

# USER GUIDE

## STAGE MONITOR PROCESSOR SPWX



**APG**

# SUMMARY

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# SAFETY INSTRUCTIONS



This symbol, wherever it appears, alerts you to the presence of un-insulated dangerous voltage inside the enclosure – voltage that may be sufficient to constitute a risk of shock.



This symbol wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Read the manual.



These symbols indicate that no part is available inside the device. Do not open the device. Do not try to troubleshoot. Contact a qualified technician. Opening the device will void the warranty for no reason manufacturer. Do not wet the unit. If liquid is spilled, immediately turn off the device and bring it to the distributor for repair. Unplug the unit during storms to prevent damage.

## **INFORMATION ABOUT APPLIANCE SUPPLIED WITH POWERD CORD:**

### **WARNING: APPLIANCE MUST HAVE GROUNDING**

The conductors of the cable industry are identified as follows:

Green / Yellow	→	Ground
Blue	→	Neutral
Brown	→	Phase

If the colors of the power cable do not match with the colors of the socket, please proceed as follow:

Green/Yellow wire be must be connected to the wire identified with E letter ground sign.

Blue wire must be connected to the black wire or the wire identified with N letter.

Brown wire must be connected to the red wire or the wire identified with L letter.

CONDUCTOR		COLOR	
		STANDARD	OTHERS
L	PHASE	BROWN	BLACK
N	NEUTRAL	BLUE	WHITE
E	GROUND	Green/Yellow	GREEN

**Warning:** When no grounding exists, problems may appear with the appliance or the system it is connected to, in case of high tension between casing and grounding. Serious injuries or death can occur in case of simultaneous contact with case grounding.

## **FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING:**

**WATER AND MOISTURE:** The device should not be used near a water source (near a bathtub, bowl, kitchen sink, in a wet basement or near a swimming pool, etc. ...). Be careful that no liquid can be enters the device (some openings).

**POWER SOURCE:** The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

**GROUNDING or POLARIZATION:** Precautions should be taken so that the grounding and polarization are properly done.

**REPAIRS:** To avoid the risk of fire or electric shock, user should not attempt to troubleshoot the device out of the instructions in the manual. In case of failure, contact a qualified technician.

## **ELECTROMAGNETIC COMPATIBILITY:**

The device meets the requirements of the Declaration of Conformity.

This device may not cause harmful parasites.

This device supports any interference, even parasite that may cause malfunctions.

The use of this device in an electromagnetic field, however, must be avoided.

## ***UNPAKING***

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Thank you for choosing this processor APG. Please take a moment to read the contents of this manual.

All APG Products are carefully designed in order to provide performance and reliability of high level. Do not hesitate to contact us or visit our website for more information on APG products.

Website: [www.apg-audio.com](http://www.apg-audio.com)

Email: [contact@apg.tm.fr](mailto:contact@apg.tm.fr)

### **Unpacking PROCESSOR SPWX APG**

Once the product is out of the box, please check that product is not damaged.

If the unit is damaged, notify the carrier and make the claim.

Please keep the packaging for future use.

### **Instructions**

This manual provides a detailed description of all functions of the SPWX processor.

## ***IMPORTANT SAFETY INFORMATION***

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Please read and keep these instructions and warnings. Follow all warnings and all instructions.

- Do not open the device.
- Maintenance of internal components must not be done by user.
- Service and maintenance must be carried out by qualified personnel.
- This device must be connected to a grounded power outlet.
- Avoid cord to be stepped on and protect device against damage.
- Pay particular attention to plugs.
- Only use attachments / accessories specified by the manufacturer.
- Have the product controlled if damaged (power cable or plug damage, for example), in case of infiltration of liquid or objects into the case, if the unit has been exposed to rain or humidity, does not operate normally or has been dropped.

# FUNCTIONALITIES

## GENERAL INTRODUCTION

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The processor static **APG SPWX** is designed to optimize the operation of **DX12 & DX15** speakers and subwoofers **SB115, SUB138P & SUB238S** in the applications of a floor or side fill or drum fill with sub. It integrates all the functions of electronic filtering to optimize the frequency response of speakers and subsonic protection.

This processor offers 4 channels, each one includes: a resonant high pass filter, a low pass filter, a shelving filter and three cells of parametric equalization. The "sub" output includes a resonant high pass filter, a low pass Linkwitz Riley 4th order (24 dB / octave).

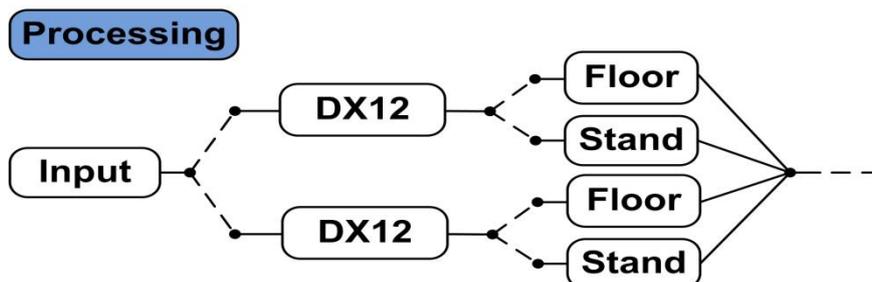
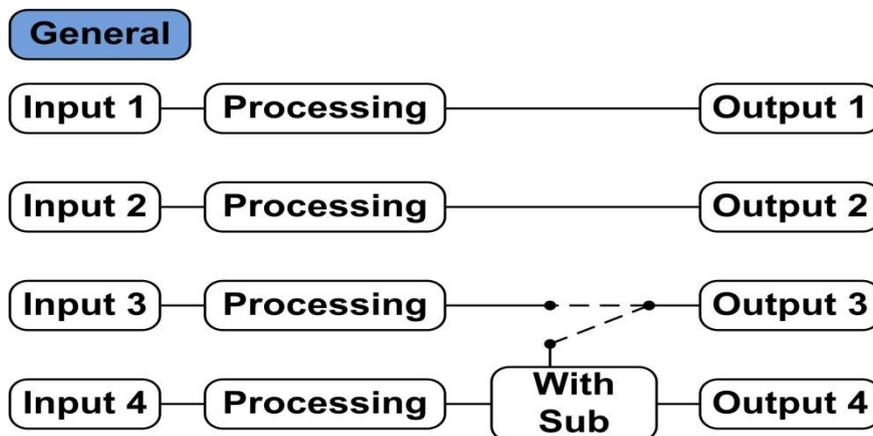
The connection is made with a slope of 24 dB / octave with a cutoff frequency of 110Hz between speakers and subwoofer.

This processor operates in two modes:

- 4 independent channels
- 2 full range monitoring channels and on 2-way active mono channel (mid/hi + sub)

## BLOCK DIAGRAM OF SPWX

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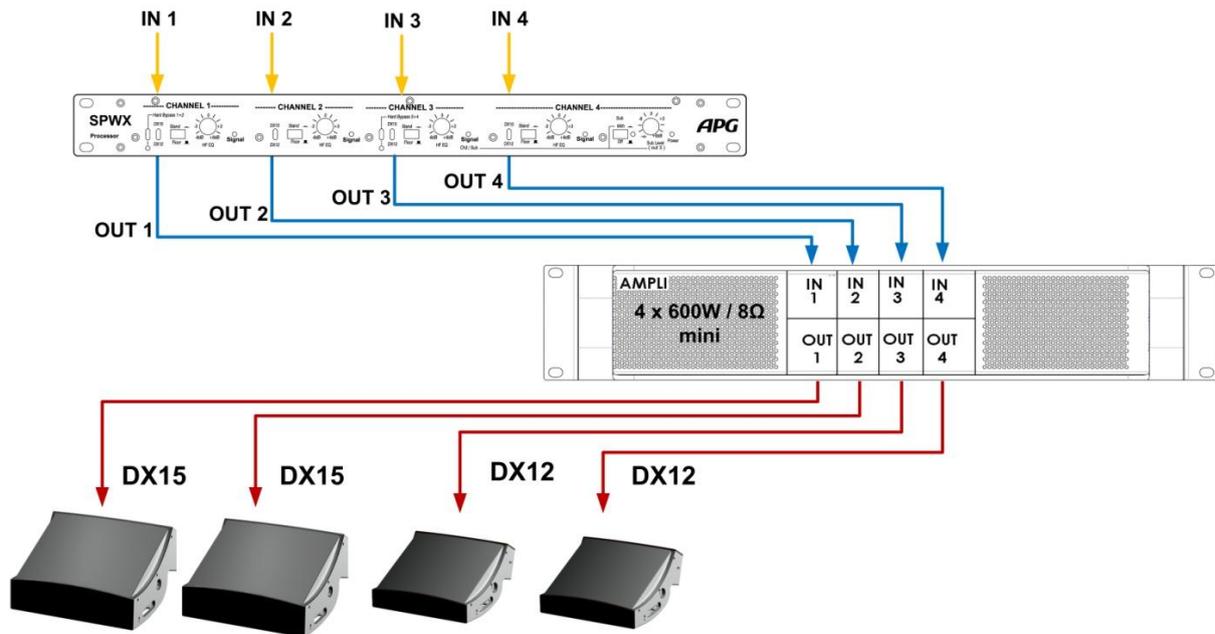


## WIRING

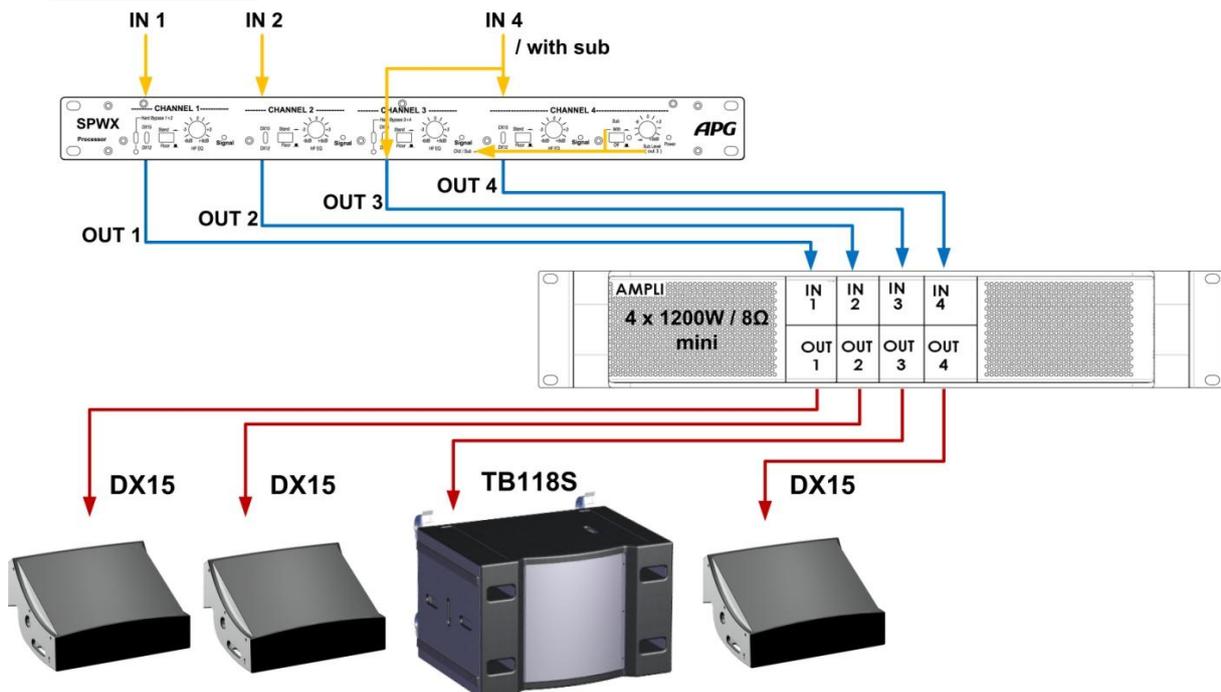
**The processor is the last item in the chain before the amplifier.**

The processor receives input signals from the console or effect rack. Its outputs are directly connected to amplifiers.

### 1°) Mode with 4 channels:



### 2°) Mode with SUB:



NOTE : in this mode, input 3 does not operate, only the physical output is used for the sub processing

# TECHNICAL SPECIFICATIONS

## SPECIFICATIONS

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### Inputs:

Balanced XLR 3 pin female, Pin1 Ground

Nominal level +4 dBu  
impedance: 18 kOhms

### Outputs:

Balanced XLR 3 pin male, Pin1 Ground

Nominal level: 21 dBu  
impedance 60 Ohms

## FREQUENCY OF CONNECTION BETWEEN SPEAKER AND SUBWOOFER

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DX12: 110Hz 24dB/octave  
DX15: 110Hz 24dB/octave

## OVERALL INFORMATION

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Noise: 94 dBu (22Hz-22kHz)  
THD less than < 0.1% (4 dBu, 1kHz)  
Connectors: 3 pin XLR, Pin1 Ground  
Consumption: 220/240V AC 15VA

## PHYSICAL

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Dimensions: 482x220x44 (mm)  
Net weight: 4,5kg  
Front panel: steel 3 mm  
Finish : epoxy grey paint

# CONTROLS DESCRIPTION

## FRONT PANEL

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**1) Hard-Bypass (1 +2) / (3 +4):** This feature pairs to disable the processor, to isolate the amp and can be used without other forums have changed the internal wiring.

**2) DX15/DX12:** This function is used to select the speakers DX15 or DX12.

### **3) Stand / Floor:**

- Pressing this key switches the mode "stand" when speakers are set up on a stand. Then, the frequency response is useful for high precision vocal reproduction and medium throw application (distributed sound system).
- By disabling this key switches the mode "floor" when speakers are coupled with the floor. In this case the effect of the coupling with the floor allows all kind of full range musical application stage and near field monitoring.

**4) HF EQ:** This knob controls the clarity of the system to change the spectral balance of the system depending on the acoustic environment, listening distance and coupling effects.

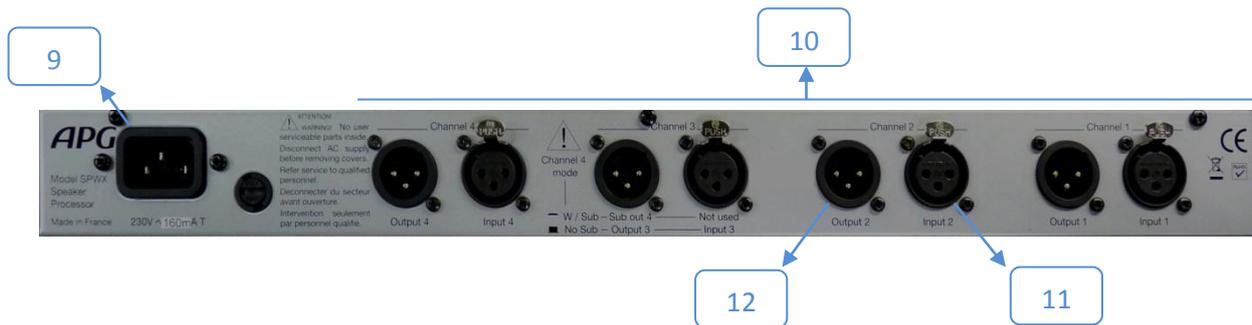
**5) Signal LED:** This LED is used to display the presence of a signal higher than - 20 dB on each output.

**6) With / off Sub (3&4 only):** Pressing this key activates a subwoofer channel on the output of channel 3 and inserts a high-pass filter in the response of channel 4 for the crossover between speaker and subwoofer.

**7) Sub Level:** This knob controls the sub level when the function 6° is activated. A centre position, the trigger materializes the nominal level of the subwoofer. The range is from infinite attenuation to 6 dB gain. It is advisable to adjust the subwoofer channel level after installation of speakers.

**8) Power:** This LED indicates the presence of voltage. The processor can be left running continuously; there is no power switch.

## REAR PANEL



**9) Power supply connector :** The base area is the IEC standard, the centre pin is grounded. For security reasons, it must always be connected.

**10 °)** The rear panel has 4 channels. Each channel has an input and an audio output.

**11 °) Audio input connector XLR female 3-pin:** These connectors are wired as completely symmetrical: pin 1: ground, pin 2: hot, Pin 3: COLD. Pin 1 of the two inputs is connected directly to the chassis and feed the signal processing chains. You can use them with an unbalanced source by connecting pin 3 to ground lug to the source.

**12 °) Audio outputs Connector XLR male 3-pin:** These connectors deliver the balanced outputs processed signals and they are wired as follows: pin 1: ground, pin 2: hot, Pin 3: COLD. You can use them with an unbalanced source by connecting pin 3 to ground lug to the source.

**Note:** pin 1 of the output is decoupled from the mass for audio frequencies but is grounded to ensure the rejection of radio frequencies, ensuring electromagnetic compatibility of the processor.

**Result:** The amplifier connected to the processor provides grounding the cable shield connected to their inputs.

**Note:** The processor uses a circuit ground loop eliminator. If a parasite snoring occurs in a facility, it is not due to a ground loop.



**During use of the subwoofer (activation of function 6) With Sub), the output of channel 3 is used for the Sub signal (the input 3 is deactivated). For speakers DX12 or DX15, only input and output of channel 4 are activated.**

The main fuse must be replaced only with the same type and value.  
**250V/0,160A Temp**

***APG***

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