



**E304/E309**  
**Metalmaster 20**  
Operator's Manual

The **ENGL RockMaster** amp and the **ENGL MetalMaster** amp are purpose-designed for performance and voiced to meet specific sound characters in order to offer the guitar player a perfect platform for diverse tonal genres. Both the combo and head versions of each amp model come in exceedingly compact housings. These amplifier series are perfect for small gigs, home or studio recording, and practicing at lower volumes without sacrificing tone. In fact, because they are endowed with hip features such as a balanced Line Out with speaker simulation and a built-in Power Soak with four variable power stages, these amps are well-suited for a wide range of diverse applications. The Master knob lets you dial in precisely the desired amount of power amp saturation.

Two EL84 pentode power tubes produce the amp's trademark tone, while two ECC83 double triode preamp tubes provides authentic tube sound.

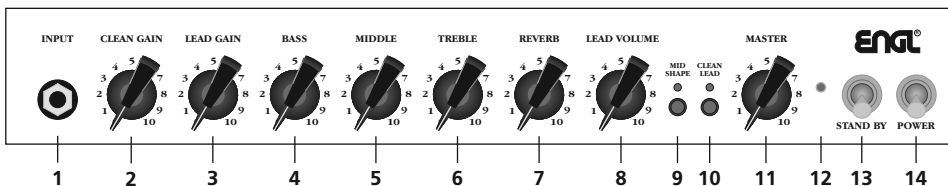
These amp models offers plenty of variety for the tone connoisseur courtesy of their two channels Clean and Lead: while the MetalMaster amp is featuring oodles of front-end overdrive during Lead mode, the RockMaster's Gain range is perfectly tuned to deliver a broad spectrum of medium preamp saturation in Clean and Lead channels; nevertheless the Lead Gain level completely suffices for playing typical fat Lead solos.

Another clear-cut feature is a specially voiced Mid Boost (RockMaster amp) or Mid Scoop (MetalMaster amp) switch that shapes those midrange frequencies that matter so much to electric guitar tone. Moreover these amps also come loaded with a bevy of convenient sound-sculpting features designed to make your musical life easier and more rewarding, including a built-in reverb system and a serial FX Loop, both features switchable on the fly via footswitch, likewise channel switching and Mid Shape. And, although the four foot-switchable features afford you even greater flexibility to shape sounds spontaneously, handling these remains an exercise in convenience and simplicity.

You'll find guidelines on care and maintenance of tube amps and details for the Power Soak handling in certain places of this manual. Please read and heed these before operating your amp. You'll also come across boxes shaded grey throughout the manual. These are located between the descriptions of the amp's functions and contain handy tips on the preceding function. All critical information pertaining to the operation of this amp is preceded by "NOTE" or "CAUTION." Please pay particular attention to these safety tips.

The ENGL team wishes you all the best—may you and your amp enjoy a "harmonically rich" future together!

## Front



**1 Input:** ¼" unbalanced input jack. Plug your guitar in here using a shielded cord.

**2 Clean Gain:** Gain control for the Clean channel. This knob determines the preamp's input sensitivity when the Clean channel is selected and, by extension, the preamp signal's saturation level. It and the Master (11) knob determine the Clean channel's volume.

**A tip from the designer:** Here's how this knob's settings relate to the type of guitar pickup.

If you are using single-coils, the preamp will start breaking up at about 6, and at around the 4 or 5 with more powerful humbuckers or an active pickup. If you want a pristine clean sound, back off the Clean Gain knob setting.

The power amp provides a moderate amount of headroom, so be sure to choose a relatively low Master knob setting (lower than 5) if you wish to avoid any kind of break-up. Even in Clean mode, you can push both the amp's preamp and power amp hard enough to overdrive the signal.

**CAUTION:** Extremely high gain and volume levels can produce powerful feedback. Avoid feedback squeals; they can lead to hearing loss and damage speakers! At higher volumes, back off the Gain and Treble levels in order to prevent unchecked feedback!

**3 Lead Gain:** Gain control for the Lead channel. This Control knob determines input sensitivity when the Lead is active. Use it to dial in the desired amount of preamp saturation level.

**A tip from the designer:** You can achieve a moderate preamp saturation or overdrive if you prefer for typical rock riffs or for rhythm work with Lead Gain knob settings prior to the position 5; ideally in the range between 1 to 4, depending on the output of the guitar pickup and the amp type.

Higher Lead Gain control settings produces a remarkably rich sustain and a singing lead tone, perfectly suited for playing solos and lead guitar for example. I would only recommend very high Gain levels at moderate volume to get additional sustain. In other words, you should avoid Lead Gain knob settings beyond the position 6 at high output power in order to prevent interaction between guitar and speakers that possibly causes undesirable feedback.

**CAUTION:** Extremely high gain and volume levels in Lead mode can produce powerful feedback. Avoid feedback squeals; they can lead to hearing loss and damage speakers! At higher volumes, back off the Gain and Treble levels in order to prevent unchecked feedback!

**4 Bass:** Bottom end voicing control of the preamps' s passive EQ.

**5 Middle:** Mid-range voicing control of the preamps' s passive EQ.

**6 Treble:** Upper range voicing control of the preamps' s passive EQ.

**Tips and info from the designer:** To help you get acquainted with the amp's fundamental sounds, I recommend that you set all tone controls to the center position; that is, to around 5.

Two channels with different gain structures (Clean and Lead) share the same voicing section here. This is why the passive three-band tone controls have been tuned to deliver optimum results even with settings remaining unchanged when switching channels.

Note the range of these passive controls is narrower than that of comparable active EQ systems. If you want to dial in very soft lead, blues, or jazzy clean sounds, try setting the Treble knob between position 4 and 6 at the RockMaster amp. For more aggressive riffs or funk-approved tone, try a knob position between 5 and 8 at the MetalMaster amp.

**7 Reverb:** Reverb intensity knob. Twist it to adjust the amount of reverb for Clean and Lead.

Turn the Reverb control knob clockwise to increase the effect's intensity. The signal remains completely dry when the knob is set to the 0 position or if Reverb is deactivated via a footswitch.

You can switch the reverb unit on and off using a footswitch connected to jack 17.

The reverb unit is always on if you do not plug a footswitch into jack 17.

Note: A digital processor generates the reverb effect.

**8 Lead Volume:** Volume control for the Lead channel (pre-FX loop, influences the Send level during Lead mode). The red LED above the channel switching selector (10) indicates Lead operating mode. Use this knob to dial in the desired balance of levels between the Lead and Clean channels.

**9 Mid Shape function:** Mid Boost (RockMaster amp) or Mid Scoop (MetalMaster amp)

This voicing feature influences specific midrange frequencies in the preamps' s EQ section. The sound-shaping button operates globally, affecting both channels. When activated, frequencies between 300 Hz and 2 KHz are

boosted varyingly strong: Mid Boost, RockMaster amp;

cut at a varyingly strong degree: Mid Scoop, Metal Master amp.

The LED above the button lights up to indicate Mid Shape (Mid Boost or Mid Scoop) is activated.

The Mid Shape (Mid Boost or Mid Scoop) sound feature may also be switched using a footswitch connected to jack (18). The button (9) on the amp's front panel is disengaged when you switch the Mid Shape (Mid Boost or Mid Scoop) function via footswitch (18).

For more details see the chapter 18 !

**A tip from the designer:**

The Mid Shape (Mid Boost or Mid Scoop) button voices specific midrange frequencies that are instrumental in fine-tuning a guitar's sound.

This tone-shaping option is remotely controllable via footswitch, so you can adapt the amp's fundamental sound on the fly, say to better support rhythm guitar work, singing leads, and slashing power chords.

**10 Lead/Clean:** This channel switching button selects the Clean channel or the Lead channel.

Press it to activate the Lead channel. The red LED above the button lights up to indicate Lead mode is active. This function can also be activated via the respective footswitch connected to jack 18.

Once a footpedal is connected, the channel selector switch is deactivated.

**11 Master:** This master volume knob controls the power amp's output (it is located post FX Loop).

**12 Power On:** This LED lit when the amp is powered up.

**13 Stand By:** Power amp standby switch: Use this switch to silence ("down" position) the amp when you take a break. The amp's tubes stay warm, which means that it is ready to roll immediately when you switch it back to full power. The standby switch is also well-suited for muting the amp for brief breaks, for instance when you're switching guitars.

**A tip from the designer:** I suggest you get into the habit of using standby during short breaks.

In this mode, current is not piped through the power tubes, so they don't get as hot (due to the lack of anode dissipation) and are spared considerable wear. The amp is ready to run when you flip the Standby switch because the tubes are already warm and don't require time to heat up.

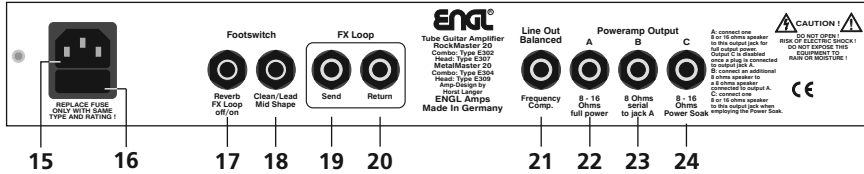
For breaks of 20 minutes and longer, I recommend that you switch the amp off in order to conserve energy.

**13 Power:** AC power on/off. The power on LED (12) indicates when the amp is switched on.

Please note: ensure that the Stand By switch (13) is set to Stand By ("down" position) 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.

**CAUTION:** After an extended period of operation and higher ambient temperatures the amp's chassis can become very hot, therefore avoid touching the rear panel surface!

## Rear Panel



### 15 Mains Connector (AC Power Inlet; IEC - C14 connector)

Plug the mains cord in here. For European models, use a standard non-heating equipment connector cable.

**CAUTION:** Make sure you use an intact mains line cord with a grounded plug!

Before you power the amp up, ensure the voltage value printed on the label next to the mains socket 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.

### 16 Mains Fuse Box: The rear chamber contains the mains fuse and in the front chamber, a spare fuse.

**CAUTION:** ALWAYS make sure replacement fuses are of the same type and have the same ratings as the original fuse! Please refer to the fuse ratings table.

### 17 Footswitch Reverb; FX Loop off/on: Use this 1/4" Stereo jack to connect a conventional footswitch with two switching functions, for example, the ENGL Z-4 (2 x off/on - Single Pole Single Throw or SPST for short). This type of footswitch lets you switch *Reverb* off or on and *FX Loop* off or on.

One of the two switches engages the internal Reverb the other enables or bypasses FX Loop.

The Reverb system and the FX Loop are activated by default if you do not connect a footswitch to this jack. Note also that a footswitch may be equipped with LEDs indicating the given switching status. Each of the two switches is provided with about 10 milliamperes of current, which suffices to power a standard LED. The jack's mono terminal (the tip) switches the *Reverb* off or on, and the stereo terminal (the ring) switches *FX Loop* off and on.

For pin assignments, see "Wiring of Principal Connectors".

### 18 Footswitch Clean/Lead; Mid Shape (Mid Boost oder Mid Scoop): Use this 1/4" Stereo jack to connect a conventional footswitch with two switching functions, for example, the ENGL Z-4 (2 x off/on - Single Pole Single Throw or SPST for short). This type of footswitch lets you access the two channels and *Mid Shape* (collective term for *Mid Boost* and *Mid Scoop*).

One of the two switches activates Clean or Lead; the other controls the Mid Shape function

*Mid Boost*, RockMaster amp: boosts a certain mid frequency range when activated;

*Mid Scoop*, MetalMaster amp: cuts a certain mid frequency range when activated;

Plugging a footswitch into this jack disables onboard channel (10) and Mid Shape (9) switching.

Note also that a footswitch may be equipped with LEDs indicating the given switching status.

Each of the two switches is provided with about 10 milliamperes current, which suffices to power a standard LED. The jack's mono terminal (the tip) selects Clean or Lead, while the stereo terminal (the ring) switches *Mid Shape*. For pin assignments, see "Wiring of Principal Connectors".

**A Tip from the designer:** If you want to control the amplifier via a MIDI system, use jacks 17, 18 and a looper or MIDI switcher (such as the ENGL Z11-S.A.C). Use two stereo 1/4" cords to connect the optionally available ENGL MIDI Switcher Z11-S.A.C... You can then preset the four switching functions *Clean/Lead*, *Mid Shape*, *Reverb off/on* and *FX Loop off/on* via the switcher, store your custom switching setups as different MIDI programs, and activate the presets via a MIDI board such as the ENGL Z-12. For more details, see the remote control options on the last page.

### 19 FX Loop Send: Connect the serial FX Loop output to a signal processor's input/return jack using the shortest possible shielded cord equipped with 1/4" plugs. The FX Loop can be controlled remotely (on/off function) via a footswitch connected to jack 17 (for details refer to chapter 17). In the signal path, the FX Loop is located post preamp and pre the power amp Master knob.

### 20 FX Loop Return: Connect the FX Loop input to a signal processor's output/send jack using the shortest possible shielded cord equipped with 1/4" plugs. The FX Loop can be controlled remotely (on/off function) via a footswitch connected to jack 17 (for details refer to chapter 17). In the signal path, the FX Loop is located post preamp and pre the power amp Master knob.

Note: Inserting a 1/4" jack plug into the Return port interrupts the circuit between the preamp and power amp.

**21 Balanced Line Out Frequency Compensated:** The frequency-corrected, balanced Line output jack (¼ stereo jack: tip and ring routes the balanced signal, shaft = Ground/Shield). This signal can be routed directly to a mixing console or a recording unit. The line out is located post poweramp in the signal chain, so ensure the poweramp is activated.

If you wish to run the amp without driving a speaker, the built-in *Power Soak* (25) can provide the necessary load for the power amp. To do this, simply set its Selector to "Speaker Off". Then you can run the amp without a speaker or cabinet connected.

**Important note:** in the aforementioned case a speaker may not be connected to the Poweramp Output "A" (22) because a ¼" jack plug inserted to jack 22 would disable the Power Soak circuit!

**Heads up:** Make sure the balanced cord's shielding is grounded at one end only; that is, either at the amp or at the mixer or recorder. Connecting two devices to the same ground (e.g. via the mains ground) can cause a ground loop that you will recognize as audible humming!

You may find it necessary to sever the connection between the shielding and ground on one of the stereo ¼" cord's two plugs.

**A tip from the designer:** The Line Out's output level is influenced by the following factors: By the input level (Clean Gain), the Volume control settings in the Lead channel, to some degree by voicing control (EQ) settings, and by the Master volume level. First dial in the desired sound combination at the front panel. Then adjust levels at FX devices or signal processors (if connected). Use the respective device's input sensitivity or gain control for level adjustments.

You can also tap the line out signal at this jack using an unbalanced cord with a mono plug; that is, with one wire carrying the signal and the shielding providing the grounding.

An internal resistor protects the second output against short-circuits.

(Note: This applies to the Line Output only!)

**22 Poweramp Output A, 8 - 16 Ohms, full power:** output jack "A" for the connection of one 8 ohms (eg. the Combo amp's internal speaker) or one 16 ohms speaker without the internal power soak circuit. This speaker output has priority with respect to speaker output "C": a ¼" jack plug connected to jack "A" disables speaker output "C" (24) and the power soak circuit.

**23 Poweramp Output B; 8 Ohms serial to jack A:** This is an auxiliary output connected in series with Output "A" (jack 22). This output is designed for one application for only—when you are driving a combination of two 8-ohm cabinets (speakers). This output may only be used when an 8-ohm speaker or cabinet is connected to Output "A" (jack 24). A typical application: the Combo amp's internal speaker connected in series with an 8 ohms cabinet, e.g. the ENGL type E112 or E412. **CAUTION:** If you intend to use one 8 or 16-ohm cabinet only, make absolutely certain you connect it to Output "A" (jack 22). Output "B" (jack 23) is only enabled when a speaker is connected to Output "A" (jack 22).

**24 Poweramp Output C; 8 - 16 Ohms, Power Soak:** output jack "C" for the connection of one 8 ohms (e.g. the Combo amp's internal speaker) or one 16 ohms speaker (cabinet) including the internal power soak circuit. The Power Soak circuit sits between this speaker output and the power amp. You'll find some important info on this circuit in section 25, please read carefully before operating the Power Soak!

**NOTE:** Never operate the amplifier without a sufficient load, otherwise you may damage or destroy the power amp!

When set to "Speaker Off," the *Power Soak* provides an adequate load for the power amp.

**Speaker/cabinet options:**

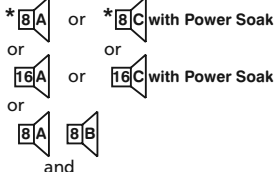
1. one 8 ohms cabinet (or the internal speaker) connected to jack "A" without the Power Soak;
2. one 16 ohms cabinet connected to jack "A" without the Power Soak;
3. two 8 ohms cabinets connected to jack "A" and jack "B" without the Power Soak;
4. one 8 ohms cabinet (or the internal speaker) connected to jack "C" including the Power Soak;
5. one 16 ohms cabinet connected to jack "C" including the Power Soak;

Note: Selecting the "Full Power" setting deactivates the *Power Soak*!

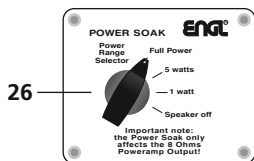


**Speaker / cabinet options**

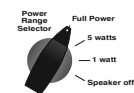
\* Another option would be to connect two 16-ohm cabinets in parallel instead of one 8-ohm cabinet.



## Power Soak Panel

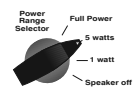


I. Full Power



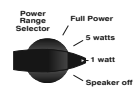
Power Soak nicht aktiv

II. 5 watts



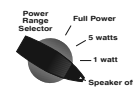
Power Soak aktiviert

III. 1 watt



Power Soak aktiviert

IV. Speaker Off



Power Soak aktiviert

**25 Power Range Selector:** Use this switch to activate the *Power Soak* and select the desired power level. The *Power Soak* works only in combination with the amp's Output "C" (jack 24)!

You have four options:

The first setting (I) is "Full Power." It deactivates the *Power Soak* and feeds the power amp's full output to the speaker output "C" (24, "Poweramp Output C 8 - 16 Ohms, Power Soak").

The second setting (II) is "5 watts." It activates the *Power Soak* and reduces the power sent to the speaker or cabinet connected to the Output "C" (24) to 25 percent (about 5 watts).

The third setting (III) is "1 watt." It activates the *Power Soak* and reduces the power sent to the speaker or cabinet connected to the Output "C" (24) to 5 percent (about 1 watt).

The fourth setting (IV) is "Speaker Off." It activates the *Power Soak*, whose resistors convert the power amp's full output to heat, and switches the cabinet connected to the Output "C" off.

**CAUTION:** The *Power Soak* circuit works only in conjunction with an 8-ohm or 16-ohm speaker (or cabinet) connected to the Output "C" (24). Make absolutely certain a speaker is connected to the Output "C" - for example, the Combo amp's internal speaker - before you engage the *Power Soak* by setting switch 25 to "5 watts" or "1 watt."

Poweramp Output "C" (24) and the power soak circuit is disabled whenever a 1/4" jack plug is connected to the Output "A" (22). In other words: if you intend to employ the *Power Soak* make sure to connect the cabinet or speaker to the Output "C" (24) and at the same time make certain there is no 1/4" jack plug connected to the Output "A" (22)!

**Heads up:** When activated, the *Power Soak's* resistors convert some or all of the power amp's output into heat. These heavy-duty resistors reside on a circuit board behind behind a steel grille. Ventilation is important for every tube amp, but all the more so for this amp because the temperature around the *Power Soak* circuitry can climb quite steeply depending on the Master volume and *Power Range Selector* settings. So, make sure air can circulate freely around the back of the amp!

Do not operate the amp at peak loads - that is, with the Master knob set to position 5 or beyond, pushing the power amp hard into overdrive - for longer periods with the *Power Soak* activated because its power resistors may overheat!

### Important tips from the designer:

You can use the *Power Soak*, which attenuates the signal sent to a connected 8-ohm or 16-ohm cabinet, for several purposes. For example, you may want to shape your tone with moderate (!) power amp saturation, but the volume with the Master knob cranked may be too loud for the situation or location. In that case, simply cut the power sent to the speaker. You can opt to reduce output by three quarters or even down to just one watt.

The "1 Watt" setting drastically reduces the volume level, though it will still be loud enough for monitoring during recording sessions.

The *Power Soak Selector's* "Speaker Off" is the setting of choice when you want to mute the speaker for direct-to-desk recording.

The power amp's entire output is then fed to the *Power Soak's* heavy-duty resistors, which ensure the power amp gets the load it needs to run safely.

If you are using the *Power Soak* in combination with the Clean channel, don't drive the power amp too hard by setting the *Master* to position 5 or beyond for a longer period because the power resistors' temperature will rise sharply.

If you do set the *Master* to position 5 or beyond, I highly recommend that you back off the *Bass* and Input Gain knob settings, particularly for the Clean channel, to prevent undesirable clipping. Bear in mind the golden rule that a speaker or cabinet may be only connected to the Output "C" (jack 24) when you intend to employ the *Power Soak*. When in doubt, always check first!

If you want to record via the *Line Out* without a connected speaker - typically a cabinet connected to the head - simply select "Speaker Off".

The *Power Soak's* heavy-duty resistors will provide the necessary load for the power amp.

## Technical Data

**Rated power:**

**Input sensitivity level Input, Clean channel:**

**Input sensitivity FX Return:**

**Output level FX Send, level range:**

**Balanced Line Output:**

**Tubes:**

further details see below!

**Fuses:**

mains fuse at 100 / 110 / 120 mains voltage

mains fuse at 220 / 230 / 240 mains voltage

Power Tube Fuses (internal on main PCB):

**Important:**

**Power Consumption:**

**Dimensions:**

Combo (type E302, E304):

Head (type E307, E309):

**Weight:**

Combo:

Head:

approx. 20 watts (maximum);

-20 dB nominal;

-20 dB, approx. 0 dB max.;

-20 dB to approx. 0 dB peak;

0 dB peak;

2 x ECC 83 (12AX7);

2 x EL 84 (6BQ5);

0.8 ATL (T: slo-blo);

0.4 ATL (T: slo-blo);

2 x 0.08 AM (80 mA, M: medium blow)

**Replace fuses only against same type and rating!**

approx. 80 watts max.;

approx. 42 cm x 37 (40) x 23 cm (W x H x D);

approx. 16.5" x 14.6" (15.7") x 9";

approx. 42 cm x 20 (23) x 23 cm (W x H x D);

approx. 16.5" x 7.9" (9") x 9";

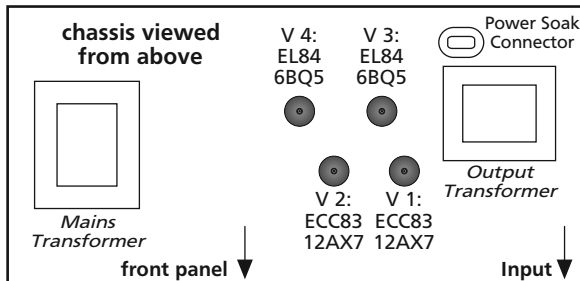
approx. 13.3 kg (E302); approx. 14.2 kg (E304);

approx. 29.3 lb (E302); approx. 31.3 lb (E304);

approx. 8.9 kg (E307); approx. 9.2 kg (E309);

approx. 19.6 lb (E307); approx. 20.3 lb (E309);

**Tube array:**



**the tubes and their function:**

V 1 - ECC83 (12AX7): input stage, 2. gain stage; grade: FQ selected

V 2 - ECC83 (12AX7): Lead driver stage, 4. stage; grade: selected

V 3, V 4 - EL84 (6BQ5): power tubes, poweramp, matched set

**Tube replacement report:**

1. Replaced on: \_\_\_\_\_ 20 \_\_\_\_ Replaced by: \_\_\_\_\_

Replaced tubes: \_\_\_\_\_

Reason: \_\_\_\_\_

2. Replaced on: \_\_\_\_\_ 20 \_\_\_\_ Replaced by: \_\_\_\_\_

Replaced tubes: \_\_\_\_\_

Reason: \_\_\_\_\_

3. Replaced on: \_\_\_\_\_ 20 \_\_\_\_ Replaced by: \_\_\_\_\_

Replaced tubes: \_\_\_\_\_

Reason: \_\_\_\_\_

## Handling and Care

- \* Keep the amp safe from hard knocks and shocks. Tubes are fragile and tend to suffer when exposed to mechanical stress!
- \* Let the amp cool down before you transport it. Ten minutes or so will spare the tubes.
- \* Tubes take some 20 seconds to warm up after you switch the power on, and about two to three minutes before they are able to pump out full power. Make a habit of giving your amp plenty of time to get toasty and flipping the Standby switch for short breaks.
- \* In order to spare the power tubes and prolong their lifetime, we recommend to set the Stand By switch to Stand By (down position, that is) before you switch the amp on. After a period of 30 seconds you may activate the poweramp by flipping the Stand By switch.
- \* Avoid storing the amp in damp or dusty rooms to spare jacks, switches and potentiometers. If you don't use the amp all the time, I recommend that you drape a covering over it to prevent the intrusion of dust. Even better, keep it in a transport cover or flight case.
- \* Never use caustic or scouring detergents to clean the amp's housing, front or rear panels. Use a soft, damp cloth or sponge with diluted soapsuds or a standard brand of mild dishwashing liquid instead. Never use solvents they can dissolve the surface (varnish) and the front and rear panel labels. Keep liquids well away from the amp, particularly the interior of the housing.
- \* Make sure air can circulate at the rear and top of the amp to allow for adequate cooling, which increases component life.
- \* Never operate the amp without an adequate load (a speaker, cabinet or suitable terminating resistor, i.e. the internal Power Soak circuit).
- \* High ambient temperatures place an additional strain on diverse components; so if at all possible, avoid operating the amp at temperatures far higher than 30°C (86°F) for longer periods. Running the amp at mains voltages exceeding the nominal mains input voltage over longer periods can also shorten component life.
- \* Replace tubes with selected tubes that satisfy ENGL selection criteria to forestall microphonic properties, undesirable noise and unbalanced power amp signals. Because power tubes' idle current (bias) must be checked and possibly adjusted when replacing tubes, this is a job best left to experienced and authorized specialists.

## Contents:

1. ENGL Tube amplifier  
RockMaster Combo type E302 or  
RockMaster Head, type E307 or  
MetalMaster Combo, type E304 or  
MetalMaster Head, type E309;
2. mains cord;
3. this manual;
4. a pamphlet entitled Instructions for the Prevention of Fire, Electrical Shock and Injury.

## Space for User Notes:



## Troubleshooting

**\* The amp does not power-up after you have switched the power on; the Power On LED (12) does not light up; the Channel & Mid Shape switching functions do not react, i.e. the corresponding control LED's do not indicate an active function; moreover no sound is emanating from the connected speaker.**

- > Is the mains cord connected to the receptacle/live power source?
- > Is the power cable you are using intact? Try another equal mains cable.
- > Is the mains lead properly connected to the AC Power Inlet (15) at the amp?
- > Possibly the mains fuse (16) has blown, unplug the mains cord from the mains connector and the receptacle and check the mains fuse.

**\* The amp fails to respond when you try to control switching functions remotely using a footboard such as the Z-4 or a MIDI switcher such as the ENGL Z11-S.A.C..**

- > Are the footpedals (or the switching loops) connected to the corresponding footswitch jacks (17, 18)?
- > Are the cords you are using stereo, intact, and wired properly? (Refer to "Wiring of Principal Connectors" for pin assignments.)
- > If you are using footswitches other than an ENGL Z-4 or Z11-S.A.C., are the switches or relays inside the boards or switching loop systems off/on Single Pole Single Throw (SPST) switches? In other words, do these switches continuously connect to GND when you wish to activate the given function?  
If you're unsure about the answers to these questions, consult an authorized service center or a professional specialist.

**\* The amp is not providing an output signal/no sound is emanating from the speaker.**

- > Is at least one speaker connected to the speaker outputs "A" (22) or "C" (24)?
- > Is the power amp activated (Standby switch to ON/"upper" position)?
- > Are all cords (guitar, effect, and speaker) connected properly and are they functional?
- > Unplug connected effectors and see if the amp works fine without these peripheral devices.
- > Is the *Power Soak Selector* (step switch; 25) set to "Speaker Off"?  
In this case, the Output "C" (24) is switched off!  
Set the *Power Soak Selector* (25) to another position, e.g. "Full Power."
- > Are the Master, Gain or Volume knobs set to a value greater than "0" (in fully counter-clockwise position)?  
If any of these knobs is fully down, no signal is routed to the amp's outputs.
- > You may be looking at a faulty tube or another defect. (the internal power tube fuses blown, etc.)  
In this case, be sure to take the amp to an authorized, professional service center.

**\* The speaker is emitting humming noises:**

- > Is there a connection (for example, via a shielded circuit, e.g. Line Out) between the amp and another device that is grounded via a power plug of its own?  
Two or more circuits sharing a common electrical ground line can cause audible hum.  
If low-frequency noise is emanating from your rig, be sure to consult a specialist.
- > The amp and mains grounds are not connected properly or are altogether disconnected. Have an experienced specialist check this.
- > Cords connected to the input or effect loops 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 (for example, 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 telephones or powerful local transmitting stations nearby.  
Switch off mobile phones while troubleshooting noise problems.

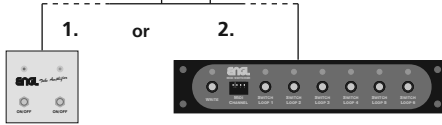
**\* One of the power amp's internal micro-fuses blows, so its output power and therefore the overall volume drops dramatically:**

- > The given power tube may be defective. If that power tube's internal micro-fuse is replaced and the new fuse also blows, the defective tube needs to be swapped out. Fuses and tubes should be checked and replaced by a qualified professional or specialist.
- > Other reasons a power amp fuse may blow: The amp has been overloaded by excessive volume levels, mains voltage, or the wrong output impedance. Check the speakers' overall impedance and, if necessary, adjust your setup accordingly (refer to the paragraph under "Speaker/cabinet options" in section 24).

**CAUTION! Please read and heed the following:**

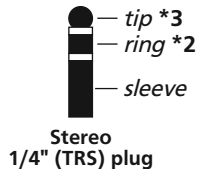
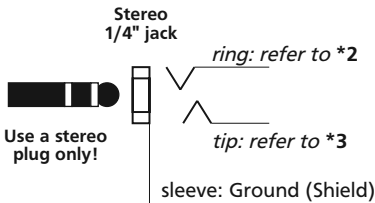
You'll find an ancillary pamphlet accompanying this owner's manual entitled Instructions for the Prevention of Fire, Electrical Shock and Injury.  
Be sure to read it before you plug in and power up the amp!

# Your options for controlling the ENGL RockMaster or MetalMaster amp remotely:



1. Use a dual footswitch such as the ENGL Z-4, connecting it to the amp via a stereo cord equipped with 1/4" jack plugs. You can switch channels and *Mid Shape* via the dual footswitch connected to port 18, *Reverb Off/On* and *FX Loop off/on* via the dual footswitch connected to port 17.
2. Use a MIDI switcher such as the ENGL Z11-S.A.C., connecting it to the amp via two stereo cords equipped with 1/4" jack plugs. The buttons on the switcher can serve to control *Clean/Lead*, *Mid Shape*, *Reverb* and *FX Loop*. You can also program all kinds of switching setups to the various MIDI program locations. Here's just one example: You could configure MIDI Preset #1 so that the *Clean* channel and *Reverb* are on, while *Mid Shape* and *M.V.B.*, are off. Then you could set MIDI Preset #2 up so that *Lead* channel, *Mid Shape*, and *FX Loop* are on, while *Reverb* is off. Whatever setups you decide to program, you can easily activate the desired configuration directly via a MIDI board such as the ENGL Z-9, Z-12, or Z-15. This type of control option is extremely versatile; we recommend it highly if you intend to use the amp in conjunction with any MIDI system, including MIDI effects devices.

## Wiring of Principal Connectors: Footswitch (17, 18) and Balanced Line Output (21)



- Footswitch jack (17):**  
 \*2: A switch connected to this terminal controls *FX Loop*: off < > on;  
 \*3: A switch connected to this terminal controls *Reverb*: off < > on;
- Footswitch jack (18):**  
 \*2: A switch connected to this terminal controls *Mid Shape*: off < > on;  
 \*3: A switch connected to this terminal controls Channel switching: *Clean* < > *Lead*;

- Balanced Line Out jack (21):**  
 \*2: the ring carries an  
 - inverted ("cold") signal;  
 \*3: the tip carries  
 + the ("hot") signal with normal polarity;

ENGL Gerätebau GmbH  
 Internet: [www.engl-amps.com](http://www.engl-amps.com) or [www.engl-amps.de](http://www.engl-amps.de)  
 Text, design, graphics and layout by  
 Horst Langer, ENGL Amp Designer

**Technical specifications are subject to change without notice.**

## Notes / Notizen

**ENGL®**  
[www.engl-amps.com](http://www.engl-amps.com)