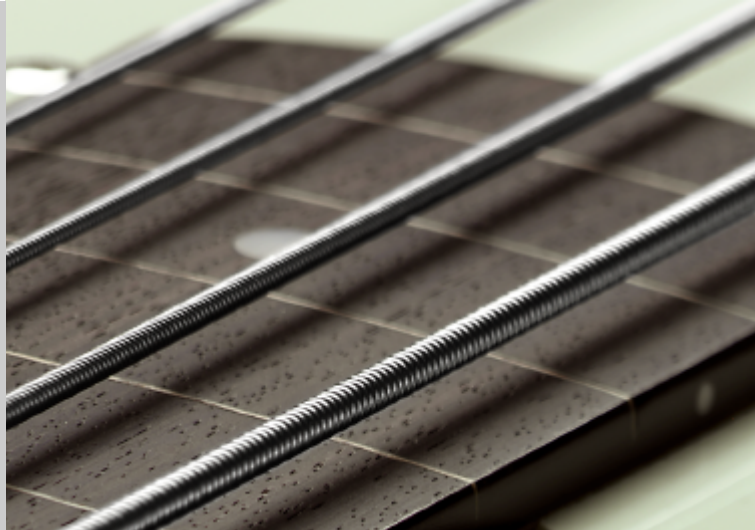


bottom line

amp one

Operating Instructions (Preliminary)



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1. Introduction

Welcome to AER. We took our time - and it therefore gives us all the more pleasure that you have chosen the amp one.

You have chosen a professional, compact and high-performance amplifier, which has been specially developed for the amplification of electric basses.

Here, when we say authentic tone, we are referring not only to the instrument but rather to the entire signal chain. The instrument, pick-up, cable, preamp, power amplifier and loudspeakers generate what you consider to be 'your tone'. We hope that the amp one will make a significant contribution to this and wish you every pleasure in using it.

2. Precautionary Measures

When you use your amp one, always take basic safety precautions in order to minimise the risk of injury by fire or electric shock.

- Read and check that you have understood all of the information in these operating instructions.
- Observe all warnings, instructions and additional text that is displayed on the amp one.
- Always use an earthed power connection with the correct mains voltage. If in doubt as to whether the connection is earthed, have it checked by a qualified expert.
- Do not install and use your amp one in the immediate vicinity of water or if you yourself are wet.
- Operate you amp one in a protected location, so nobody can step on cables or trip over them and damage them.
- Do not install your amp one near to equipment with strong electromagnetic fields, e.g. such as large mains transformers, rotating machines, neon lighting etc. Do not lay the signal cable parallel to high voltage power lines etc.
- Wire-up your amp one only when it is switched off.
- Before cleaning your amp one, remove the plug from the mains. For cleaning, use a damp cloth. Avoid the use of cleaning agents and ensure that no liquid enters the inside of the equipment.
- The inside of your amp one contains no parts that are to be maintained by the user. Leave all maintenance, adjustment and repair to qualified experts. The 2-year guarantee period will be invalidated in the event of outside intervention.
- Retain these operating instructions.

3. Conception

We have set ourselves the target of housing a professional piece of equipment with powerful performance, kit and outstanding tonal properties in a small, transportable casing, in which the pleasure of the 'full bass' can be appreciated.

It has long been known how innovative and experimental bassists are today.

The E-Bass has doubtless advanced into a 'solo instrument', which has resulted in a huge rise in demands in terms of tone and technology and consequently also in the demands placed on developers.

Specifics 1)

Distortion-free, strong deep bass reproduction in particular is in constant conflict with physics, human perception and what costs allow for the requirements of the market.

Considerably 'more' energy is required to make the really deep tones audible at the same volume as the mid-range or higher tones. The aim is for the balanced reproduction of the authentic tone of the instrument, irrespective of resonance and format conditions. Here, unfortunately several problem fields can theoretically be added:

- Human hearing is significantly more sensitive in the mid-range than in the other ranges.
- The instrument reproduces its individual spectrum very unevenly. There are large differences in level, in emission characteristics and in the duration of the vibration. There are effacements and super-elevations.
- Deep bass reproduction demands more 'energy' and places considerably greater stress both on the material and on the components, particularly if amplification is added above the tone control (e.g.: +15dB at 80 Hz corresponds to 5.6 times the voltage at this point) or 31.6 times more output.

2)

Tonally, the 'bass' is a very demanding instrument. Its reproduction capacity extends over the entire audio spectrum. However, the distribution relative to the level is also very disproportionate. The basses and primarily the levels are generally amplified considerably in order to achieve a balanced signal, which can then be processed with complex tone controls.

The coincidental concurrence of sound pick-ups, pre and power amplifiers, each with many control options and their different qualities, very quickly show its limits in the final result and these limits are manifested in a moderate signal to noise voltage difference for the audio chain overall and in an adverse effect on the dynamics, as the performance limit of the power amplifier, the power supply or the components is reached too quickly.

Here, this should be an adequate illustration of the complexity of the problem and of why we have taken significantly different approaches in order to implement our tonal ideas, so that the 'bass' is able to sound like it wants to sound.

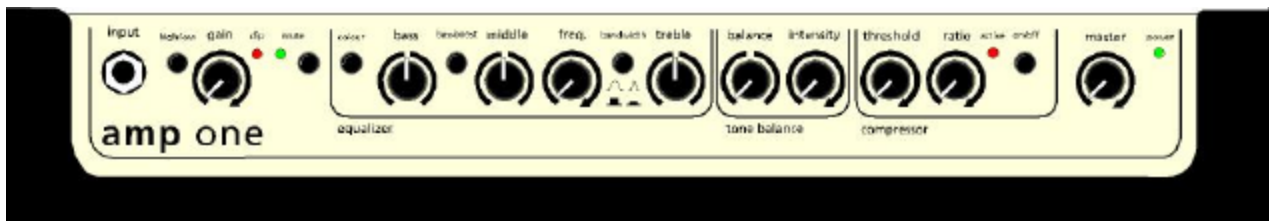
- Together with a powerful power supply, an analogue 200-watt power amplifier with high drive reserves provides the required output.
- The analogue signal processor monitors the signal such that the complete power amplifier output can be exploited without the 'headroom' that is otherwise required. This saves space and reduces the weight, protects the loudspeaker, and ensures constant, defined conditions in the power amplifier. As this is a 'closed system' (power amplifier, processor and loudspeaker), all of the components can be optimally adjusted to each other, which therefore guarantees maximum effectiveness without overloading the system. We go to the limits, but not beyond them.
- We have opted for a 10" 'Sica' instrument loudspeaker. This loudspeaker is highly suited to bass reproduction, particularly in small bass reflex enclosures. However, the reproduction properties, power rating and level of effectiveness are linked, so special bass chassis are always a little quieter (approx. -3dB) than a universal-design chassis. The chassis has been electrically and mechanically tested in accordance with the AES standard.
- The casing must be able to withstand a huge load. It is made from 15 mm birch plywood (13-layer), mortised and fixed with watertight glue. The loudspeaker is located in a bass reflex chamber that is separate from the electronics, which means that everything is mechanically detached.

The other equipment includes:

- Compressor
- Adjustable DI out XLR
- Line out, tuner out, headphones out
- Foot switch connection
- Insert pre and insert post equaliser
- Effect loop
- Ground lift
- Aux in

4. Operating Elements

Front (from left to right):



Input Input (mono jack)

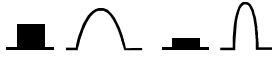
High/low Changeover switch for adjusting input sensitivity

Gain Input level control

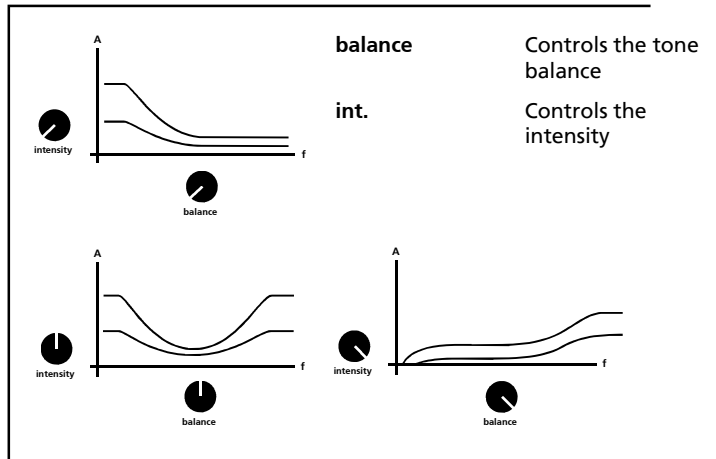
Clip Overdrive display

Mute Channel mute

equaliser

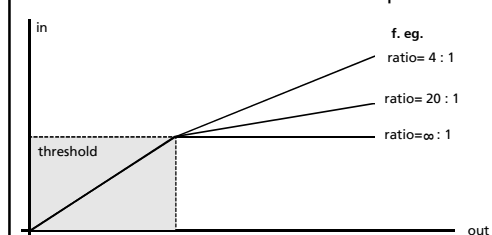
colour	Switch to activate the contouring mid-filter
bass	Bass-sound control
bass boost	Extra level increase in the bass range
middle	Mid-range control
freq.	Working frequency for mid-range control
bandwidth	Bandwidth of the mid-range contro
	
treble	High-range sound control

tone balance



compressor

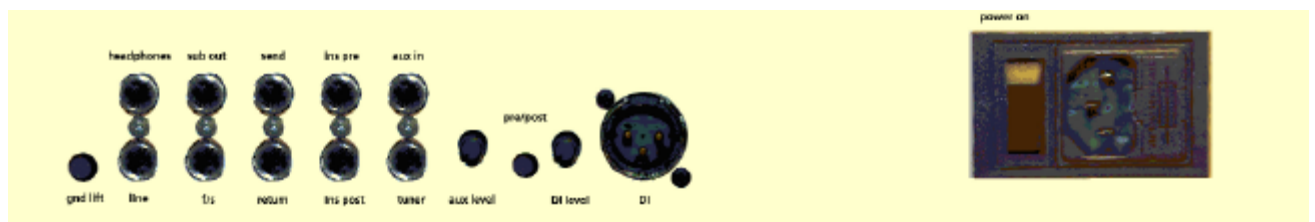
threshold	Controls the input signal threshold value
ratio	Controls the adjustment of the output signal to the input signal; determines the strength of signal compression
active	Compressor operating display LED
on/off	Switches the compressor on and off



master Overall level controller

power Power control light

Back (from left to right):



gnd lift	Separates the protective earth from the signal earth	insert pre eq	Pre equaliser loop
headphones	Stereo headphone output, mutes the loudspeaker	insert post eq	Post equaliser loop
line	Preamp output	aux in	Stereo jack socket, input e.g. for a CD player
footswitch	Stereo foot switch connection, TIP= mute, RING = effect loop	tuner	Output for a pre-master tuner
send	Output for external effects processor	aux level	Potentiometer for adjusting the aux signal
return	Input for an external effects processor	pre/post	Selector switch for the signal on the DI output; pre or post equaliser
sub out	Additional output for an external active sub-woofer	DI level	Controls the signal level on the DI output
		DI	Symmetrical XLR output, pre master
		power on	Combined on-switch with fuse holder (3.15 A slow)

5. Operating Summary

Connection and Initial Operation

Check whether the mains voltage (e.g.: 120 V in the USA, 230 V in Europe) in the location matches the voltage authorised for the operation of your amp one. Before switching on the amplifier, turn the master control to the zero position (far left). Then connect all the necessary cables. You can now switch on your amp one using the power on switch on the back of the equipment. The green power light indicates that it is ready to operate.

- Selection

Please check the following:

Precondition:

Mute switch: Not depressed,

Preamp on the instrument: EQs in central position,

Volume: Approx. ½ to ¾ open.

Set the master controller on the amp one to the zero position and increase the gain setting until the clip display flickers briefly. If this condition occurs at a gain setting of approx. '9-11 o'clock', it is guaranteed that the source, e.g. your instrument with pre-amp

- a) Is able to fully select the input level of the amp one and
- b) That the complete ambient noise level (rustling, buzzing) is at a minimum. Take the gain control back a little in order to create an additional 'headroom' dynamic reserve. Use the master control to set the final volume desired.

The clip display generally indicates a high input signal. Brief flickering of the clip is not dangerous. However, when in operation, ensure that it does only flicker. For safety, you should take the gain or volume control on your source (instrument) back a little in order to guarantee an optimum and distortion-free reproduction. If required, you can use the mute switch to silence the equipment. Mute can also be operated by footswitch.

- Sound Control

The 3-band sound control on your amp one is designed to be technically parametrically complete, although only the central band is adjustable in terms of frequency and bandwidth. We hope that we have selected the filters such that you find the sound control to be a diverse and universal tool, which complements the diversity of basses and tones.

We are right, are we not?!

Nonetheless, we are of the opinion that more is required in order to balance the instrument sound. At the extreme high end (unbalanced reproduction properties, particularly in combination with active bass electronics), the rustling is amplified from one level to the next.

- Compressor

Our amplifiers are all dynamically controlled. The additional compressor can only be switched fully on or off. As well as its use as a pure bass effects processor, the compressor can be used to balance dynamic differences between various signal sources.

6. Technical Specifications

Single-Channel Amplifier for E-Basses

Input:

Channel 1 Jack, mono, Sensitivity: -25 dBV,
-15 dBV with pad-switch on
Input Impedance: 1 Meg
Noise: < -82 dBV

Aux in, L/R Jack, stereo
Sensitivity: -3 dBV
Input Impedance: 22 K

Effect Return Jack, mono
Sensitivity: -6 dBV
Input impedance: 10 K

Clip indicator 8 dB under clipping

Output:

Tuner Jack, mono, -6 dBV

Headphones Jack, stereo, max. 1,7 V RMS,
max 2 x 100 mW into 32 Ohms

**! Do not connect to other devices!
! Do not use mono jack plugs!**

DI out XLR, adjustable max. -15 dBV, balanced,
pre/post equalizer

Sub bass Jack, 0 dBV

Line out Jack, 0 dBV

Inserts Jack, stereo, tip = send, ring = return

Footswitch Mute Channel 1 = tip,
Effect on/off = ring

Equalizer

Bass ± 10 dB / 80 Hz
Middle ± 10 dB
Frequency 350 - 1,1 kHz, 1-1/3 octave
Treble ± 13 dB / 10 kHz
Bass boost + 10 dB / 55 Hz
Colour - 3 db / 700 Hz
+ 10 db / 7,5 KHz

Tone balance Maximum intensity
+ 9 dB / 40 Hz
+ 6.5 dB / 10 KHz

Compressor Threshold - 40 dB to 0 dB
Ratio: 1 : 1 to 20 : 1

Analog Signal Processor

AER low-distortion limiter, subsonic filter

Poweramp 200 W sine-wave into 8 Ohm, 1% THD,
30 Hz - 20 kHz, analog power amplifier

Speakersystem 10" (25 cm) woofer, Neodym magnet

Mains power AC 230 V, 50 - 60 Hz, max. 550 W

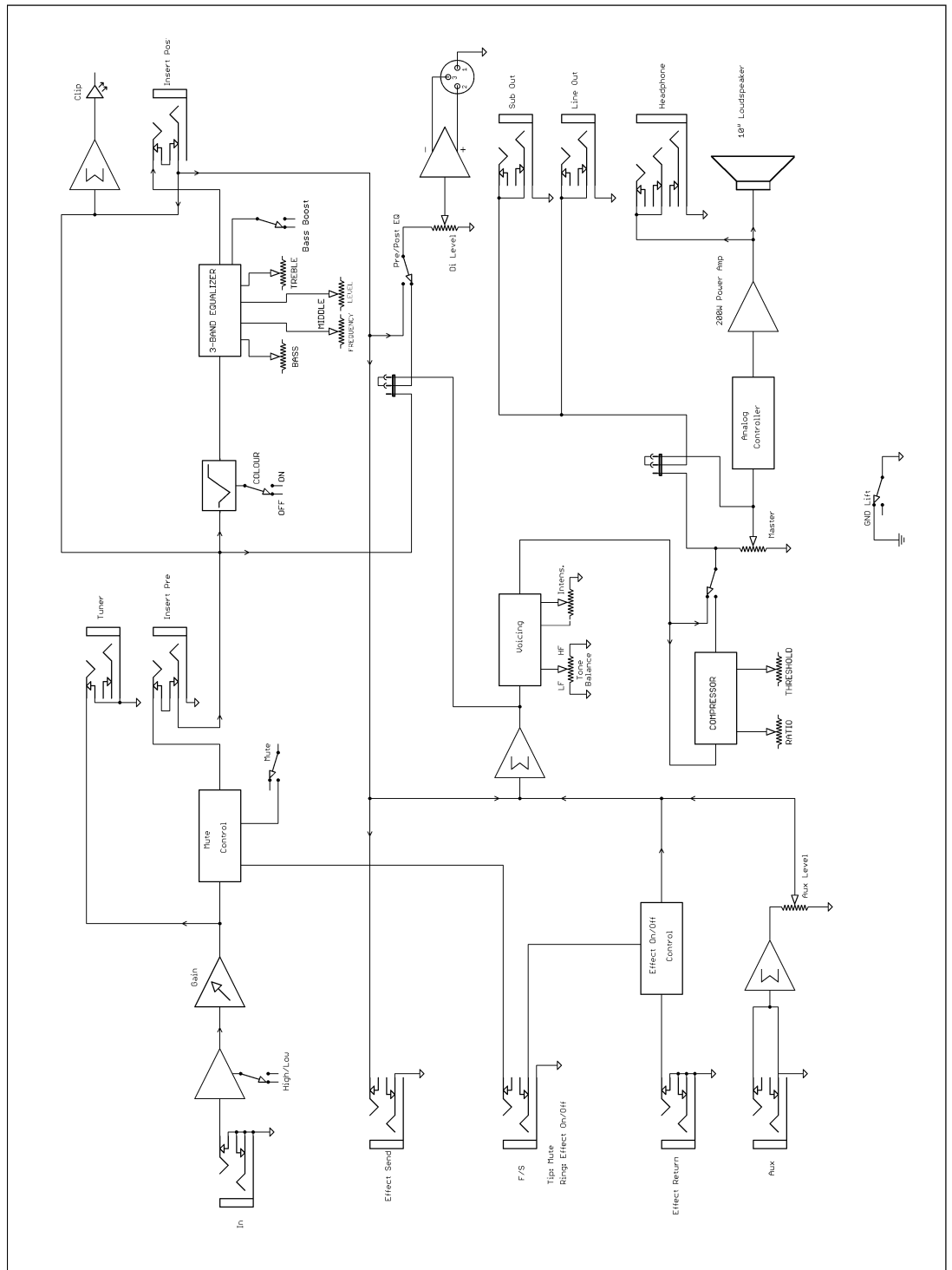
Mains fuse Slow, 3.15 A, 5 x 20 mm

Finish Waterbased acrylic, black spatter finish

Cabinet 15 mm (0,38") Birch Plywood
396 mm (14,56") height
320 mm (12,59") width
285 mm (11,20") depth

Weight: 13,5 kg (29,5 lbs)

7. Block Diagram



8. Disposal Regulations

The disposal of electronic equipment in household waste is not permitted.

AER GmbH waste electrical and electronic equipment is not to be taken to public collection points for disposal.

AER GmbH remains solely responsible for the disposal of AER GmbH waste electrical and electronic equipment labelled with a dustbin.

To dispose of AER GmbH waste electrical and electronic equipment that is labelled with a dustbin symbol, please contact us; we will ensure correct and cost-neutral disposal.

In the case of AER GmbH waste electrical and electronic equipment that is not labelled with a dustbin, the owner is responsible for correct disposal in accordance with the law.

However, we are also happy to help in this case and we can present you with the options of where to dispose of these electrical goods.

The telephone number of AER GmbH: +49 (0)2361 891789

Here, we will provide you with qualified information on the disposal of AER GmbH waste electrical and electronic equipment.

Declaration

The EU directive on the disposal of waste electrical and electronic equipment (WEEE, 2002/96/EC) has been changed to the electrical and electronic equipment act.

All AER electrical equipment affected by WEEE has been labelled with the symbol of a crossed out dustbin since 13.08.2005.

This symbol indicates that the disposal of the equipment is not permitted with household waste.

It has been circulated in this form since 13.08.2005.

In the German registration department EAR, AER GmbH has been registered under WEEE registration number DE26301529.

European Union, Norway, Iceland and Liechtenstein

The disposal of electronic equipment in household waste is not permitted.

All AER electrical equipment affected by WEEE has been labelled with the symbol of a crossed out dustbin since 13.08.2005. This is also applicable for Norway, Iceland and Liechtenstein.

This symbol indicates that the disposal of the equipment is not permitted with household waste.

It has been circulated in this form since 13.08.2005.

The European directives of WEEE are anchored in different respective national laws in all European states. As such, we are unfortunately unable to provide you with one standard disposal solution.

The distributor or importer for the respective state is responsible for the observance of the laws of that state and must ensure the disposal of the waste electrical and electronic equipment in accordance with national regulations.

Other Countries

For correct disposal of the electrical goods, please ask the local dealer or the appropriate authority.

