



**JAM**  
combo amplifier  
for acoustic instruments

# IMPORTANT SAFETY INSTRUCTIONS



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 ENCLOSURE THAT MAY BE OF A 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 INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE PRODUCT.

## WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK  
DO NOT EXPOSE THE APPLIANCE TO RAIN OR HUMIDITY

- 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.



# INTRODUCTION

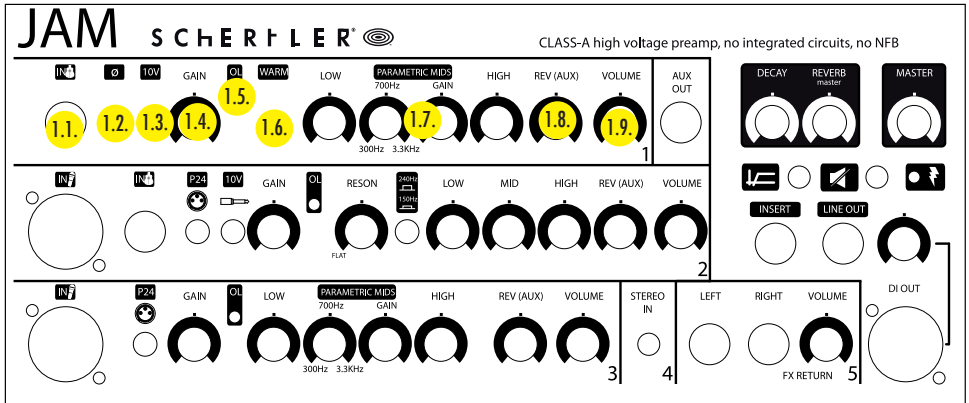
JAM becomes the third member of Schertler's "next generation" acoustic amplification series. The new 5-channel "all-rounder" combines a comprehensive feature set with the updated technology and enhanced "look" that defines all the models in this latest range.

Equipped with a 1" dome tweeter and 8" woofer, and featuring an optimized 2-way bass reflex construction, JAM offers 200W (150W + 50W) of bi-amplified power. The amplifier includes a balanced microphone (XLR) input, an unbalanced mic/instrument input and an input offering both balanced microphone and unbalanced mic/instrument options. Both instrument inputs feature a Bootstrap technology that enables the input to automatically adapt to any impedance. A separate stereo input channel will additionally accommodate devices such as a computers, MP3 or CD/DVD players. A 5th FX Return channel can also be used for inputting line level devices.

The 3 main microphone/instrument input channels include a Gain control for input sensitivity regulation and 3-band EQ, with parametric mids on input channels 1 and 3 and a switchable resonance (notch) filter (240Hz/150Hz) on channel 2. Phantom power is supplied for condenser and electrostatic microphones. Each of these channels also features an overload LED. Channel 1 is additionally equipped with a phase reverse switch to prevent feedback, or unwanted effects between the various channels.

JAM's Master Section controls include a new adjustable DI Out, a new Mute button, a Line Out enabling the connection of external systems, a digital reverb and an Insert for connecting an external dynamics processor. Connection options are further enhanced with an Aux Out (Channel 1) that also enables connection to other systems. A Low Cut filter (cutting frequencies below 180Hz) can be used with instruments that generate aggressive low frequencies. This also enables a separate subwoofer to be connected without causing any damage to the amplifier. JAM is additionally equipped with a high voltage CLASS-A preamp that has no integrated circuits and No Negative Feedback (NFB).

# 1. FRONT PANEL INSTRUMENT IN



## 1.1. INSTRUMENT IN

Unbalanced input for the connection of jacks (6.3mm or 1/4"), with optimal sensitivity for high level signals. The electronics will adapt to any situation. No special action is required.

## 1.2.PHASE

In case of feedback, or unwanted effects between different channels use the phase reverse switch.

## 1.3. 10V

Phantom power supplies the Jack connector with 10V for powering electret microphones.

## 1.4. GAIN

This variable gain preamplifier adjusts the sensitivity level to ensure the best possible processing of the INSTRUMENT IN signal through the channel. It is important that this input level should be set and optimised in the best way to achieve the cleanest sound possible.

## 1.5. OVERLOAD

This LED (when lit) indicates that the level of the input signal is too high and it might introduce distortions

## 1.6. WARM

When engaged, this low-pass filter damps higher frequencies to produce a warmer sound when using bridge-mounted pickups such as the SCHERTLER STAT-Series for violin, viola, cello and double bass..

## 1.7. HIGH, MID, LOW

These controls are devoted to high, medium and low frequency regulation. Offering cut and boost of  $\pm 15\text{dB}$ , they allow a wide range of tonal variations to be explored. Parametrics MIDS regulation offers the possibility to cut or boost a frequency range between 300Hz and 3.3kHz. When the controls are positioned centrally there is no cut or boost of the selected frequency band.

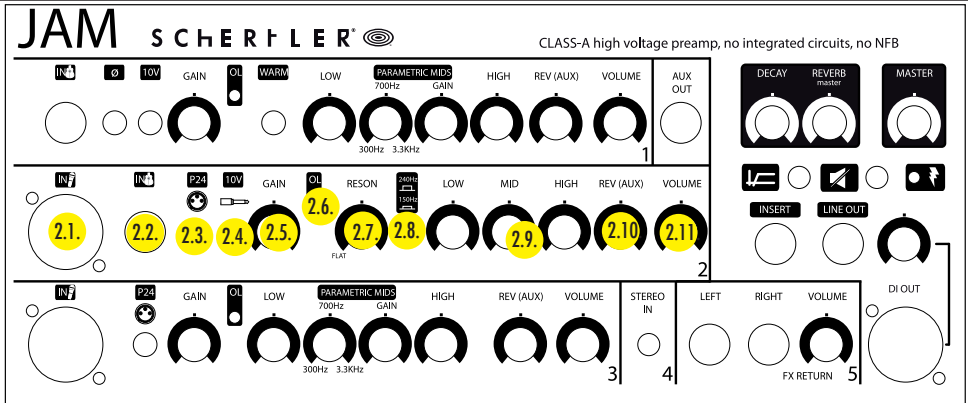
## 1.8. REVERB

This rotary control sets the level of the digital reverb on the channel.

## 1.9. VOLUME

This rotary control regulates the channel volume.

## 2. FRONT PANEL MIC or INSTRUMENT IN



### 2.1. MIC INPUT

This input is electronically balanced for XLR type connections. The new MIC/DYN channel is now conceived for any kind of signal sources. You can plug in vocal microphones. The electronics will adapt to any situation. No special action is required.

### 2.2. INSTRUMENT IN

Unbalanced input for the connection of jacks (6.3mm or 1/4"), with optimal sensitivity for high level signals, the electronics will adapt to any situation. No special action is required.

### 2.3. P24

The amplifier's XLR input provides 24V phantom power for use with a condenser microphone. Most condenser (and dynamic) microphones, along with some preamps, can be safely phantom powered. In certain cases however, phantom power can cause damage to a device. This tends to occur with unbalanced microphones, preamps or stompboxes that have been modified for balanced XLR use. For any doubt, please contact us to check the compatibility of your audio device before using the amplifier

### 2.4. 10V

Phantom power supplies the Jack connector with 10V for powering electret microphones.

### 2.5. GAIN

This variable gain preamplifier adjusts the sensitivity level to ensure the best possible processing of the MIC and the INSTRUMENT IN signal through the channel.

It is important that this input level should be set and optimised in the best way to achieve the cleanest sound possible.

### 2.6. OVERLOAD

This LED (when lit) indicates that the level of the input signal is too high AND it might introduce distortions

### 2.7. RESON

The Resonance (notch) filter cuts the frequency of 150Hz/240Hz, to reduce low-frequency feedback. Left: no attenuation (flat), Right: maximum attenuation. Use the reson switch to select the resonant frequency of the instrument (240Hz/150Hz)

### 2.8. RESON switch

### 2.9. HIGH, MID, LOW

These controls are devoted to high, medium and low frequency regulation. Offering cut and boost of  $\pm 15$ dB, they allow a wide range of tonal variations to be explored. When the controls are positioned centrally there is no cut or boost of the selected frequency band.

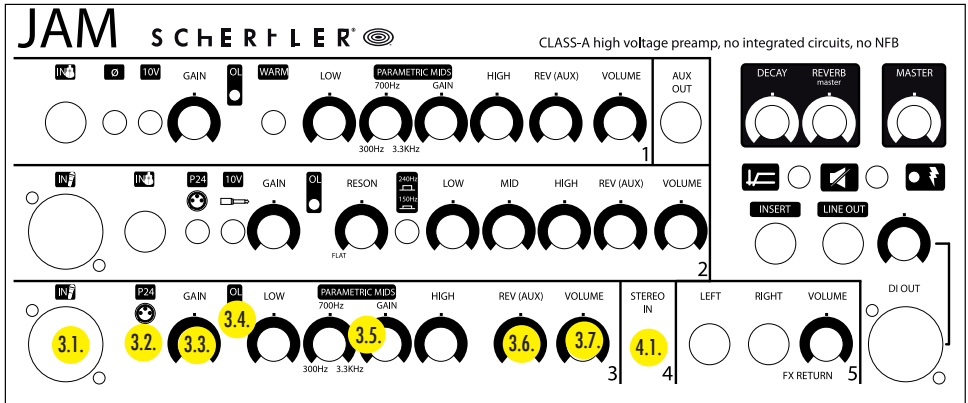
### 2.10. REVERB

This rotary control sets the level of the digital reverb on the channels.

### 2.11. VOLUME

This rotary control regulates the channel volume

## 3. FRONT PANEL MIC / 4. STEREO IN



### 3.1. MIC INPUT

This input is electronically balanced for XLR type connections. The new MIC/DYN channel is now conceived for any kind of signal sources. You can plug in vocal microphones. The electronics will adapt to any situation. No special action is required.

### 3.2. P24

The amplifier's XLR input provides 24V phantom power for use with a condenser microphone. Most condenser (and dynamic) microphones, along with some preamps, can be safely phantom powered. In certain cases however, phantom power can cause damage to a device. This tends to occur with unbalanced microphones, preamps or stompboxes that have been modified for balanced XLR use. For any doubt, please contact us to check the compatibility of your audio device before using the amplifier

### 3.3. GAIN

This variable gain preamplifier adjusts the sensitivity level to ensure the best possible processing of the MIC signal through the channel. It is important that this input level should be set and optimised in the best way to achieve the cleanest sound possible.

### 3.4. OVERLOAD

This LED (when lit) indicates that the level of the input signal is too high and it might introduce distortions

### 3.5. HIGH, MID, LOW

These controls are devoted to high, medium and low frequency regulation. Offering cut and boost of  $\pm 15\text{dB}$ , they allow a wide range of tonal variations to be explored. Parametrics MID regulation, offers the possibility to cut or boost a frequency range between 300Hz and 3,3kHz. When the controls are positioned centrally there is no cut or boost of the selected frequency band.

### 3.6. REVERB

This rotary control sets the level of the digital reverb on the channels.

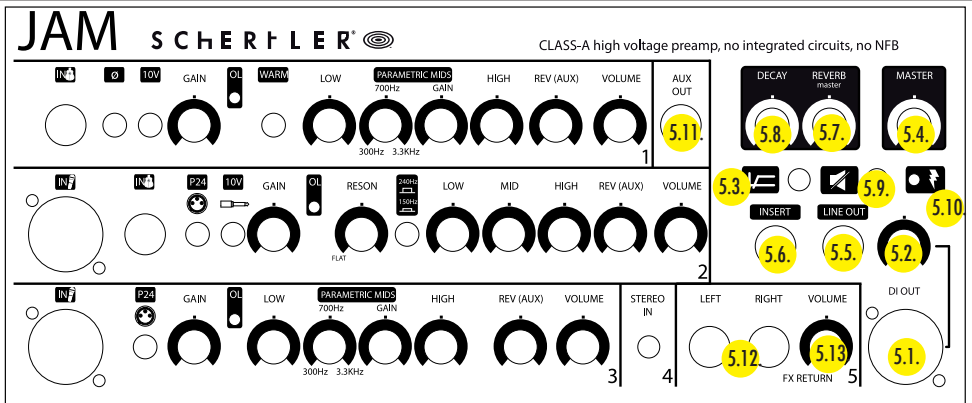
### 3.7. VOLUME

This rotary control regulates the channel volume

### 4.1. STEREO IN

Mini Jack stereo 3.5mm input for PC, MP3 and several electronic devices. The volume depends on the MASTER-VOL regulation

# 5. MASTER SECTION / FX RETURN / AUX OUT



## 5.1. DI-OUT

General output. XLR balanced type connector for connections of external systems. The output volume does not depend on the regulation of the MASTER-VOL but is effected by changes in individual channel volume.

## 5.2. DI-OUT vol

This rotary control sets the output level on the DI-OUT

## 5.3. LOW CUT

When engaged, this filter cuts all the frequencies below 180Hz. This function is ideal if you play an instrument that generates aggressively low frequencies, it enables you to connect a subwoofer and prevent unpleasant vibration and possible damage to your JAM.

## 5.4. MASTER

Control overall system volume

## 5.5. LINE OUT

This unbalanced jack plug enables the connection of external systems. The output volume depends on the regulation of the MASTER-VOL.

## 5.6. INSERT

This stereo jack plug enables the connection of an external device (compressor, equalizer, etc.) in series to all the outputs

## 5.7. REVERB master

This control regulates the general level of the digital reverb, common to all channels. The amount of the effect can be regulated individually for the single channel through the dedicated controls.

## 5.8. DECAY

This control regulates the length of the reverb (time of the reverb from attack to silence).

## 5.9. MUTE

Mute switch, cuts the audio on the master

## 5.10. Power LED

This LED indicates when the amplifier is switched ON

## 5.11. AUX OUT

Additional output. This mono jack plug enables the connection to other systems.

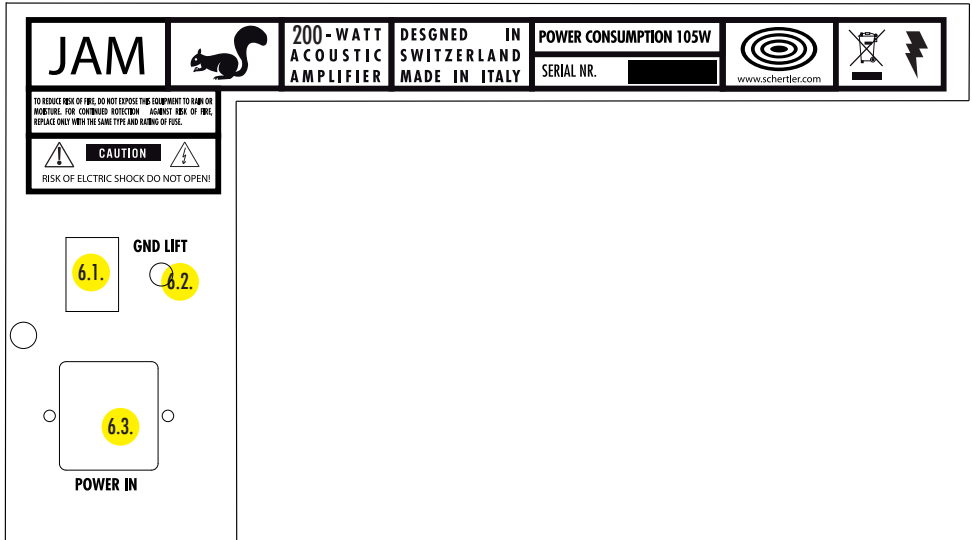
## 5.12. FX Return

Left and Right unbalanced jack plug for FX Return

## 5.13. FX Return volume

This rotary control sets the output level on the FX Return

# 6. REAR PANEL



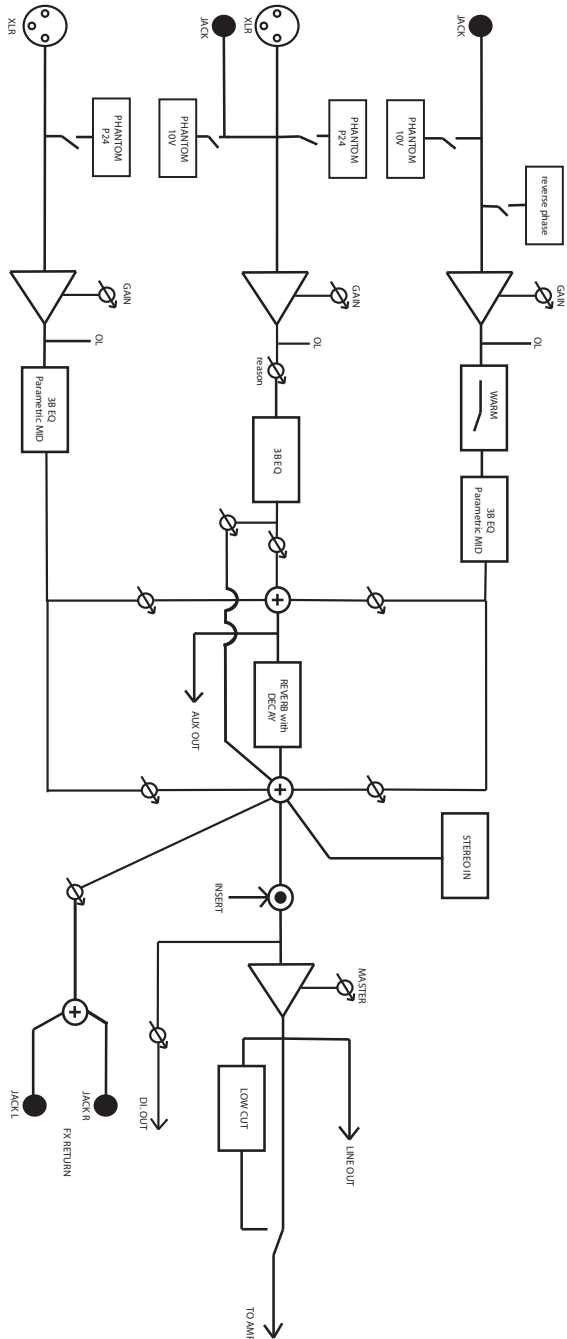
**6.1. POWER ON/OFF**  
System ON/OFF switch.

**6.2. GROUND LIFT**  
This switch connects and disconnects the ground

**6.3. MAIN POWER CONNECTION**  
Connection to mains (230V~/115V~ - 50Hz/60Hz)  
PLEASE ENSURE THE PROPER VOLTAGE AND USE THE ORIGINAL CONNECTION CABLE



# SIGNAL FLOW



# NOTE

# WARNINGS

## PRECAUTIONS

### WARNING

Read carefully this manual and follow these precautions before operating the device

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Keep this manual for possible future needs

Pay attention not to pour liquids onto the device and do not operate in conditions of excessive humidity

Do not install the device close to sources of excessive heat, do not expose it to direct solar radiation and do not position it without protection in a dusty environment

Be sure that the main voltage does not exceed the value indicated on the back panel

Do not use the device if the main cable or the plug aren't in a perfect condition (if necessary, replace it)

If the main cable has to be replaced, the operation must be carried out by qualified personnel. Replace the cable exclusively with one that is an exact substitute

In order to avoid interference, do not install the device close to power transformers, TV sets, RF transmitters, electric motors or any source of electric energy

Do not point microphones against speakers: this could generate annoying whistles (Larsen effect) that cause damage

In order to avoid unpleasant and costly inconveniences, use only original connecting cables

To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC socket

When cleaning, do not use solvents (e.g. acetone or alcohol). These could damage the external finishing and the serigraphy

Do not attempt to service this product. In case of malfunction of any part of the system call the nearest technical assistance centre or a specialized technical centre

For good ventilation, the heat sink should never be covered or obstructed by blankets, sofas or similar furniture. Be sure also to leave sufficient clearance between the heat sink and any other surface

No source of flames, e.g. candles, should be placed on or near the device

The device should not be exposed to water, even in small amounts. No object containing liquids should be placed on or near the device

The device should only be connected to a mains socket outlet equipped with protection ground system

When the device is installed, be sure the mains socket and the plug of the mains cable are easily accessible

# 7. TECHNICAL DESCRIPTION

## 7.1. DESCRIPTION

Box two way, bass reflex

## 7.2. ENCLOSURE SECTION

Construction: Plywood

Weight: 12,2 kg

Dimensions: 32.4 x 29.7 x 38 cm

## 7.3. AMPLIFIED SPEAKER SECTION

Freq. resp.: 50Hz - 30kHz (-3dB)

Sensitivity: 91.9 dB

SPL max: 112.3 dB

## 7.4. TECHNICAL SPECIFICATIONS INPUTS

MIC channel

Connector: XLR balanced

Sensitivity: -52dB

Impedance: 4.7kohm

LINE channel

Connector: JACK 6.3mm unbalanced

Sensitivity: -47dB

Impedance: 820kohm

Stereo IN

Connector: JACK 3.5mm stereo 4.7Kohm

## 7.5. TECHNICAL SPECIFICATIONS OUTPUTS

LINE OUT:

Connector: JACK 6.3mm unbalanced

Level: 0dBu

Impedance: 200ohm

DI OUT

Connector: XLR balanced

Level: -15dBu

Impedance: 200ohm

INSERT

Connector: JACK 6.3mm

## 7.6. INTERNAL EFFECT (digital reverb)

Freq. resp.: 200Hz - 10kHz (-3dB)

Delay time: c.a. 30ms

Reverb time: adjustable to c.a. 3s

## 7.7. COMPONENTS

Woofer: 8"

Tweeter: Dome 1"

Cross-over: Active, 24dB/octave

Amplifier: 150W + 50W

8ohm

0.001% THD (1000Hz)

ALL SCHERTLER® PRODUCTS ARE COVERED BY A LIMITED TWO-YEAR WARRANTY (FROM THE DATE OF PURCHASE) AGAINST MANUFACTURES DEFECTS. DETAILS CAN BE OBTAINED FROM YOUR LOCAL DEALER/REPRESENTATIVE. SCHERTLER SA STRONGLY BELIEVES IN "COMMON SENSE" AND THUS, MISUSE OF OUR PRODUCTS ARE NOT COVERED UNDER RIGHTS OBTAINED THROUGH OUR WARRANTY POLICY OR THAT OF INTERNATIONALLY RECOGNIZED TERMS AND CONDITIONS.

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