



JMC Soundboard Live

User Manuel



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The JMC Soundboard is a full-fledged musical instrument stemming from 21st century Lutherie techniques. It is thus very important to take great care of it, in terms of packaging (resonance spruce is very soft and thus easily marked); humidity (at least 40%); and exposure to sources of heat (avoid placing it near a fireplace, a radiator or positioning it behind a window in direct sunlight).

The JMC Soundboard Live is a professional speaker that enhances the sound quality of voices, instruments and even music produced. It performs best in places such as conference or concert halls, churches and theatres. It can be set up as a fixed installation, attached to a wall or left mobile on a standard pedestal. Depending on its use, the JMC Soundboard Live can be combined with a subwoofer.

The JMC Soundboard Live uses an unknown technique combining the vibration of a flat membrane with traditional lutherie techniques. Instead of a diaphragm that moves back and forth like a piston, the board vibrates microscopically across the entire surface. Thanks to the excellent dispersion characteristics of this technology, speakers thus endowed produce a remarkably balanced, equal sound throughout the room, leaving listeners free to listen wherever they wish.

The membrane of the JMC Soundboard Live is made of resonance spruce, the wood used for violins and pianos, combined with a honeycomb of fibres that is both very light and very tough, like resonance spruce itself, and which enables top performance. While it is relatively delicate and marks easily on the surface, it is nonetheless very resilient to wear thanks to this technology resulting from composite materials. Aside from being extremely light, it is also stable in conditions with variable, but controlled, humidity or temperature, in other words, a minimum of 15% humidity in a minimum temperature of 10 degrees Celsius. The membrane can however tolerate exceeding these limits for short periods. Nonetheless, the suspension of the actuators will not withstand extreme cold and will become brittle. Do not use the JMC Soundboard Live under these circumstances, due to the considerable risk of potential damage!

The JMC Soundboard Live offers a very useful alternative, enabling enhanced control of issues linked to certain sound applications:

- The installation is greatly simplified thanks to this audio source using either a single source, or a vastly reduced number of sources.
- A single low volume speaker pervades the entire sound space in a completely homogenous manner, both in terms of volume and the frequency response band, which is transmitted through the flat wave generated by the JMC Soundboard Live.
- Reverberation phenomena are nearly eliminated due to the sound reverberating with little power against the walls, and there are therefore also few echoes resulting in better quality listening, thanks to the low volume emission of the JMC Soundboard Live.
- There is nearly no sound interference phenomenon thanks to a low volume emission combined with a large emission surface area. The loop that produces the phenomenon is unlikely to be created, as the microphone receives very little energy in return.
- There is no dephasing thanks to the nature of the audio source of the JMC Soundboard Live.
- The intelligibility of the address is enhanced thanks to the presence of the sound generated by the JMC Soundboard Live.

Providing sound in churches is, for example, the most difficult of all, due to natural reverberations, as well as dephasing and noise interference issues. The JMC Soundboard Live provides a simple solution for avoiding issues of this nature..

Amplifications and presets

The JMC Soundboard Live is activated by a Powersoft amplification that is connected to 220 Volts. It is mono and must be connected to a mixing console in order for it to be operated, like any active sound system. Four presets driven by DSP drive the JMC Soundboard Live.

Presets



- | | | |
|----|---|---------------------------|
| 4 | 0 | Vox |
| 3. | 0 | Fullrange |
| 2. | 0 | With Sub, more High tones |
| 1. | 0 | With Sub |

Preset 4 Vox is designed to enhance the intelligibility of speech solely.

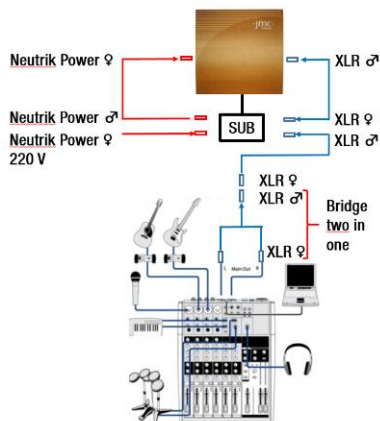
The **Preset 3** Fullrange is designed for use without a subwoofer. As the JMC Soundboard Live also produces low frequencies, the acoustic pressure is less effective than with a subwoofer.

Presets 1 with Sub and 2 with Sub, more High tones are designed for use with a subwoofer. When used with a subwoofer the SB Live produces the greatest acoustic pressure. The cut-off frequency is set at around 140 Hertz. **Preset 2** with Sub, more High tones provides greater sound clarity. Select one or other of the two presets according to the environment in which it is being used.

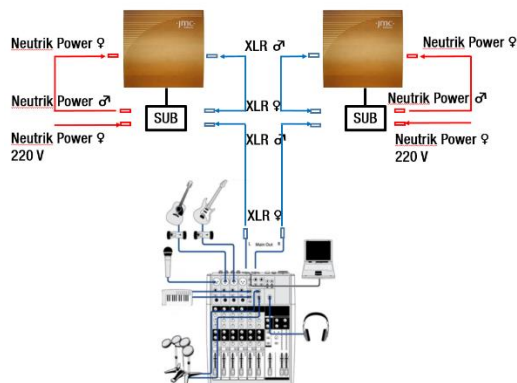
Connections

The JMC Soundboard must be connected to a mixing console. The exact connection depends on use

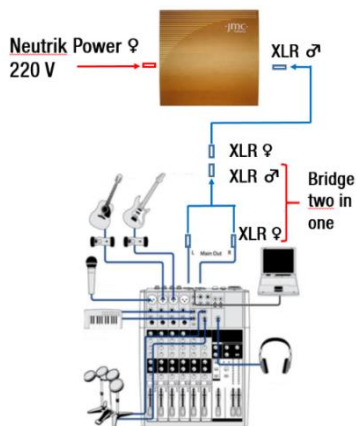
Preset 1 and 2 (mono)



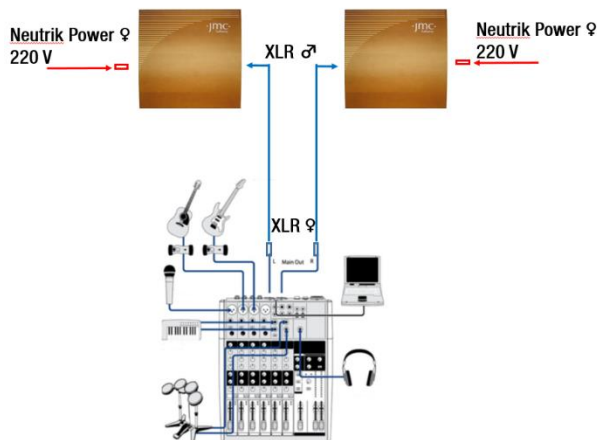
Preset 1 and 2 (stéréo)



Preset 3 and 4 (mono)



Preset 3 and 4 (stéréo)



Notes on performance

One must consider the performance of the JMC Soundboard Live from a completely new angle. The shape of the audio wave emitted is not punctual, but instead flat. The positive outcome of this is a two-fold reduction of power loss due to distance. With a punctual source, 6 dB are lost with every doubling of distance. With the JMC Soundboard Live, the loss is only 3 dB. It is therefore not necessary to have a very powerful initial sound to provide sound for a vast area.

Limit values before triggering heat

White noise	1 metre	98 dBA
	2 metres	95 dBA
	4 metres	92 dBA

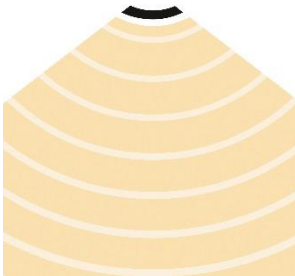
These measurements taken with continuous white noise are not representative of the JMC Soundboard Live's ability to handle dynamics. It has been measured with far higher values (to the tune of 11 dBA) in instantly released Spl power spikes.

The amplifier and the actuators have the benefit of heat protection that activates them in the event of over-burdening. Nonetheless, one should not be put off by performance that might appear modest, because in direct comparison with a punctual sound source of 11 dBA from a metre away (see table), the results show that from 16 metres and upwards, the sound wave from the JMC Soundboard Live is more pervasive than that of a punctual source. This is with the presence of far more effective high frequencies.

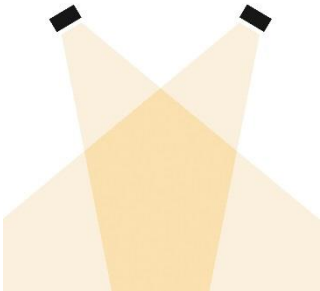
Comparison

Distance (in metres)	JMC Soundboard Live	Punctual Source
1	98 dBA	110 dBA
2	95 dBA	104 dBA
4	92 dBA	98 dBA
8	89 dBA	92 dBA
16	86 dBA	86 dBA
32	83 dBA	80 dBA

Onde du Soundboard Live JMC

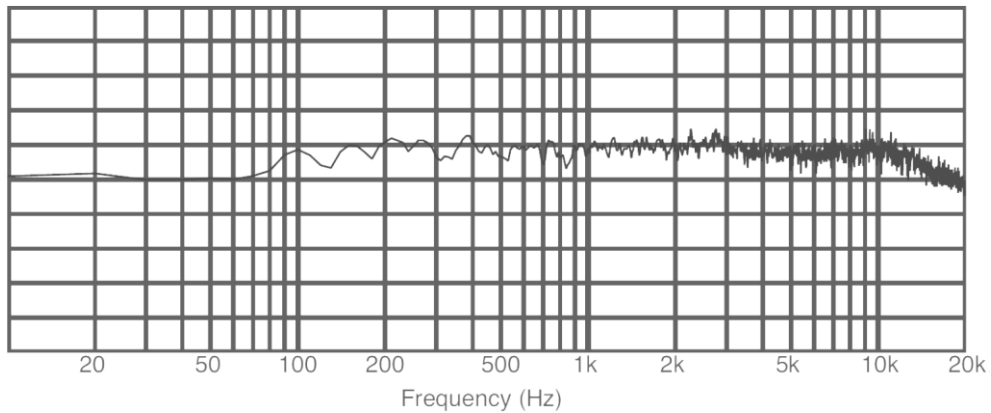


Onde de deux haut-parleurs

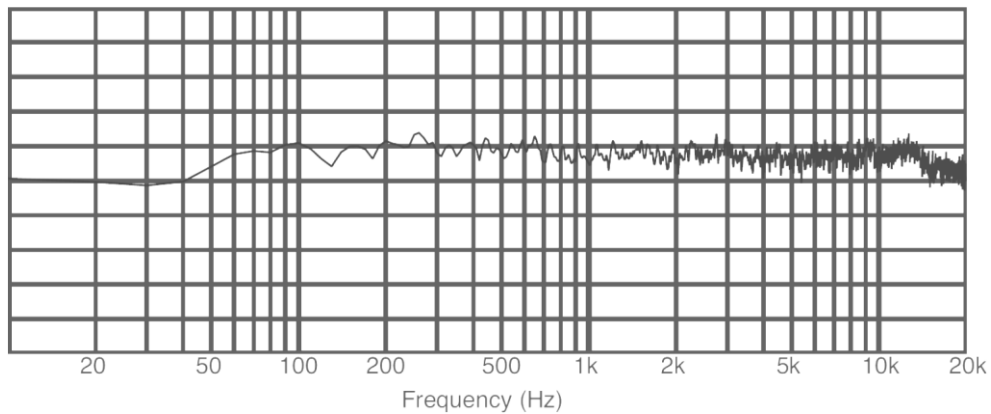


Frequency response measurement curve from 3 metres

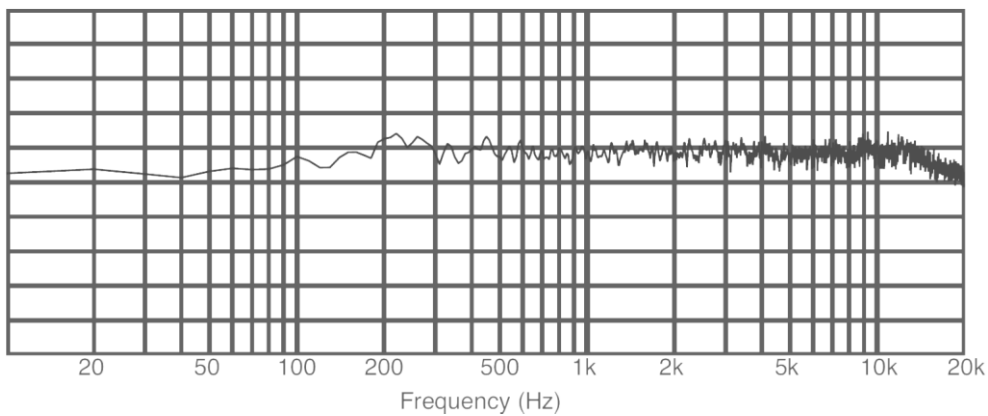
White noise Preset 4, Voice



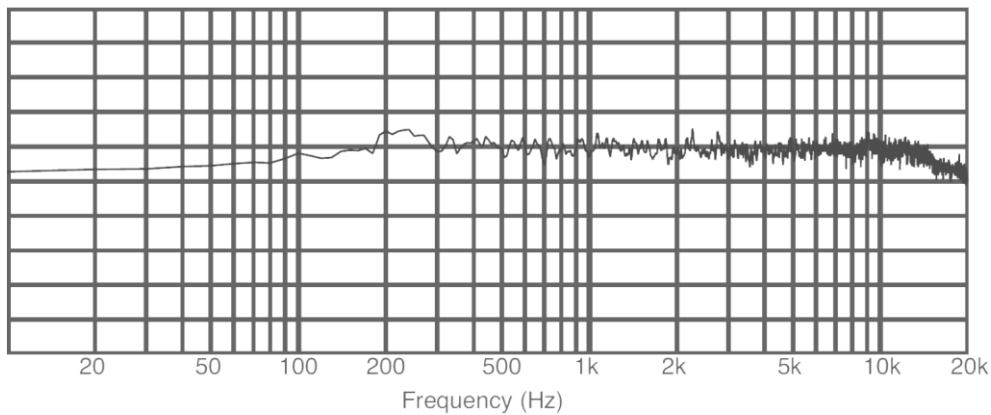
White noise Preset 3, Fullrange



White noise Preset 2



White noise Preset 1



The membrane of this speaker has been crafted from over 350-year resonance spruce using lutherie techniques. It is glued and varnished with varnishes that do not perturb the vibration. It is important to care for it like a musical instrument.

Cleaning and maintenance

It is important to check the humidity rate in the room. We advise you to maintain a minimum 40% humidity rate. To clean it, we suggest using a soft damp cloth if necessary. Do not use cleaning products (so as to keep the natural satin-finish effect) and definitely not detergents (which may damage the varnish). Be careful not to knock it with any hard materials. While such impacts should not disturb the sound, they could easily leave marks and it is virtually impossible to remove these marks.



Technical specifications

Type of loudspeakers	Plain and mono
Built-in amplifier	Powersoft 2 times 1,000 Watts with 4 presets: Presets 1 and 2 in association with a subwoofer Preset 3 full range, preset 4 for voice only
Max level at 1 metre	98 dBA with continuous white noise
Max spike level at 1 metre	110 dBA when spiking
Wave shape	Hemi-directional, absorbed by a flat wave
Attenuation	3 dB per doubling of the distance
Bandwidth	50 to 20,000 Hz in full range (see current curves)
Mount	Standard insert for 35 mm tube
Dimensions	890 mm x 890 mm x 165 mm
Weight	25 kg
Minimum operating temperature	10 degrees Celsius
Humidity	minimum 15 %
Power supply	Neutrik Powercon plugs (NAC3FCA)
Contact connections	Standard XLR plugs
Settings	A volume button and preset selection button

Variations possible depending on models..

Warranty

JMC Lutherie SA guarantees the quality of its products. The warranty may only be issued by JMC or by its official distribution network. It is valid for two years as of the date of purchase, and only for JMC instruments and Soundboards accompanied by the original invoice. Accessories are covered by their respective brand or supplier guarantees. The warranty does not cover normal wear such as natural ageing (scratches or fading), damage resulting from improper maintenance, nor damage due to indirect causes or negligence. The customer must inform JMC Lutherie SA in writing and in detail of any potential hidden flaw within 15 days of taking delivery of the goods. If such a report is not received, the product is considered to be exempt from any such flaws.

Delivery and return

The customer undertakes to check the goods immediately upon taking receipt of them. If any damage or irregularities are observed, he must mention them on the shipment documents and inform the forwarding agent. JMC must be informed in writing within 5 days. Beyond this deadline, the customer loses any right to reimbursement. Import taxes are payable by the customer, who undertakes to settle them. JMC creations are unique because they are made from natural wood, which means that certain slight differences (in size or appearance) between various items may occur due to the wood fibre structure. If no prior arrangement has been made, the cost of any returns must be covered by the customer and the original packaging (of which an empty version may be pre-ordered) to ensure appropriate protection.

Applicable law

Swiss law. The Vienna Convention is in no way applicable. The place of jurisdiction is Le Chenit, Vallée de Joux, Switzerland.

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JMC Lutherie SA

Route de France 6
CH - 1348 Le Brassus
Switzerland

T +41 21 845 56 10
info@jmclutherie.com
www.jmclutherie.com

