# Please note:

In order to keep the file size small this PDF-File exists only of the internal pages of the original manual which contains the important technical information!

The **ENGL SAVAGE 60** is on the cutting edge of modern guitar technology, it boasts a number of efficient features and operating modes: two channels, Rhythm and Lead each featuring a Gain control and an individual Boost pushbutton. Choose between Clean or Crunch tones in the Rhythm channel, and a lo end Lead for focused projection or hi gain Lead with an emphasized bottom end in the Lead Channel. Separate volume controls and an additional EQ section in the power amp for each channel allow for precision-tuning between the channels. The Hi Range Suppressor is a unique innovation combined with the 3- band voicing contol system: This new contol affects the response of the Treble control in the high mid range and therefore it enlarges the tonal variations and assists the fine-tuning of the mid and high frequency range. Another clever feature: Two independent volume levels for the Master control, switchable via footpedal, automatically giving you the volume you want for solos. This amp also features a number of signal paths: a passive, parallel/serial (!) FX loop, a variable balanced line out featuring speaker simulation and an overload LED, and 8 and 16 z speaker outputs. The integrated ECS (Emergency Circuit System) protects the amp from damage due to power tube defects/failure and ensures the amp continues to function at reduced power until the failed tube can be replaced.

Intelligent design features, superior craftsmanship and finishing and quality components are what this device is all about. However keep in mind, that a few precautions will radically extend tube life (see handling and care guidness).

# **PLEASE NOTE:**

Read the Operator's Manual carefully and thoroughly, especially the following Handling and Care section as well as the framed guidelines. Avoid operating errors and potential damage to the amp by heeding the guidelines and cautionary remarks in this manual. The footnotes also cover a few convenient pointers and interesting tips on several functions. These are listed at page 6 and 7 of the manual. This manual covers all the features, operational guidelines, technical specifications and many helpful hints and tips. It should answer all your questions, so keep it in a safe place and refer to it when necessary.

# Handling and Care

- Protect the amp from mechanical knocks (tubes!).
- Let the amp cool down before you transport it (app. 10 minutes).
- Tubes need about 20 seconds to warm up after you switch the power on, and furtheron 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 front and 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 microfonic properties, undesireable noise and unbalanced performance.

# The last page contains a front- and backpanel illustration!

### **FRONT PANEL**

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

#### 6 LEAD BOOST

Boosts the degree of distortion in the Lead channel, with primary emphasis on the bottom end.

| boosts the degree of distortion in the Lead Chairner, with primary emphasis on the bo                         | ttom ena. |
|---|-----------|
| 7 BASS  | TIP 4     |
| Bottom end voicing control in the main EQ   |           |
| 8 MIDDLE  | TIP 4     |
| Mid-range voicing control in the main EQ  |           |
| 9 TREBLE  | TIP 4     |
| Upper range voicing control in the main EQ  |           |
| 10 HI RANGE SUPPRESSOR  | TIP 5     |
| This control suppresses mid-/high range frequencies, and defines the control range of the TREBLE (9) feature. |           |

#### 11 VOLUME RHYTHM

Volume control for the Rhythm channel

#### 12 VOLUME LEAD

Volume control for the Lead channel.

### 13 VOLUME MASTER

Master volume control for power amp output; the feature to switch between two Master volume levels (Hi/Lo-Master Volume) can be accessed by means of a footswitch (See 22)

## 14 RHYTHM/LEAD

Channel selector pushbutton for the Rhythm and Lead modes, red LED indicates Lead mode is active.

#### 15 PRESENCE RHYTHM

Treble control for the Rhythm channel in the power amp

### 16 DEPTH BOOST (Lo/Hi)

Bass boost feature for the Rhythm channel in the power amp

#### 17 PRESENCE LEAD

Treble control for the Lead channel in the power amp

### 18 DEPTH BOOST (Lo/Hi)

Bass boost feature for the Lead channel in the power amp

#### 19 POWER

AC power on/off

# **REAR PANEL**

#### 20 AC SOCKET

Connect AC cord here

**ATTENTION:** Ensure you use an intact AC cord with an insulated plug only! Before you power the amp up, ensure the voltage value printed beside the AC socket corresponds to the available current.

#### 21 AC FUSE BOX

Contains mains fuse (rear chamber) and spare fuse (front chamber)

**NOTE:** Ensure replacement fuses bear identical ratings (refer to the table)!

# 22 FOOTSWITCH: RHYTHM/LEAD; VOLUME LEVEL SWITCHING ......TIP 6

1/4" stereo jack for double footswitches, executes the following functions:

- 1.Channel switching RHYTHM/LEAD (mono terminal)
- 2. Switching between the two Master volume levels Hi and Lo (stereo terminal)

#### 23 F.X. LOOP SEND

Signal output for the Effects loop. Connect this output to a signal processor's input/return jack via a shielded cable with 1/4" plugs.

### 24 F.X.LOOP RETURN

Signal input for the Effects loop. Connect this input to a signal processor's output/send jack via a shielded cable with 1/4" plugs.

#### 25 BALANCE

FX mix control for the Effects loop: Rotate the knob to the DRY position for the pure amp signal, i.e. no effect on the signal. Turn clockwise to blend in an effect connected to the loop to the dry signal (parallel/passive). At the EFFECT position, only the wet signal, i.e. the signal sent from the FX device is fed to the power amp (serial/passive).

**NOTE:** If no effects processor is connected to this loop, leave this control in position DRY!

#### **26 POWER TUBE FUSE**

Power tube fuse (E.C.S.) for the left power tube (as seen from the rear of the chassis); LED illuminates when a fuse is defective.

### 27 POWER TUBE FUSE

Power tube fuse (E.C.S.) for the right power tube; LED illuminates when a fuse is defective.

#### 28 LEVEL

Signal level control for the frequency-corrected line output; it is used to match the amp's signal amplitude at the LINE output to the mixing console or recorder's input.

#### 29 OVERLOAD

This LED denotes the LINE output is overloading; in this case, reduce the signal's amplitude via the LEVEL control.

| 30 FREQUCOMPENSATED LINE OUT (BALANCED)  | TIP 7 |
|--|-------|
| The frequency-corrected, balanced LINE output jack (XLR). (Pin 2 and 3 signal, P Its signal simulates a $4 \times 12^n$ speaker cabinet. |       |

31 POWERAMP OUTPUT: 8 OHM .......TIP 8
8Z speaker output jack, for the connection of one 8Z cabinet:

32 POWERAMP OUTPUT: 16 OHM ......TIP 8

16Z speaker output jack for one 16Z cabinet.

**NOTE:** Never operate the power amp without a sufficient load, otherwise you may damage or destroy the power amp! Ensure your cabinet's specifications match the respective output's specs.

### TIP 1

GAIN settings depend on what type of pickups are installed in your guitar. The recommended setting for humbuckers or active pickups lies between the 10 and 1 o'clock positions, and 12 to 3 o'clock for single coils, for a pure clean response. In this case, leave the RHYTHM BOOST pushbutton in the Lo position. More over increased gain will produce a touch of overdrive in the preamp ("light Crunch") that in combination with high volumes (power amp distortion) produces an expressive tone! If your pickups are of the ultra-high output variety ( > 1V or 0dB ) you may have to back off the guitar's volume to achieve a truly clean tone.

#### TIP 2

For crisp glassy tones, set the BRIGHT switch to the HI position. This setting boosts the treble response of muddy pickups.

### TIP 3

Use the LO position of the RHYTHM BOOST pushbutton for Clean or light Crunch response; the Hi position generates a fantastic Crunch or a powerful Rhythm, depending on then GAIN (2) setting.

#### TIP 4

To get an idea of this amp's capabilities, we suggest you set all control pots to the 12 o'clock position and then adjust the sound according to your taste, the connected speakers and the room's ambience.

# TIP 5

The effectiveness of the HI RANGE SUPPRESSOR depends on the setting of the TREBLE control; the higher its level is set, the higher the efficiency of the H.R.S. The frequency range it operates in, is between 1 kHz and 2,5 kHz; i.e. reach different sonic shapes in the Lead mode by means of the H.R.S. control: a smooth or a hard and metallic lead tone character, especially in combination with higher TREBLE control settings.

## TIP 6

The switching functions CLEAN / LEAD (14), and the (MASTER) VOLUME LEVEL SWITCHING can also be executed via a Looper/switcher or other MIDI devices that feature 2 freely-programmable switching inputs. Depending on the type of MIDI device, you may have to split the FOOTSWITCH stereo jacks into two mono jacks. Each switching function requires the mono or stereo contact (see 22 for assignments) and the ground!

NOTE! If the switching and signal grounds are identical in the MIDI device, then you may encounter a ground loop, especially if the amp and device (e.g. FX processor) exchange signals!

### TIP 7

The LINE OUT's output level is influenced by the following factors: By the input level (GAIN), the VOLUME control settings for the various channels, to some degree by voicing control settings, and by the MASTER volume level. First dial in the desired sound combination at the front panel. Then adjust levels for FX devices and signal processors (if connected). Now use the LEVEL control to adjust the level. The LINE output is not overloaded until the OVERLOAD LED illuminates brightly and continuously. You can push the level up to this point to match a mixing console or recorder's input level requirement. Use the respective device's input sensitivity or gain control to fine-tune level adjustments.

### TIP 8

This amp is designed for one speaker cabinet (8 or 16 Z). If you decide to connect additional speakers, ensure you keep the overall impedance in mind! For instance, if you want to connect two 8Z systems, you must first connect them in series and then to the amp's 16Z output. The **ENGL Speaker Cabinet Extension** offers a number of options, right up to four cabinets.

# Attention! Please read the following!

- This 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 unpluged!
- 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!

# **Technical Data**

Rated power: 60 W

Power Outlet Impedances: 8Z, 16Z

Minimum Input level: - 45 dB

Maximum Input Level: + 1,5 dB

Effects loop: SEND - 10 dB (average), 0 dB (max.)

RETURN + 3 dB (max.)

LINE output: + 6 dB (at 1kHz!)

Levels are based on 0db => 1 V eff, measured at 1kHz.

Tubes: V1 -> ECC83/7025 F.Q.

V2, V3 -> ECC83/12AX7 selected V4 -> ECC83/12AX7 standard V5, V6 -> EL 34/6CA7matched sets

Fuses: AC mains: 230 Volts 100 and 120 Volts

external 1,25 AM 2,5 AM (medium) internal 1,6 AT 3,15 AT (slow)

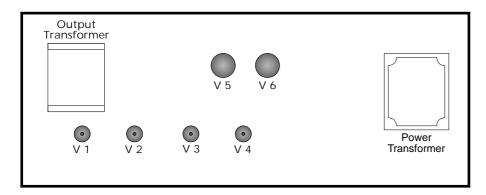
Power tubes (ECS): 2 x 160 mAM

Dimensions: (I x h x d) 60 x 24 x 25 cm (23,6 x 9,5 x 9,8 ")

Weight: app. 15 kg

We reserve the right to make unannouced technical upgrades.

## Tube array:

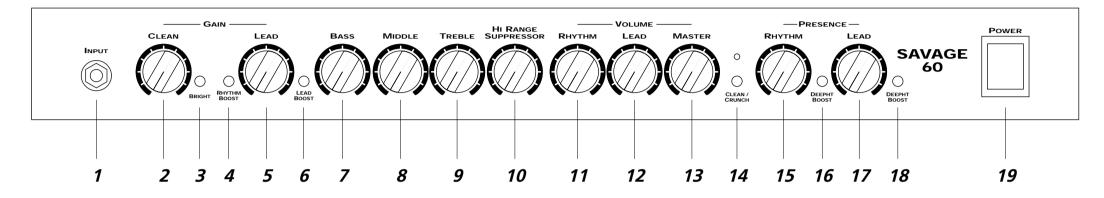


# E C S ( Emergency Circuit System):

This circuit ensures the amplifier does not shut down completely when a single power tube fails. The amp continues to perform at approx. 1/3 of the rated power, depending on the type of defect.

Gas developing in the power tubes can cause a momentary short circuit. The fuse activates, but the amp is not shut down! Often the tube absorbs the developed gas, and is operable after a short circuit. Sometimes the problem can be rectified by replacing the fuse, but if the new fuse activates as well, the defective power tube needs to be replaced.

# FRONT PANEL



# **REAR PANEL**

