EHRLUND
ACOUSTIC PICKUP + PREAMPLIFIER
MANUAL | ENG

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The pickup is connected to the preamp at the INPUT jack socket. The mixer/amplifier is connected to the OUTPUT jack socket. Note that the preamp automatically switches on when a connection is made in the OUTPUT jack socket.

EAP SYSTEM QUICKSTART

1. Fix the pickup to the instrument using the adhesive supplied. Shape the adhesive into small balls about 3-4 mm in diameter and attach these to the corners of the pickup. Then stick the pickup down where you want it on the instrument. For more information, see page 6.
2. Connect the pickup to the input on the preamp.
3. Connect the output from the preamp to the amplifier/mixer.
4. The volume control on the preamp is normally set to maximum. The volume is usually controlled by the connected amplifier/mixer.
5. If you think the sound is strange, for example due to feedback, this may mean that the phase switch needs to be changed.
6. You may need to adjust the High/Low switch, depending on the gain at subsequent stages. For example, if you feel that the sound is clipped, you can try setting this switch to “Low”.
7. When the preamp is not in use, disconnect the cable between the preamp and the mixer/amplifier. The “output” jack acts as the switch to turn the preamp on and off. When you connect a cable to “Output”, the preamp switches on automatically.

TECHNICAL SPECIFICATIONS PICKUP

Length	28 mm
Width	25 mm
Height	5 mm
Weight	4 g
Length of cable	150 cm
Weight with cable and connector	42 g

EHRLUND ACOUSTIC PICKUP

THE EHRLUND ACOUSTIC PICKUP (EAP) is an ultra-linear contact microphone for instruments with an acoustic sound box, such as the guitar, violin, double bass and ethnic instruments. It is made entirely in Sweden and is based on the same knowledge of sound recording as Ehrlund's other products.

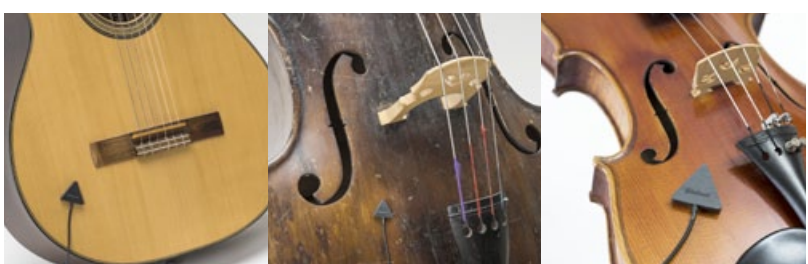
A linear microphone means that the pickup reproduces a flat frequency response. The pickup captures the vibrations of the acoustic instrument, enabling the microphone to provide excellent separation, even in what are normally "impossible" conditions, where musicians playing together generate high noise levels on their respective instruments. In testing, very good results were achieved, for example, in mismatched combinations, such as heavy metal music and the cello.

The EAP is sold separately or in a set, EAP SYSTEM, together with the PREAMP.

ATTACHING THE PICKUP

The EAP can be moved easily between different instruments. The pickup is easy to attach using adhesive on the sound box. The pickup can also be attached to the inside of the instrument via the sound hole.

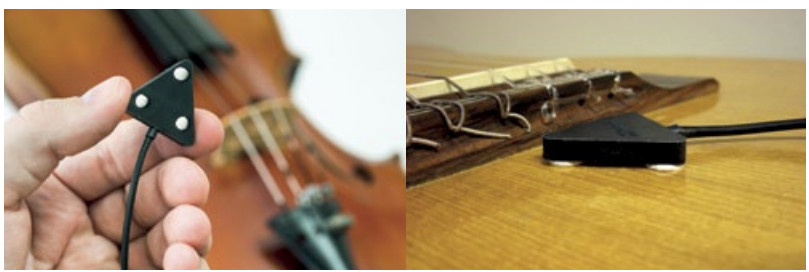
Each instrument is unique, which is why the positioning of the pickup needs to be tested in advance. The first time you do this, it can take some time before you find the best position. We know from experience that it is worth the time it takes to find the ideal position for the pickup, so that the people in front of you get a musical experience that is the same as if you were playing without amplification. Some musicians have made a cardboard template to fit against part of the instrument, which makes it easier to attach the pickup in the same place for every performance.



Some examples of positions that usually work really well.

The adhesive needs to be shaped into small balls about 3-4 mm in diameter and attached to the corners of the pickup. Never attach adhesive to the middle of the pickup. Then stick the pickup down carefully on the instrument so that there is about 2 mm of space between the pickup and the instrument.

The adhesive used to attach the pickup is sometimes queried. However, violinists who have been using the pickup for many years say that they cannot see any marks on their instruments. Use only the white adhesive that is supplied with the pickup. Other types of grey or green adhesive may leave marks. The recommended adhesive is Faber-Castell TACK-IT White, art. no. 18 70 91-60.



The adhesive needs to be shaped into small balls about 3-4 mm in diameter and attached to the corners of the pickup. Important: Never attach adhesive to the middle of the pickup.

TECHNICAL SPECIFICATIONS PREAMP

Length	92 mm
Width	60 mm
Height	37 mm
Weight	150 g
Battery	9V/6LR61/6LF22/MN1604
Power consumption	0,5 mA
Minimum supply voltage	7,2 V

EHRLUND PREAMPLIFIER

THE EHRLUND PREAMP has extremely low self-noise and low power consumption. It is optimised for use with the Ehrlund EAP pickup. It is able to operate with most existing accessories, such as foot pedals, effects pedals and transformer-equipped DI boxes.

The preamp is fitted with a belt clip and can easily be attached to the waistband. It is powered by a 9 V battery, has a long operating time of at least 600 hours and switches off when the output cable is disconnected.

The preamp can be adjusted for volume control, basic amplification and phase adjustment to avoid feedback during live performance.

Like other Ehrlund products, the preamp is developed and manufactured in Sweden.

FEATURES PREAMP

Input	6,3 mm tele jack
Output	6,3 mm tele jack. The Preamp turns itself off when the output cable is disconnected.
Phase switch	The unit has a phase switch (0-180°) which is used to avoid feedback during live performance.
High/Low	The unit can be adjusted for high/low input from the microphone.

PHASE SWITCHING

It should also be remembered that the switch for phase can make a big difference, because the speaker can work with or against the instrument's sound box. Use the switch to get the best possible sound. This is particularly useful to bear in mind when playing at high volume in small venues.

If the sound is "tinny", you can try to move the switch to its other position.

OPERATION HIGH/LOW

The High/Low switch is used when you find a point on the instrument where you get a good, strong signal. The place where the sound is loudest is not normally the point on the instrument where you get the best sound. The switch determines only the internal gain of the preamp; it has no other effect on the sound.

There have been occasions when a musician has done a sound check with the switch in the High position and everything has sounded good. During the recording, the musician has then played so loud that the preamp saturated, and the sound gets distorted due to clipping. When the switch was then set to the Low position, everything sounded good again. This is something you just have to experiment with.

VOLUME CONTROL

The Preamp has a fairly low output. The volume control is usually set to maximum output, and is only used if, for some reason, you want to limit the output. The output is sufficient for all standard line inputs on the mixing board. If you try to connect the preamp directly to a power amplifier, the input may be too low to operate the amplifier.

REPLACING THE BATTERY

1. Remove the two nuts on the INPUT/OUTPUT side.
2. Unscrew the two screws on the volume control side.
3. Place your fingers on Input and Output and press.

4. The Preamp will open on the volume control side. Carefully pull away the cover until you reach the battery. You can now replace the battery.
5. If you pull the entire circuit board from the case, it is important that the card is replaced in the correct slots in the case.

THINGS TO BEAR IN MIND

• Cable microphonics are one of the drawbacks of the pickup system, regardless of brand. These microphonics are a mechanical property of the cable. If you set the cable in motion, for example by hitting it or through other strong movement, you induce mechanical waves, which propagate through the cable to the pickup. As the pickup is a microphone that is sensitive to mechanical vibrations, this wave will be converted to an electrical signal that interferes with what you want to hear. To counteract this, you can make a loop (30-50 mm diameter) on the cable, as close to the pickup as possible. Then attach the cable using a soft material where it leaves the instrument.

• A straight cable will always generate more noise than a coiled cable. You can easily check this by pinching the cable between your thumb and forefinger and then sliding your fingers along the cable. Try it on both a straight cable and a coiled cable and see the difference.

• Some musicians fit a contact and connect the pickup directly to a mixer or other device. It is possible to do this, but the result may not be as good because the components have different impedances.

Connect the pickup to a preamp with a high impedance input. The EAP is designed to work optimally with the EHRLUND PREAMP.

• Placing a pickup on an instrument makes the entire system act as a microphone. This means that the pickup may also capture other vibrations, such as sound from other instruments and from loud-speakers. The sensitivity to these sounds will be significantly lower, however, than with a normal microphone. The sound from strikes and impacts on your own instrument will also be captured by the EAP. Handle your instrument carefully.

• If you connect the EAP to a preamp from another manufacturer, you may get unexpected effects, because other pre-amplifiers often contain fixed filters to improve the frequency response from a certain pickup. The Ehrlund Preamp does not have any filters; it is a pure low-noise amplifier.

• The preamp can also be used for electric guitars. In this case connect it directly to the mixing board.

If you have any questions, tips or comments, please contact **support@ehrlund.se**
For warranty details see **www.ehrlund.se**

A cleaner sound.

The very best music experiences have something in common. Be it a warm guitar, a jazzy voice, a tingling piano piece, total presence. Every nuance becomes suddenly important. You listen, experience, and want to stay in the moment.

A triangular membrane is the secret behind the clean sound of an Ehrlund Microphone. The technology is based on knowledge of the properties of sound that dates back thousands of years. Just as a circular shape gives sound resonance, a triangle muffles resonances fast. An association that no microphone company before us has picked up on.

The end result is a sound almost free from background noise and disturbing resonances. A sound where even the tiniest of nuances of voice and instrument can come through.

This creates a music experience that feels incredibly intimate, tight and genuine. Music that gets under your skin. The way music is supposed to sound.

Ehrlund

www.ehrlund.se