

ENGLE

*Straight
Guitar
amplifier*

Operator's Manual

Please, first read this manual carefully!

ENGL Straight: 2-channel all-tube guitar amplifier.

Models:

E401: Combo 50 Watts;

E403: Combo 50 Watts special (3 channels),

E501: Combo 100 Watt;

E503: Combo 100 Watts special (3 channels),

E402: Head 50 Watts;

E404: Head 50 Watts special (3 channels);

E502: Head 100 Watts;

E504: Head 100 Watts special (3 channels);

Features:

Two basic channels Clean and Lead, 3-Band-EQ in every main channel, Accutronics reverb spring, Master and Presence controls for the power amp, serial Effects Loop and 0dB Line Out. The channel Clean/Lead switching can be executed via a footswitch. In addition to the Clean/Lead channel switching the special models allows remote control of the Lead Boost and the Reverb via a double footswitch. This functions can also be controlled via MIDI if a MIDI Switcher (e.g. Z-11, optional) is connected to the footswitch jacks.

You will find guidelines on care and maintenance of tube amps on the last page of the manual. Please read and heed these before operating your amp. All crucial information pertaining to the operation of this amp is preceded by "NOTE" or "CAUTION." Please read and heed these as well.

Front

Input: Unbalanced 1/4" input jack.

Clean channel controls:

Volume: Gain and Volume control for the Clean channel (in front of the FX loop).

Bass: Bottom end voicing control.

Middle: Mid-range voicing control.

Treble: Upper range voicing control.

Clean channel sound switches:

Gain Boost: Bass and Gain boost of the input stage.

Frequency Shift: Boosts the mid frequencies between 300 and 500 Hz.

Bright: Alters the EQ by boosting the upper treble range.

Treble Shift: Boosts the high mids between 1 and 3 kHz.

Lead channel controls:

Leaddrive: Gain for the Lead channel, controls the amount of preamp overdrive in the Lead mode.

CAUTION: Extremely high gain and volume levels in the Lead mode can produce strong feedback. Avoid feedback squeals, they lead to hearing loss and damaged speakers!

Bass: Bottom end voicing control.

Middle: Mid-range voicing control.

Treble: Upper range voicing control.

Lead Volume: Volume control for the Lead channel (in front of the FX loop, affects the SEND level).

Lead-channel switches:

Clean/Lead: Channel selector switch for Clean and Lead; This feature can also be switched via the footswitch jack "Clean/Lead" located at the rear panel: the channel selector switch is deactivated once a footswitch is connected to the footswitch jack. The red LED beside this switch indicates Lead channel activ.

Lead Boost: Switching between Soft and Heavy Lead mode by boosting the amount of overdrive in the preamp. This feature can be also accessed via a double footpedal connected to the stereo jack that is located at the rear panel of the amp but in the special models only. Once a footpedal is connected, this switch is deactivated.

Mid.Shift: Boosts the mid frequency at 500 Hz.

Bright: Alters the EQ by boosting the upper treble range.

Bypass: Defeats the EQ (Bass, Middle, Treble) of the Lead channel.

Poweramp:

Presence: This control defines the Treble response in the poweramp stage.

Master: Master volume control for power amp output (located post FX loop).

Stand By: Poweramp standby switch.

Power: AC power on/off.

Rear Panel

Fuse:	External mains fuse. For values refer to "technical data".
NOTE:	The value must correspond to the available current.
CAUTION: (Ground:)	Ensure replacement fuses bear identical ratings (refer to the table below)! Only used at balanced mains without Earth to avoid hum. Usually this switch is set to the center.
Voltage selector:	This selector must be set to the correct value that corresponds to the available current, e.g. 120 Volts in the U.S., 220 Volts in Germany, etc.
CAUTION:	Before you power the amp up, ensure the voltage value set at the voltage selector corresponds to the available current.
Reverb:	Reverb control, adjusts the portion of the reverb signal and increases reverb intensity when you rotate it clockwise. The reverb can be switched via the respective footswitch jack (only in the special models).
Footswitch:	1/4" jack for connecting a footswitch; it executes the following function: channel selection between Clean and Lead.
Footswitch:	1/4" stereo jack for connecting a double footswitch; it executes the following functions: (this jack is only mounted in the special models) Reverb On/Off Lead Boost.
Send:	Signal output for the FX Loop. Connect this output to a signal processor's input/return jack via a shielded cable with 1/4" plugs.
Return:	Signal input for the FX Loop. Connect this input to a signal processor's output/send jack via a shielded cable with 1/4" plugs.
Line Out:	Line output routed from the power amp; 0dB level.
4 Ohms parallel:	4 ohms speaker output jacks, internal connected parallel. For diverse cabinet options see the next chapter on this page!
8 Ohms:	8 ohms speaker output jacks, the internal 8 ohms speaker (Combo) is connected to this jack. For diverse cabinet options see the next chapter on this page!
NOTE:	Never operate the amplifier without a sufficient load, otherwise you may damage or destroy the power amp! Ensure your cabinet's specifications match the respective output's specs.
Choose only one of the following cabinet options:	
A:	One 4 ohms cabinet connected to a 4 ohms jack (without the internal speaker in the Combo!);
B:	An external 8 ohms cabinet and the internal speaker of the Combo connected to the 4 ohms jacks. When you unplug the cable for the external cabinet, ensure you plug the internal speaker back into the 8 ohms jack!
C:	Two external 8 ohms cabinets connected to the 4 ohms jacks (Head); Internal speaker only, connected to a 8 ohms jack (Combo), one 8 ohms cabinet (Head);
D:	Two 16 ohms cabinets connected to the 8 ohms jack (without the internal Combo speaker!) with an y-adaptor or an through jack at the cabinet.

Technical Data:

rated power:	approx. 100 Watts at 4 and 8 ohms (& 16 ohms); all 50X models. approx. 50 Watts at 4 and 8 ohms (& 16 ohms); all 40X models.
Tubes:	V1 (Input tube): ECC 83 / 12AX7, FQ selected; V2, V3, V4: ECC 83 / 12AX7, selected; V5: ECC 83 / 12AX7, standard; V6 - V9: 6L6GC matched set in the first version (single plate supply). V6 - V9: EL34 matched set, in the second version (dual plate supply).
mains fused external:	at 230 Volts: 2,5 A for the 100 Watt models; 1,6 A for the 50 Watts models. at 100 and 120 Volt: 5 A for the 100 Watts models, 3,15 A for the 50 Watts models.
mains fused internal:	3,15 A for the 100 Watts models; 2,5 A for the 50 Watts models.
plate fuse internal:	2 x 1,25A for the 100 Watts models; 2 x 0,5 A for the 50 Watts models.
CAUTION:	Replace fuses only against same type and rating!

Handling and Care

- Protect the amp from mechanical knocks (tubes!).
- Let the amp cool down before you transport it (approx. 10 minutes).
- Tubes need about 20 seconds to warm up after you switch the power on, and further on a few minutes before they reach their full power capability.
- Avoid storing the amp in damp or dusty rooms, they are hard on jacks, switches and potentiometers.
- Make sure air can circulate at the rear side and the top of the amp to allow for adequate cooling (increases component life).
- Never operate the amp without an adequate load.
- Replace tubes with select **ENGL** replacement tubes (special selection criteria) to avoid microphonic properties, undesirable noise and unbalanced performance.

Attention! Please read the following!

- This guitar amplifier can produce high volume levels. Exposure to high volume levels may cause hearing damage!
- Leave tube replacement and power amp biasing to qualified professional. Be sure the unit is switched off and unplugged!
- Caution! Tubes can get very hot and cause skin burns.
- Always use high quality cables.
- Never operate the amp through an ungrounded outlet!
- Never bridge a defective fuse and be sure replacement fuses feature identical ratings!
- Pull the AC mains plug before replacing fuses!
- Never open the chassis or attempt repairs to your own. Consult qualified service personnel!
- Never expose the amplifier to extreme humidity or dampness!
- Please read the instructions carefully before operating the unit!
- Only operate the amplifier in a manner it is designed for and therefore note this operational instructions!

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**We reserve the right to make
unannounced technical upgrades!**