

Field Amp

User Manual



Low-Noise Pre-Amp specialised
in Contact Mics and Hi-Z Signals

Version 1v2r0
Manual 1v0r0

LeafAudio 

1. Intro

What is Field Amp?

Field Amp is our our pre-amp solution for the world of body sound transmission: recording the world with contact microphones and geophones.

After releasing our Microphonic Soundbox we quickly noticed that we hit a blind spot. Many sound designers praised the clean and noise-free amplification of it, but had not necessarily use for the Soundbox itself.

We heard you and developed a product on its own - the Field Amp. When you want the Soundbox pre-amp without the actual box, Field Amp will be your new best friend! It's perfect for sound design work or musical applications in the studio, field recording, sound installations and possibly much more.

Quality amplification & power management circuitry

No relevant noise or beeping can be heard or seen in the spectrum, not even above the hearing range, which would come into focus later during sound manipulation processes. You can record with high sampling rates, transpose the audio by a lot and enjoy your pure sound. Just the clear, pristine audio you want to capture with your contact microphones. Ok, technically there is noise, like every pre-amp creates noise, sure. But compared to others it's performing really really good.

One relevant point is the amplifier itself - it's just good. The other one is the power management circuit. Many devices introduce „dirt“ within or above our human hearing range caused by poor power supplies or bad power management circuits. We worked on that problem early while developing our Microphonic Soundbox and found a clever solution, so you don't have to deal with that and have all the freedom to manipulate the signal later - no surprises will show up, only the sound that you wanted to record.

Optimised for travelling

The small unit is fully portable, light, offers many mounting possibilities. A professional case is included, which also can carry your contact mics, batteries and cables.

Body sound transmission vs. airborne sound

We are used to listen to the world from our own human hearing perspective. Sound travels through air before it hits the diaphragm of our ear or a microphone. By using contact microphones you switch the hearing perspective from listening to the outside of materials to listening from within materials. This shift is a massive trick for your sound design, which you should try! There is a whole world of sound that normally keeps hidden from our ears.

Optimised for Hi-Z signals like contact mics and geophones

If you tried to record instruments or more experimental sound objects with **contact microphones**, you might have experienced a bad sound quality, even with good recorders. The reason might not only be a bad quality contact mic (also „professional“ products often sound shabby). Also a mismatch of the impedance between contact mic and amp might be the reason. Often times a drop in high frequencies or bass, or just noisy signal quality might be the result. Also, in such cases, every meter of cable between contact mic and amp will make it worse. The minimum you could do then is to use an impedance converter between contact mic and, for example, your mixing desk. Generally you can try **contact mics** with our pre-amp, as well as **geophones**, **hydrophones**, or **guitar pickups**.

The gate is open!

We went some steps further and created an impedance matched and low-noise pre-amp for the contact mics which we use in our products, and it will also work for a wide range of other mics as well. Imagine the input of the amp as a wide open entry for your precious audio, where the actual signal can float easily into it and does not have to push against the input. In the amplifier itself it is then converted to a very strong signal, so a few meters of audio cable behind the output is absolutely no problem anymore. **But, as always, you should keep the cable length on the input side as short as possible.**

2. Using the Field Amp

Power

The unit runs on 9 Volts. You can either use a 9V battery, a 9V DC power supply (barrel connector 5,5mm/2,1mm, center positive) or use a powerbank with the included USB-C to barrel adapter cable (power delivery required). So you have maximum flexibility, even when you are recording in the field.

Adjusting the gain

Field Amp delivers 50x adjustable low-noise gain (~34dB). Plug in your contact mic and adjust the gain to your taste. (Gain is the amplification, not the output volume!)

Input

We use 3,5mm (1/8") connectors for in- and outputs to keep the unit small, light and portable. Usually contact mics are unsymmetrical, that's why we use mono connectors. But here is something you should know. **When you want to use geophones, or generally sources with symmetrical or unsymmetrical XLR pinout, please read the following!**

All geophones we have tried and opened are actually unsymmetrical, even if they have an XLR connector. For unsymm. XLR-to-jack connections there are [defined specs](#) to find on the web. Sounds all more complicated than it is! We offer an additional XLR female to jack (3,5mm / 1/8" mono) adaptor, if you need that. Check Exploding Shed (EU only shipping) or any of our other distributors if they carry it. See distributor list on the LeafAudio website. **We tried LOM geophones in combination with the adaptor and the Field Amp. Works like a charm.**

Amp specific interesting note: Generally make sure to connect the adaptor on the input side to the geophone (or other devices) first and then connect it to the Field Amp. When you insert an adaptor cable or a cable without microphone, with this type of amp, it will act as an antenna and pickup noise and hum while the input is „floating“. Sounds hefty, but nothing is broken then, just keep calm! This will be no issue while a) nothing is connected or b) a contact mic or geophone is inserted.

Output

The same signal goes to both outputs, but the second one is attenuated by 12dB. You can use this one for very sensitive recording devices connected to Field Amp or to record in stereo on your recorder using both channels to have one safety channel in case that your recorder clips.

Also for the output we offer additional adaptors 1) from 3,5mm / 1/8" mono jack to XLR male and 2) from 3,5mm / 1/8" mono jack to 6,3mm / 1/4" mono jack. Nothing fancy, but a bit rare, you can also make your own.

Mounting possibilities

Use the standoffs between top and bottom for mounting of your choice. Alternatively use the 1/4"-UNC mount on top and bottom for using camera tripods, microphone bars etc. There's a wide range of adaptors available from stores, for example from 3/8" microphone stand to 1/4". Many possibilities are available here.

3. Legal stuff

Specifications

Mechanical

Size: 120 x 120 x 34 mm (4,7" x 4,7" x 1,3")
Weight: 192 g (410 g w. case & USB-C cable)

Input & Output

1x mono input 3,5 mm (1/8")
2x mono output 3,5 mm (1/8") [one is -12dB]

Power

- 9 V battery
- 9 V DC 5,5mm/2,1mm barrel, center positive
- USC-C to barrel cable included for usage with power banks or USB-C power supplies (power delivery required)

Intended use and safety instructions

The unit is intended to be used in dry places within a temperature range between 10°C/50°F and 70°C/158°F.

Generally it is ment to be used with high impedance signals like from contact microphones, piezos, geophones. You can also try hydrophones or guitar pickups.

Warranty terms

Tech Creation Lab Leipzig UG warrants this product to be free of defects in material or workmanship at the time of shipment for a period from one year from the date of purchase. During that period, any malfunctions which happen while normal use will be repaired or

serviced. The warranty does not cover any problems resulting from damages during shipping, incorrect use, wrong power supply or polarity, the use in improper working environment, abusive treatment or any other obvious user-inflicted fault.

Return policy

The device intended for repair or replacement under warranty needs to be shipped in the original packaging only! The packaging is part of the product, so keep it. Also a filled out RMA form must be included (email us, we'll send it). We cannot take any responsibility for transport damages. Before you send us anything, please

contact support@exploding-shed.com. Parcels that are not sufficiently franked or sent without request will be rejected and sent back. If you bought it from a distributor/reseller outside EU and not from Exploding Shed directly, please contact the distributor/reseller first.

Disposal

For private households: Information on disposal for users of WEEE

This symbol (figure on the right) on the product(s) and / or accompanying documents means that used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge. Alternatively, in some countries, you may be able to return your products to your local retailer upon purchase of an equivalent new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

For professional users in the European Union

If you wish to discard electrical and electronic equipment (EEE), please contact your dealer or supplier for further information.

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Main distributor in the EU is: www.exploding-shed.com

For worldwide distributors please check LeafAudio or Exploding Shed websites.

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