the mains protection fuse is placed.

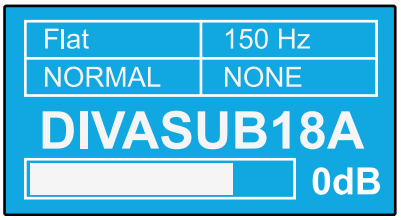
REPLACE THE PROTECTION FUSE ONLY WITH THE SAME TYPE.
IF, AFTER THE REPLACEMENT, THE FUSE BLOWS AGAIN, DO NOT TRY TO REPLACE IT AND CONTACT THE NEAREST PROEL SERVICE CENTER.

12. AC~ SOCKET

Here's where you plug in your mains supply cord. You should always use the mains cord supplied with the device. Be sure that your device is turned off before you plug the mains supply cord into an electrical outlet.

DSP OPERATIONS

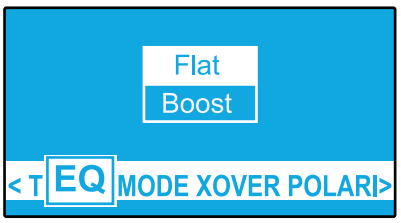
The display usually shows the current setting: EQ, XOVER, MODE, DELAY (in meters) and LEVEL (bar and dB of attenuation). The LEVEL is controlled by the **MASTER VOLUME** knob: this knob when pressed and rotated allows to access the DSP functions.



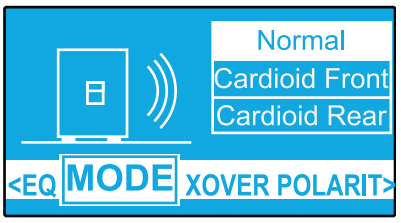
EXIT
Press to return to main screen: any changes to subsequent settings are saved and will be recalled when the system is turned on again. To restore the default parameters use RESET function.



EQ
Choose between FLAT or BOOST. The FLAT response can be used for any music genre, BOOST enhances the low end and can be used generally in any music genre where this taste is more appreciated, like electronic, disco, rock etc.



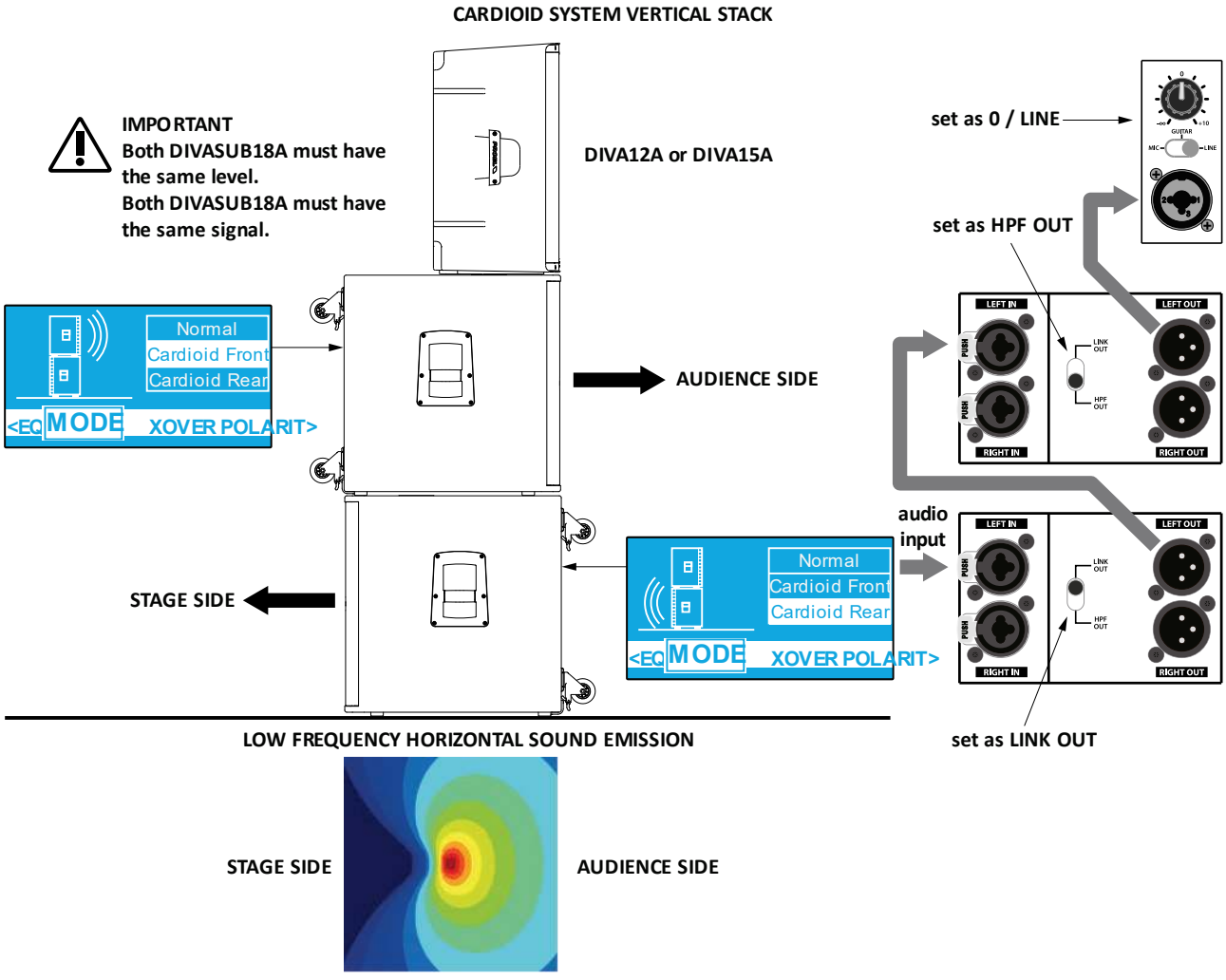
MODE: Normal
This is the standard operating mode.



MODE: Cardioid Front and Cardioid Rear
Using two DIVASUB18A arranged one above the other it is possible to set them in cardioid mode. In this configuration the low frequencies will be added (+6dB) only to the front side and they will be substantially attenuated on the rear side. This configuration is very useful in those cases where you want to push the basses on the audience side, but you want to reduce them on the stage side.
The following figure shows the arrangement of the two SUBs with a DIVA satellite above and the sound emission on the horizontal plane.
Note: the cardioid arrangement works correctly in open or very large spaces, in the presence of large obstacles less than 2 meters away the cardioid-shaped emission is compromised and therefore not recommended.

HOW TO SET UP CORRECTLY THE CARDIOID:

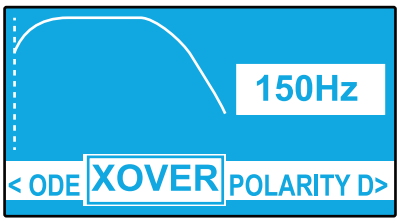
- **Respect the positions of the boxes and their connections.**
- **All parameters EQ, XOVER, POLARITY and DELAY must be the same on both DIVASUB18A, these parameters must be set in NORMAL mode before changing into CARDIOID FRONT and REAR.**
- **To be sure all parameters are the same is preferable to RESET both DIVASUB18A, then set the same XOVER or other, then finally change the MODE from NORMAL to CARDIOID.**
- **When the DIVASUB18A is configured as CARDIOID, front or rear, all other DSP parameters are blocked except the MASTER VOLUME.**
- **In order operate correctly, the audio signal must be the same for both DIVASUB18A, so their MASTER VOLUME must also be the same.**



XOVER

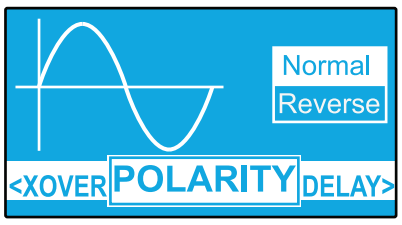
Sets the frequency of the crossover filter between subwoofer and satellite. The crossover frequency is selectable at 80/120/150 Hz for both Low-Pass and High-Pass filters. Remember that to apply the High-Pass filter to the signal sent from OUTPUT connectors the switch must be in HPF OUT position.

If your satellite is DIVA12A we recommend setting the crossover to 120Hz, if it is DIVA15A to 80Hz.



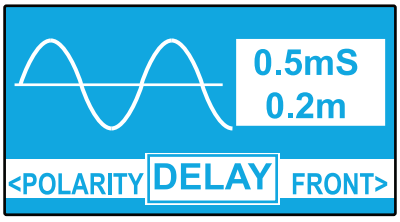
POLARITY

By modifying this parameter, it is possible to invert the phase of the DIVASUB18A. NORMAL is the most used setting if the satellite is installed close to the subwoofer. When the subwoofer is far from the satellite, the phase can be set as NORMAL or REVERSE with the aim of obtaining the best coupling between the two.



DELAY

With this parameter it is possible to delay the emission of the subwoofer with respect to the satellite. The delay is displayed in milliseconds (time) and in meters (distance). For example, if the satellite is installed close to the ceiling and the subwoofer is on the floor, it may be necessary to delay the sub to achieve the best coupling in the audience area.



FRONT LED

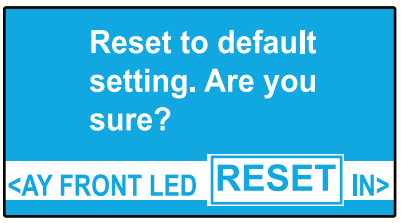
It allows you to set the behavior of the front LED choosing between:

- OFF: the LED is always off
- ON: the LED is lit in BLUE when the subwoofer is on
- LIMIT: the LED is lit in BLUE when the subwoofer is on and flashes in RED when the internal LIMITER is in action



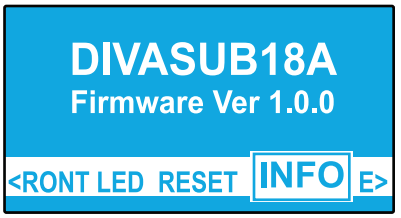
RESET

Choose RESET and confirm with YES to restore all initial parameters of the internal DSP. This option is useful if you want to re-initialize several subwoofers after they have been used in different environment with different satellites.



INFO

This screen shows the DSP Firmware version.



OPTIONAL ACCESSORIES

SPEAKER POLE

KP210S – Adjustable speaker pole for speaker-subwoofer separation with screw-mount bottom terminal piece (supplied with screw M20 x 25). It features a bolt locking mechanism incorporating a steel pin for extra safety. Adjustment: 735 - 1230 mm.



TECHNICAL SPECIFICATIONS

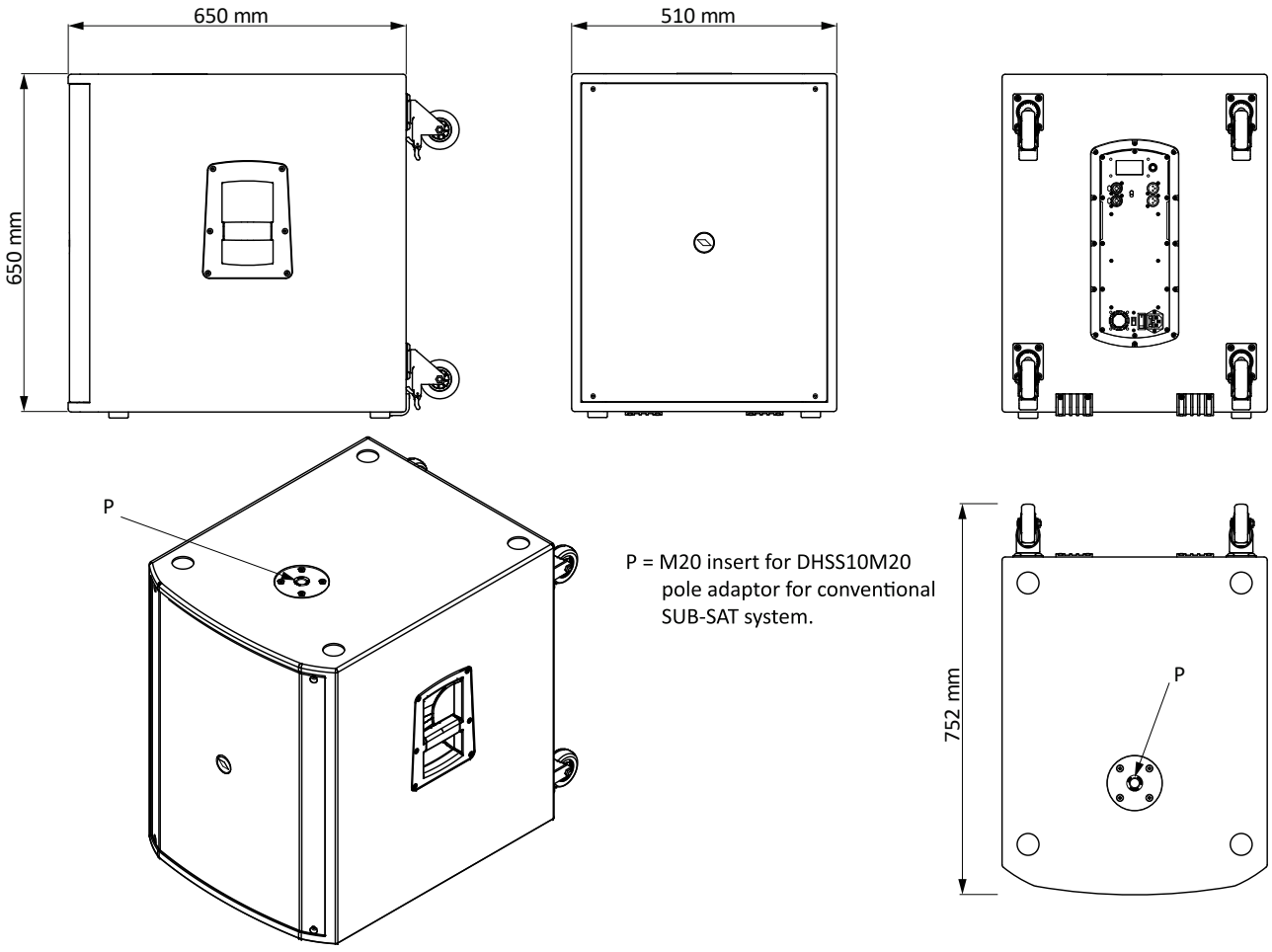
System type	Vented enclosure subwoofer
Loudspeaker	18" woofer with 3" VC
Amplifier Continuous Power	750 W Class D
Amplifier Peak Power	1500 W
Power Supply Type	SMPS
System Processing	DSP
Frequency Response	35 Hz - 160 Hz
Crossover	24dB/oct Butterworth 80/120/150 Hz
Max SPL	132 dB
Connectors	IN: 2x LINE (NEUTRIK COMBO) OUT: 2x LINK/HPF (NEUTRIK XLR MALE)
Input Impedance	10k ohm
Controls	LCD, ROTARY PUSH ENCODER
Power Supply	220-240 V~ or 100-120 V~ 50/60 Hz with LINE VOLTAGE selector
*Rated Consumption**	480 W
Line Protection Fuse	T4AL (at 230) / T8AL (at 115)

GENERAL SPECIFICATIONS

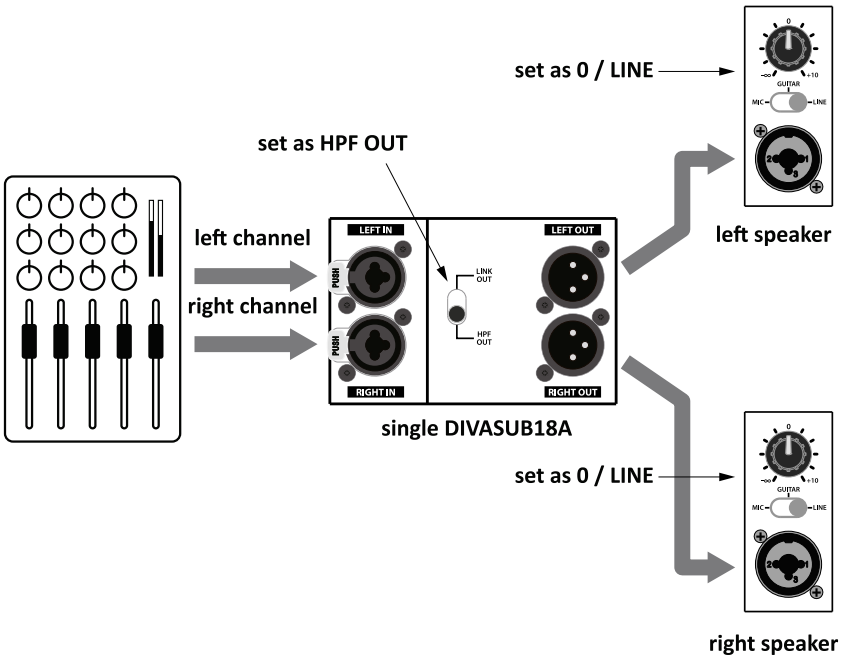
Cabinet	15/18 mm plywood Black anti-scratch paint 1.5 mm metal grille 2 handles 1 x M20 support for speaker pole 4 x 75 mm wheels
Dimensions (W x H x D)	510x650x650 mm (without wheels) 510x650x752 mm (with wheels)
Weight	38 kg (83.77 lb)

** Rated consumption is measured with pink noise with a crest factor of 12 dB, this can be considered a standard music program.*

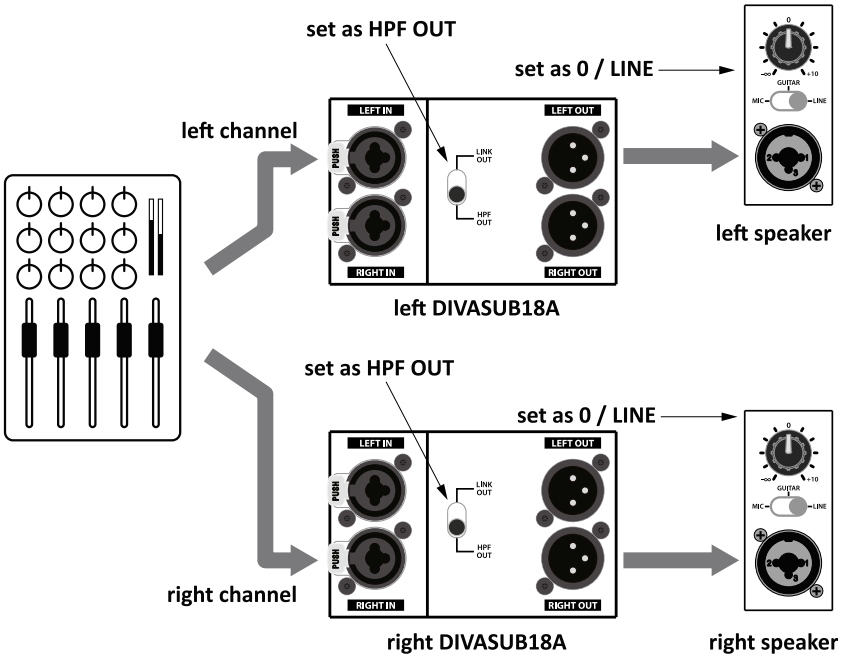
DIVASUB18A TECHNICAL DRAWING / DISEGNO TECNICO



STEREO SINGLE SUB SETUP / CONFIGURAZIONE STEREO SINGOLO SUB



STEREO DUAL SUB SETUP /CONFIGURAZIONE STEREO DOPPIO SUB



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