



E600 Ironball Combo
E606 Ironball Head
Operator's Manual

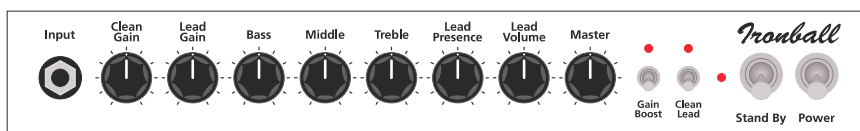


Figure: Front panel E606 head

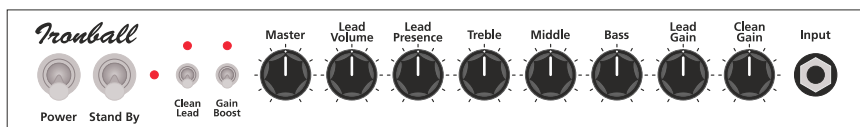


Figure: Front panel E600 combo

Input

Input (conventional 6.3mm / ¼" TS) unbalanced input. Plug your guitar in here using a shielded instrument cable.

Clean Gain

Gain control for the Clean channel.

Lead Gain

Gain control for the Lead channel.

Bass

Bottom end voicing control of the preamp's passive EQ.

Middle

Mid-range voicing control of the preamp's passive EQ.

Treble

Upper range voicing control of the preamp's passive EQ.

Lead Presence

This control defines the Treble response in the poweramp stage for the Lead channel.

Lead Volume

Volume control for the Lead channel (pre-FX Loop, influences the send level). Use this knob to dial in the desired balance of levels between the Lead and Clean channels.

Master

Master volume knob. Located post-FX Loop. It controls the power amp output level.

Gain Boost

Press this push button to activate / deactivate the Gain Boost function. The red LED above this push button lights up to indicate that the Gain Boost is activated. This feature can also be controlled via a dual footswitch (conventional 6.3mm / ¼" TRS) like the ENGL Z4 connected.

Clean/Lead Channel

Press this push button to toggle between the Clean and the Lead channel. The red LED above this push button lights up to indicate that the Lead channel is engaged. This feature can also be controlled via a dual footswitch (conventional 6.3mm / ¼" TRS) like the ENGL Z4 connected.

Stand By

Use this switch to use the Stand By mode when you take a longer break or for brief breaks, for instance when you are switching guitars. The amp's tubes stay nice and toasty, and the amp is ready to roll immediately when you ramp it back up to full power.

Power

Mains power on/off.

Please note: ensure that the Stand By switch is set to Stand By before you switch the amp on. Let the tubes heat up for about 30 seconds before you activate the power amp. This procedure spares the tubes.

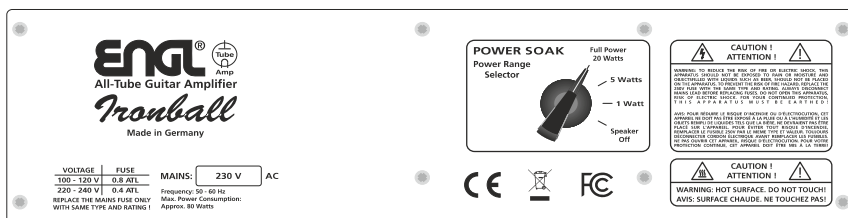


Figure: Tube protective panel with integrated Power Soak E606 head

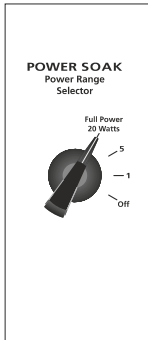


Figure: Power Soak panel E600 combo

Power Range Selector

Use this switch to activate the Power Soak and select the desired power level.

- Full Power (approx. 20 Watts)
- 5 Watts (approx. 5 Watts)
- 1 Watt (approx. 1 Watt)
- Speaker Off (zero Watts)

When activated, the Power Soak's resistors convert some or all of the power amp's output into heat. So, make sure air can circulate freely around the back of the amp!

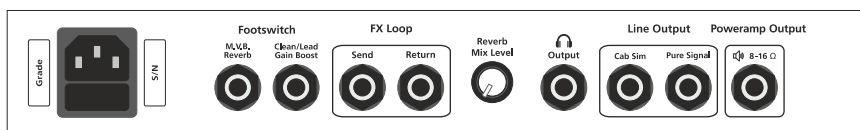


Figure: Back panel E606 head

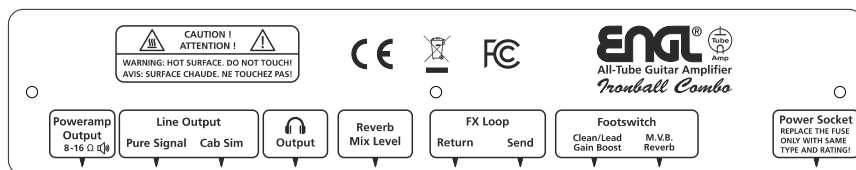


Figure: Back panel E600 combo

Main Supply Connector / Power Socket (AC Power Inlet, IEC – C14 connector)

Plug the mains cord in here.

CAUTION! Make sure you use an intact mains line cord with a grounded plug! Before you power the amp up, ensure the voltage value (e.g. printed on the Type Label or alongside the mains port) is the same as the current of the local power supply or wall outlet. Please also heed the guidelines set forth in the separately included pamphlet, Instructions for the Prevention of Fire, Electrical Shock and Injury.

Mains Fuse Box

The rear chamber contains the mains fuse and the front chamber a spare fuse.

NOTE: Ensure replacement fuses bear identical ratings (refer to the technical data)!

CAUTION! Always make sure replacement fuses are of the same type and have the same ratings as the original fuse! To this end, please refer to the fuse ratings shown on the type panel.

Footswitch:

Master Volume Boost (M.V.B.)/Reverb (conventional 6.3mm / ¼" TRS). Use this jack to connect a conventional footswitch with two switching functions, i.e. the ENGL Z4 (2 x off/on – Single Pole Single Throw or SPST for short).

Tip: switching the Master Volume Boost on and off.

Ring: switching the Reverb on and off.

Default (no footswitch connected): Master Volume Boost is on, Reverb is on.

Clean/Lead and Gain Boost (conventional 6.3mm / ¼" TRS). Use this jack to connect a conventional footswitch with two switching functions, i.e. the ENGL Z4 (2 x off/on – Single Pole Single Throw or SPST for short).

Tip: switching between the Clean and the Lead channel.

Ring: switching the Gain Boost on and off.

Default (no footswitch connected): Clean Channel is activated, Gain Boost is deactivated.

FX Loop (serial FX Loop)

In the signal path, the FX Loop is located post preamp and before the power amp Master controls.

FX Loop Send

Connect the FX Loop Send (output) to a signal processor's input or an effect pedal's input/return jack using the shortest possible shielded instrument cable (conventional 6.3mm / ¼" TS cable).

FX Loop Return

Connect the FX Loop Return (input) to a signal processor's output or an effect pedal's output/send jack using the shortest possible shielded instrument cable (conventional 6.3mm / ¼" TS cable).

Reverb Mix Level

This control adjusts mix of dry signal to wet Reverb signal and increases it's intensity if you rotate it clockwise.

Headphone Output

Connect a headphone (conventional 6.3mm / ¼" TRS cable) for easy monitoring or practice. When selecting the Power Soak "Speaker Off" position you can practice without disturbing your neighbours.

CAUTION! When powering the amp up, upcoming noise can appear and damage hearing. Make shure to remove the headphones while powering the device up.

Line Output – Cab Sim

The Line Output – Cab Sim port taps the power amp's output to provide a line out signal configured at a level of about 0 dB. The signal ist filtered to simulate the effect a speaker cabinet has on the signal.

Line Output – Pure Signal

The Line Output – Pure Signal port taps the power amp's output to provide a line out signal configured at a level of about 0 dB. The frequency response is identical to the power amp output signal. In other words, its frequency response is not compensated or corrected. You can feed this signal to another linear power amp. Another option is to patch it through an outboard filter to emulate a speaker, or for example into the ENGL CABLOADER (IR-Loader with an integrated microphone and poweramp simulation), and feed this externally processed signal to a recording device or PA system.

Poweramp Output

EG00 Ironball Combo: The internal 12" speaker is connected to this output.

EG06 Ironball Head: A single 8-16 ohm cabinet can be connected to this output.

Important Note: We cannot stress enough the importance of proper impedance matching when connecting one or more cabinets to your amp. Impedance mismatching can damage the poweramp! Always check the connected cabinet's impedance to confirm it matches the amp's output impedance!

TECHNICAL DATA:

Output power	approx. 20 Watts max
Input sensitivity	
Input	from -20 dB to approx. 0 dB max.
FX Return	from -20 dB to approx. 0 dB max.
Output level	
FX SEND	from -20 dB to approx. 0 dB max.
Headphone	approx. 0 dB at nominal power output
Power consumption	approx. 80 Watts (95 VA) max.
Fuses	
220 / 230 / 240 supply voltage	0,4 AT L (T: slow-blow)
100 / 115 / 120 supply voltage	0,8 AT L (T: slow-blow)
Power Tube Fuses	2 x 0,08 AM (M: medium-blow)
Important: Replace these with fuses of the same type and rating only!	
Tubes	
V1:	ENGL ECC83 First Quality (FQ)
V2 / V3 / V4	ENGL ECC83 Selected (S)
V5 / V6	ENGL EL84 Hand-matched Duet
Dimension	
	Head: 34 cm x 14 cm x 22 cm
	Combo: 49 cm x 44 cm x 25 cm
Weight	
	Head: 7 kg
	Combo: 19 kg

A FEW COMMENTS ON TUBE AMPLIFIERS

Be sure to read this section before powering the amp up!

This amp's input is extremely sensitive due to its high gain factor. In combination with inherent microphonics of tubes, at certain settings this can elicit powerful feedback from the speakers – even without a guitar being connected!

This occurs primarily when Crunch and Lead channels (that is, all channels whose preamp is easily overdriven) are activated and the following settings are dialed in:

- Gain and / or Lead Gain knob past the 12 o'clock position
- Treble knob past the 12 o'clock position
- Crunch / Lead Volume knob past the 12 o'clock position
- Presence knob past the 12 o'clock position

Avoid setting the afore mentioned knobs to extreme positions (that is, combinations in which several of these knobs are set past the 12 o'clock position). This type of configuration can cause considerable feedback that could severely damage your hearing and destroy speakers.

If you set the Volume or Master knobs to higher volume levels, always make sure to back off amplification levels to prevent feedback by turning the Lead channel Gain knobs down. The same applies to these channel's Treble and Presence knob settings.

Before you power the amp up, take a moment to check out the control panel and make sure that these knobs are not set to any configuration similar to the one described above!

A FEW WORDS ON BACKGROUND NOISE IN TUBE AMPLIFIERS

You may hear slight background noise right after you power a tube amp up or even while you are operating. It manifests as intermittent hissing or sizzling, crackling, or popping noises. Caused by tubes, this type of noise may even occur with brand new tubes.

The noise is particularly noticeable in high-gain Lead channels. This is because the Lead channels provide a very high gain factor, amplifying noise along with the usable guitar signal.

It is not necessary to swap tubes if you encounter this kind of noise every now and then, though you may consider replacing tubes if it becomes a constant companion.

TROUBLESHOOTING

The output volume fluctuates or drops:

- Take all effect devices (in front of the preamp and FX Loop) out of the signal chain.
- Check all used cables.
- Check the used guitar or use another guitar.
- Use a patch or guitar cable to patch the FX Send with the FX Return jack.
- Try using an external and functional power amp with the preamp of the amp (FX Send connected to an external power amp) to exclude a problem with the amp's internal preamp.
- Try using an external and functional preamp with the poweramp of the amp (FX Return connected to an external preamp) to exclude a problem with the amp's poweramp.

The amp is not providing a proper output signal / no or low sound is emanating from the speaker:

- Is at least one speaker connected to the speaker outputs?
- Is the power amp activated (Stand By switch to ON)?
- Are all cords (guitar, effects and speaker) connected properly and are they functional?
- Take all effect devices (before the preamp, FX Loop) out of the signal chain.
- Is the Noise Gate activated? (Relevant only, if the amplifier is equipped with a Noise Gate).
- Are the Master knob and the Gain and Volume knobs set to a value higher than 0? If any of these knobs is set to zero, no signal is routed to the amp's output.

The speaker is emitting humming noises:

- The amp and mains ground are not connected properly or are altogether disconnected. Please have this checked by a technician.
- Cords connected to the input or FX Loop may not be shielded properly. Replace them to check if this is indeed the case.
- The amp or speaker cords may be picking up interference from powerful magnetic fields (i.e., of nearby power transformers or electrical motors). Reposition the amp and connector cables.
- The amp or speaker cords may be picking up radio signals. For example, from activated mobile phones or powerful local transmitting stations nearby. Switch off mobile phones while troubleshooting noise problems.

Please contact us via e-mail: service@engl-amps.com before shipping a product to us.

The more precise the error description is, the better our service team can help you. It is best to send us a photo of the control settings and a video recording. A detailed description of the error also helps us to isolate and locate the problem faster.

- Which channels are affected?
- Which functions are activated?
- In which knob positions does the problem occur?
- Are you using effects devices before the input or in the FX-Loop?
- Does the problem occur in standby mode (noise issues)?
- What equipment is used in detail?

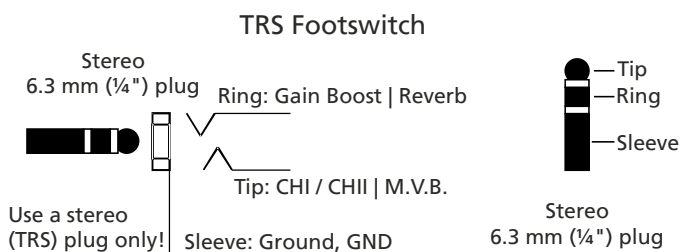
Packaging

Please make sure to use suitable packaging to ensure undamaged transport (use original PKG). To unfold the full protective function of the packaging, the outer packaging, the device and the inner packaging must form a single unit. This is the only way to ensure that the device survives the transport route undamaged.

Please check used packaging for tears, signs of compression, pressure marks, perforations or other damage before use. Please do not use damaged packaging. Note that a flight case is not a suitable shipping packaging and is therefore not accepted. Please never pack devices together (e.g. Z4 Footswitch + E633 Head), but send them separately. As it is our responsibility to use suitable shipping packaging for return shipping, we reserve the right to use a new original packaging if necessary and must also invoice it.

Original Packaging

Our original packaging consists of particularly thick cardboard material and is equipped with special, custom-made molded foam parts for each model. This packaging can be used several times - do not throw it away!



Whilst the information contained herein is correct at the time of publication, due to our policy of constant improvement and development, ENGL AMPLIFICATION reserves the right to alter specifications without prior notice.

ENGL[®]
www.engl-amps.com