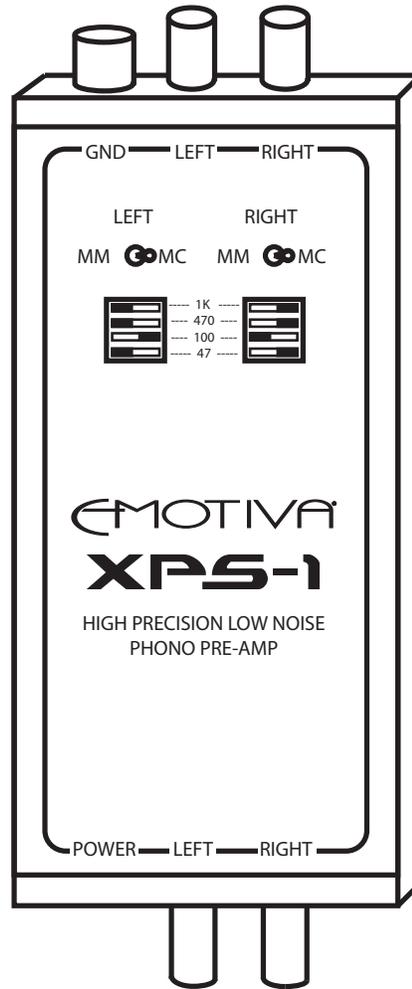


XPS-1

EMOTIVA®



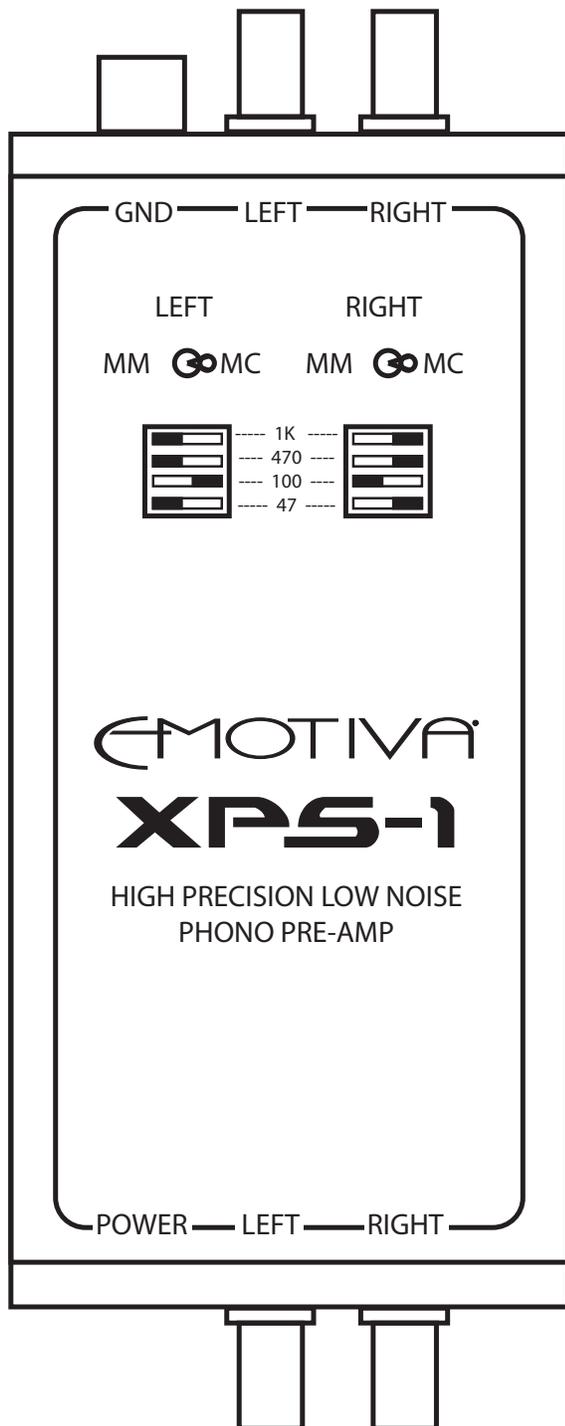
**XPS-1**

High Precision Low Noise  
Phono Preamp



# Emotiva XPS-1 - Installation and Configuration

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The Emotiva XPS-1 is a high precision low noise modular phono preamp, which is ideal for interfacing a turntable with any piece of high quality audio equipment that has an available line level analog input.

The XSP-1 was designed to deliver excellent sound from either a Moving Magnet (MM) or Moving Coil (MC) type phono cartridge. Close adherence to the standard RIAA curve assures accurate performance, and multiple selectable input impedances are offered for optimum matching to a wide variety of different moving coil cartridges.

The all metal construction and gold plated solid brass RCA connectors ensure reliable connections, and offer exceptional protection from interference and noise.

The XSP-1 is powered by a highly regulated external AC power supply, which delivers excellent isolation from power line noise. The individual operating voltages required by the XSP-1 are then derived by an internal switching level converter, which operates at a very high frequency to avoid generating noise in the audio band. This topology results in all of the benefits of a regulated power supply (tight bass and excellent imaging) and a very low noise floor.

**Note: The XPS-1 is specifically designed to be used with moving coil and moving magnet phono cartridges. It should NOT be used with other input devices. DO NOT connect a line level device, a turntable with a built-in phono preamp, a microphone, or anything with a digital output, to the inputs of the XPS-1.**

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## Connecting the XPS-1

You should connect the XPS-1 to your turntable using good quality, well shielded unbalanced (RCA) audio cables. Some turntables include permanently attached cables, which should work fine. The important thing to remember is that a phono cartridge puts out a low level audio signal, which is very sensitive to noise and interference. If your turntable provides the option of selecting your own interconnects, then there are a few guidelines you should follow for best results:

1) Place the XPS-1 as close to the turntable as is practical. (We don't specifically recommend mounting or placing the XPS-1 on the turntable itself, but positioning it within a few feet is a good idea.

2) The interconnects between the XPS-1 and turntable should be kept as short as possible. If your turntable is located some distance from your other equipment, use short interconnects between the XPS-1 and turntable, and longer interconnects between the XPS-1 and your other equipment.

3) Use well shielded high quality interconnects. The capacitance of the interconnects between the cartridge and the XPS-1 will affect the way your turntable sounds. Many cartridge makers (especially MM cartridges) recommend cables with low capacitance, while some specifically recommend the opposite. We suggest that you choose low capacitance cables unless the maker of your cartridge says otherwise. Choosing an interconnect to go between your XPS-1 and your preamp, pre / pro, or receiver is less critical, and any high quality interconnect should provide excellent sound.

4) Avoid running power cables or speaker wires near the interconnects going to your turntable. If interconnects must cross other cables, they should do so at right angles.

5) If your turntable provides a ground wire, connect it to the ground lug on the XPS-1 (next to the input connectors).

6) Position your turntable and the XPS-1 as far as possible from major noise sources (microwave ovens, air conditioners, PCs, cordless phones, etc.) Especially avoid running interconnects to and from the XPS-1 near such devices.

Plug the XPS-1 AC power supply into a convenient AC receptacle and connect the power lead to the Power input on the XPS-1.

If, after connecting your turntable, you experience hum or noise problems, the most likely culprit will be the interconnects between the turntable and the preamp. See the troubleshooting section for some suggestions to address such problems.

***WARNING: The XPS-1 draws very little power, and is intended to be left powered continuously (it doesn't have an Off switch). We strongly suggest that you plug the XPS-1 into an UNSWITCHED outlet. The XPS-1 may generate a very loud transient at its output when power is connected or disconnected, so you should always make sure that any equipment connected to the output of the XPS-1 is turned off (or all the way down) BEFORE connecting or disconnecting power to the XPS-1. Failure to do so could damage your speakers.***

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## Configuring the XPS-1

**Note: The XPS-1 may generate a loud click or pop if you change switch settings while it's connected and powered on. You should always exercise caution if changing switch settings with the power on.**

The XPS-1 has two configuration settings.

The two toggle switches select between moving coil and moving magnet cartridges. Moving coil cartridges typically have much lower output, and so require the XPS-1 to apply more gain. These switches must both be set to the correct setting for your particular cartridge.

**Note: Both switches should be set the same. To choose Moving Coil, set both to the RIGHT (MC); to choose Moving Magnet, set both to the LEFT (MM).**

**Note: Some Moving Coil cartridges have very high output levels, and their manufacturers recommend using a Moving Magnet setting. This may also be required if you use a transformer with your MC cartridge. Always follow manufacturer's recommendations.**

If you choose the MC (moving coil) setting, you will also be able to configure the resistive load seen by the cartridge. This setting will change the way the cartridge sounds, and most manufacturers will offer advice on the best value to choose. (Feel free to change this value if you prefer a different sound; it won't damage your cartridge.) To choose a particular value of resistive load, set the associated switch to On.

**Note: The switches for both channels should be set the same, and only one load selector switch per channel should be activated at a time. To choose load values, set each switch TOWARD THE CENTER (towards the writing that shows the value).**

**Note: Load selector switches are only active in MC (moving coil) mode.**

## Specifications

### Input Impedance:

MM: 47k Ohms; MC: user selectable between 47, 100, 470, 1k Ohms

### Gain:

MM: 40 dB; MC: 60 dB

### Frequency Response:

MM: RIAA + / - 0.12 dB, 20 Hz - 20 kHz

MC: RIAA + / - 0.25 dB, 20 Hz - 20 kHz

### Signal to Noise Ratio (S/N; A weighted):

MM: > 96 dB; MC: > 79 dB

### THD:

MM: <0.0075 % @ 1 kHz; < 0.02%, 20 Hz - 20 kHz

MC: <0.006 % @ 1 kHz; < 0.05%, 20 Hz - 20 kHz

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# Emotiva XPS-1 - Installation and Configuration

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## Troubleshooting

### ***If you don't get any sound at all....***

Make sure that the blue Power LED is lit.

Make sure that the AC adapter is attached to the XPS-1 and connected to a live outlet.

### ***If you get steady hum or noise....***

Phono cartridges put out very small signals. While the XPS-1 is quite well shielded (compared to most phono preamps), it will still amplify noise that is picked up by the turntable, the cartridge, and the interconnect cables. Placement and connection of a turntable for best performance requires more care than with most line-level components.

Check the wires going to your turntable.

Make sure that your cables and turntable aren't near any power cables.

If your turntable has a ground cable, attach it to the ground terminal on the XPS-1.

Try relocating your turntable or rearranging the connecting cables;

especially ensure that the interconnects are not run close to the turntable's power cable.

### ***If you get noises or "birdies" that come and go....***

This sort of noise is usually interference from nearby appliances, especially digital devices like computers, cordless phones and cell phones, CCF lamps, TVs, air conditioners, and microwave ovens. This interference can come through the power lines or through the air.

Make sure your XPS-1 and your turntable aren't located close to sources of interference.

Locate the XPS-1 near your turntable and use short interconnects between them.

Try plugging your turntable and / or the XPS-1 into a different outlet.

Try using a power conditioner (like our excellent CMX-2).

### ***If the sound is overloaded or distorted....***

If you're using a moving magnet (MM) cartridge, make sure both switches are set to MM.

Some MC cartridges also have a high output and require that the switches be set to MM.

### ***If the sound level is very low....***

If you're using a moving coil (MC) cartridge, make sure both switches are set to MC.

### ***If the channels aren't balanced or sound different from each other....***

The MM / MC switches and the cartridge impedance switches (for MC) on the XPS-1 are separate for each channel. Make sure the switches for both channels are set the same.

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