ENGL

Tube Amp
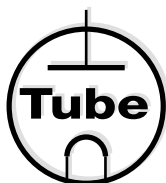

TUBE PREAMP 570
Full Tube Guitar Preamp
with MIDI-Control

Operator´s Manual
Please, first read this manual carefully!

ENGL

Tube

Amp
Technology

Table of Contents

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!

Note: Technical specifications are subject to change without notice.

Congratulations! With the **ENGL** **Preamp E570**, you now own one of the **most advanced** and **versatile Guitar preamps** available today!

This **sophisticated guitar preamp** marries the unrivalled tone of **all-tube technology** to the awesome sound-shaping might of control features powered by **state-of-the-art microchip circuitry**. This elegant combination puts at your fingertips **a vast range of great fundamental tones** and an all but inexhaustible reservoir of compelling variations all of which may be **controlled remotely via MIDI**. What's more, the preamp boasts a host of hip & practical features: To mention just a few, you get a **switchable Noise Gate** for the Crunch, Lead I and Lead II overdrive channels. In addition, the amp sports a **frequency-compensated stereo out** featuring **4x12" speaker cabinet emulation**. You can send a balanced signal to a mixing console via the XLR ports, or an unbalanced signal to a recording device via the stereo jack.

This affords you:
1. a logical control feature array, utmost **ease of use** and **remarkably intuitive handling**;
2. **excellent sound-shaping options** and **greatest flexibility** courtesy of the many voicing options and special features, and 128 MIDI presets offering a bevy of programming options;
3. **a gigging workhorse** that also sports a speaker simulation system, making it a handy tool for **studio** and **home recording**;
4. a combination of **finely-tweaked, MIDI controllable sound-shaping functions** providing instant access to a **wealth of disparate sounds**;
5. the **four basic sounds** Clean, Crunch, Lead I **and** Lead II; with two variable and switchable Gain levels and two voicing options (Modern and Classic) for each basic sound, you actually have 16 fundamental sounds to choose from;
6. an **ultra-advanced tone-generating machine** that will give you years of **playing pleasure** and **value to boot**.

Features and Functionality at a Glance
-> **Four basic channels**: Clean, Crunch, Lead I and Lead II with separate Gain, Treble and Volume knobs.
-> **Preamp Defeat Function:** This bypass circuit lets you combine the 570 preamp with further preamps or multi-effect processors to extend the range of your 19" rack system's sound-shaping options.
-> **Modern and Classic sound-shaping buttons**: Determine the basic voicing of all four channels, giving you a broader, deeper tonal spectrum to work with.
-> **Two Gain variants** for each of the basic channels: Gain Boost and Hi Gain let you activate directly two different gain settings for every channel.
-> **Two voicing sections**: one EQ for Clean and Crunch (Main Channel 1), and another for Lead I and Lead II (Main Channel 2).
  As a special feature, every channel sports a dedicated Treble knob.
-> **Various sound-shaping buttons** tuned to match the tonal requirements of the given channels: Bright and Ultra Bright for Clean and Crunch, Contour and Mid Edge for the two Lead channels.

4

-> **Programmable stereo effect loop:** Use this circuit to insert stereo effect devices into the signal chain.
-> **Master knob: Overall output level control.**
   The preamp can also be muted via MIDI controller 7.
-> **Stereo Effects Loop:** Use this circuit to insert stereo effect devices into the signal chain.
-> A stereo jack offers an **unbalanced, frequency-compensated line out** signal for recording to tape deck or PC.
-> **Balanced, frequency-compensated XLR line stereo outputs** for routing the preamp signals to mixers or recording gear.
-> MIDI In **and** Thru **ports** serve to integrate the preamp into a MIDI system.
-> **128 MIDI presets**, accessible via 16 MIDI channels.
-> The Preamp E570 **offers three different remote interface ports:**
   The Serial Amp Control Port accepts the Custom Z-9 Footswitch (optional); use it as a conventional switcher to select channels and two sound-shaping functions directly. Then there's the MIDI In, which accepts the Z-9 for use as a simple MIDI footcontroller or any other MIDI footcontroller. Finally, the preamp is equipped with a stereo jack that takes a dual footswitch, allowing you to switch the four channels remotely.
-> **Programmable Noise Gate** for suppressing noise in the Crunch, Lead I and Lead II channels.

Among the hallmarks of this fine preamp are painstaking workmanship and finishing as well as rigorously tested and carefully selected quality components. You'll find guidelines on care and maintenance of tube amps on page 24. Under the heading Tips from the designer, you'll come across practical tips on the aforementioned features throughout the manual. All critical information concerning the operation of this preamp is preceded by "NOTE", "CAUTION", "Read and heed" or some other eye-catching comment. We're calling your attention to these remarks for reasons of safety or other compelling motives, so please give them due consideration.

Everyone at ENGL is confident that the **E570 tube preamp's extraordinary versatility** and **outstanding features** are sure to delight you: **Simply plug in, play and be inspired by the tube tone of your ENGL 570preamp!**

A few words of wisdom from the designer:
Though this preamp is relatively easy to handle and you're probably raring to give it a go, I recommend that you read the owner's manual thoroughly before you power it up.

Contents:
1. ENGL E570 Tube Preamp;
2. mains cord;
3. this manual;
4. a pamphlet entitled Instructions for the Prevention of Fire, Electrical Shock and Injury.

Front Panel Features

At the back of the manual, you'll find fold-out diagrams of the front and rear panels. As you're reading the descriptions of the preamp's features, you'll gain a better understanding of the topic of discussion if you unfold and refer to them as we go!

1 PREAMP DEFEAT

This is a bypass that cuts the preamp out of the signal chain when you press the button. In this case, the input signal is routed directly to the Send jack. The LED located above the button illuminates to indicate the preamp is bypassed.

A tip from the designer:

This option comes in handy when you want to insert another preamp or an effect processor into a serial loop along with the ENGL Preamp 570. If the other preamp can also be bypassed, you can switch between the two preamps on the fly or even run them both at the same time. If you want to connect a second preamp, insert it into the stereo effects loop and set the Preamp Defeat status and FX Loop status active when you want activate the second preamp. You could even daisy chain several preamps or effect processors.

2 CLEAN GAIN

Clean channel Gain control. This knob determines the preamp's input sensitivity in Clean mode; use it to set the desired input level.

A tip from the designer:

The amount of distortion depends on your guitar's pickups and the Gain Boost (3) setting. In Clean mode, single-coil pickups may begin saturating the preamp when the knob is set to about the two o'clock position; pickups with very high output levels (humbuckers or active pickups) will evoke mild overdrive at even lower settings. If you want squeaky clean tone, simply back off the Gain knob accordingly.

3 GAIN BOOST

Boosts the input sensitivity of Main Channel 1, Clean and Crunch. The red LED above this button lights up to indicate Gain Boost is on. Gain Boost can also be switched via MIDI program change command or the Custom Z-9 Footswitch.

A tip from the designer:

As its name would imply, Gain Boost serves primarily to up Clean and Crunch channel input levels, extend both channels' gain ranges. In effect, this feature gives you two additional variations on these two channels' basic sounds. For example, you could set the Clean channel Gain knob to the highest setting at which your guitar signal remains distortion-free, just under the preamp clipping threshold. Then when you activate Gain Boost, you will overdrive the Clean preamp slightly, yielding a grittier tone well-suited for rock riffs.

Another Clean channel option is to use the Gain Boost as a volume booster. To do this, activate Gain Boost and dial in a Clean Gain knob setting, making sure not to push the preamp into clipping zone. Consider this your high-volume clean tone, say for clucking lead lines. Switching Gain Boost off gives you a softer clean tone for chord work. Switch back and forth between the two as desired.

4 CRUNCH GAIN

Gain control for the Crunch channel. This knob determines input sensitivity in Crunch mode; use it to dial in the desired amount of preamp distortion.

CAUTION: Extremely high gain and volume levels in Crunch 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!

A tip from the designer:
Single-coil pickups will evoke mildly overdriven sounds at settings somewhere between 10 and 3 o'clock. Try settings between 9 and 1 o'clock for pickups with high-output humbuckers or active pickups. Bear in mind the Gain Boost function. You can activate it via an ENGL Custom Z-9 Footswitch or a preprogrammed MIDI preset to get an even bigger, beefier crunch tone on the fly.

5 BASS

This is the preamp voicing section's passive low-frequency EQ for Main Channel I's Clean and Crunch modes.

6 MIDDLE

This is the preamp voicing section's passive midrange frequency EQ for Main Channel I's Clean and Crunch modes.

7 TREBLE CLEAN

This is the preamp voicing section's passive high-frequency EQ for Main Channel I's Clean mode.

8 TREBLE CRUNCH

This is the preamp voicing section's passive high-frequency EQ for Main Channel I's Crunch mode.

A tip from the designer:
To help you get acquainted with the preamp's fundamental sounds, I recommend that you set all tone controls to or slightly higher than the center or 12 o'clock position. For higher-gain Crunch sounds, your best bet is to turn the Treble Crunch knob down to prevent the pickups and speakers from generating feedback (a setting in the 10-to -1 o'clock range is recommended).

The Clean and Crunch channels are equipped with dedicated Treble knobs so you can tweak the top end of each of the two channels separately to suit your taste and the given sonic scenario. You will find that grittier tones generally sound better with a touch less treble because preamp saturation makes higher frequencies figure more prominently in the signal. Bear in mind that you also have the two Normal Bright (9) and Ultra Bright (10) buttons at your disposal for shaping the high frequency range. I suggest you get into the habit of dialing in lower Treble settings. That way, you can program various MIDI presets with one or both Bright options, remotely and have plenty of tonal variations at your fingertips.

9 NORMAL BRIGHT

This feature boosts the upper end of the high frequency range in Main Channel 1, Clean and Crunch. Its effectiveness decreases as Gain settings increase. The red LED above this button lights up to indicate the Normal Bright function is on. This feature can also be switched via MIDI program change or Custom Z-9 Footswitch.

A tip from the designer:

For a crisp or glassy tone, activate the Normal Bright. This setting brightens the sound of humbucking or muddy pickups. Don't let the names confuse you: Normal Bright actually addresses a higher frequency range than Ultra Bright. Note also that the Gain knob influences this sound-shaping function's intensity. Furthermore, its tonal impact varies slightly in Modern and Classic modes, particularly when you are driving the preamp into the clipping zone.

10 ULTRA BRIGHT

Located in the Clean and Crunch preamp stage of Main Channel 1, this sound-shaping function boosts slightly lower high frequencies. Unlike Normal Bright (9), its intensity remains the same irrespective of the Gain knob setting. The LED above the button lights up to indicate the Ultra Bright function is on. It can also be activated remotely via MIDI program change or Custom Z-9 Footswitch.

A tip from the designer:

This voicing option ups the twang factor inherent in certain types of guitars, and lets you put a set of sonic cow horns on those that lack it. Feel free to control this sound-shaping function remotely via MIDI. But whichever way you choose to use it, I recommend that you don't overstate top-end frequencies. Back off the two Treble knobs to avoid harsh, cutting or over-the-top brightness. In Classic mode, high-frequency peaks are dampened anyway when the preamp starts clipping. In Modern mode, the tone can become very gritty and raw, particularly when Bright functions are activated. That's not necessarily bad; for some sounds, this effect can be quite compelling. I suggest you literally play it by ear experiment freely and you are sure to discover many interesting and inspiring top-drawer tones. Be sure to give the Modern/Classic sound-shaping functions a good work out. I suspect you'll be delighted by the array of tones, particularly as you add different guitars and pickups to the mix.

11 CLEAN VOLUME

Determines the Clean channel's level. Use this knob to adjust the Clean channel's volume and dial in the desired balance in comparison with the other channels' levels. Because this knob is located pre effect loop, it also determines the effect send level in Clean mode. The green LED to the right of the knob lights up to indicate the Clean channel is on.

12 CLEAN

Push this button to activate the preamp's Clean channel directly (in reciprocation with Crunch, Lead I, Lead II, and Preamp Defeat). The green LED to the right of the Clean Volume knob (11) lights up to indicate the Clean channel is active. The Clean channel may also be activated via MIDI program change, the ENGL Custom Z-9 Footswitch, or a dual footswitch.

13 CRUNCH VOLUME

Determines the Crunch channel's level. Use this knob to adjust the Crunch channel's volume and dial in the desired balance with the other channels' levels. Because this knob is pre effect loop, it also determines the effect send level in Crunch mode. The yellow LED to the right of the knob lights up to indicate the Crunch channel is on.

14 CRUNCH

Press this button to activate the preamp's Crunch channel directly. (in reciprocation with Clean, Lead I, Lead II, Preamp Defeat), The yellow LED to the right of the Crunch Volume knob (13) lights up to indicate the Crunch channel is active. The Crunch channel may also be activated via MIDI program change, the ENGL Custom Z-9 Footswitch or a dual footswitch.

15 MODERN/CLASSIC

This sound-shaping feature voices the basic tonal character of the four Clean, Crunch, Lead I and Lead II channels, the choices being a more contemporary sound or vintage-approved tone. The LED above the button lights up to indicate Classic is activated. Modern and Classic can also be activated via MIDI program change or the ENGL Custom Z-9 Footswitch.

A tip from the designer:

When set to Modern, the preamp's response is a touch less dynamic, with fewer midrange frequencies in the mix. This voicing is particularly prominent when the preamp stage (Crunch, Lead) is overdriven, making Modern the right choice for heavier styles. Classic mode is the way to go for vintage tube tone. If you want your lead lines to pack a mightier punch, I recommend that you activate Contour in Lead/Modern mode, or generally opt for Classic mode. When in Classic mode and at higher Gain settings, deactivate Mega Lo Punch for a more focused, tighter low end. Though the difference in the two voicings is more subtle in the Clean channel, you will notice that Classic elicits a more dynamic response; this is attributable to the ECC 83 triode stage. The result is a slightly smoother, less edgy tone. Here's a hip Classic/Modern configuration for you: Set up your rig so that the preamp is right at the cusp of clipping that is, the point where the clean signal begins to break up and transition to a dirtier tone and turn up the Treble knob. In Classic mode, higher frequencies are dampened - an effect known as soft clipping yielding a more homogenous, balanced tone. You can achieve this kind of tone by dialing in higher Gain knob settings for the Clean channel knobs or activating Gain Boost. The Crunch channel also puts out mild, rock-approved grind: Activate Crunch and dial in lower gain levels by setting Crunch Gain somewhere in the 9 - 1 o'clock range.

16 M.L.P.: MEGA LO PUNCH

When activated, this function boosts low-end frequencies in all four preamp channels. The red LED above the button lights up to indicate this function is on. It may also be activated remotely via MIDI program change or Custom Z-9 Footswitch.

A tip from the designer:

Mega Lo Punch's effects vary, particularly in Lead channel Modern and Classic operating modes. When Modern is on, it boosts the bottom-end meaning that it audibly increases sound pressure. When Classic mode is activated, the effect depends

on the Gain knob setting and is not nearly as pronounced. At very high Gain settings and depending on the type of pickup, the signal's low end may become rather muddy. When you configure the amp in Classic mode and dial in a high gain level, I strongly suggest you deactivate Mega Lo Punch.

17 FX LOOP ACTIVE
Press this button to activate and deactivate the FX Loop. The red LED above the button lights up to indicate FX Loop is activated. You can also switch the FX Loop on and off via MIDI program change or Custom Z-9 Footswitch.
A tip from the designer:
The integrated programmable stereo effect loop offers you the option of calling up a connected outboard signal processor's effect at will via MIDI and assigning this effect to the preamp's different channels as desired. As an alternative, you can use the effect loop to integrate an additional preamp into the system. In this case, use Preamp Defeat and FX Active Loop to switch to and fro between the 570 preamp and the connected outboard preamp or combine the two devices.

18 INPUT
¼" unbalanced input jack. Plug your guitar in here using a shielded cord.
A tip from the designer:
Depending on the type of cord and its shielding, you may occasionally encounter interference from sources such as radio stations or powerful magnetic fields. When this occurs, try connecting your guitar to the amp using different cords. What's more, to minimize signal degradation due to high-frequency loss, use the shortest cords feasible (as a rule, the shorter the cord, the less susceptible it is to high-frequency attenuation).

19 LEAD I GAIN
This knob determines the Lead I channel's input sensitivity and preamp saturation level.
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 and possibly Presence levels of a connected poweramp in order to prevent unchecked feedback!
A tip from the designer:
The two Lead channels' fundamental tones are not worlds apart: Lead I boasts slightly less gain and bottom end, but its speedier response makes it a great choice for brisk riffing and lightning lead runs.

20 HI GAIN
Pressing this button ups input sensitivity, thereby increasing the amplification factor and the amount of distortion in both Main Channel 2's Lead I and Lead II modes. The LED above this button lights up to indicate Hi Gain is active. This feature can also be switched via MIDI program change or Custom Z-9 Footswitch.
A tip from the designer:
When activated, Hi Gain supercharges the amplification factor, switching from Soft

Lead to Heavy Lead and putting both Lead channels into high gear. This doubles the number of basic sounds in Main Channel 2. The Soft Lead setting suffices for high-output pickups - even for playing leads - so you can leave Hi Gain off if your guitar is shred-approved. Soft Lead settings also work for chugging rhythm riffs or as alternative crunch sounds, so give 'em a try. But by all means, for scorching ultra high-gain lead sounds with truckloads of sustain or for power chords with a monster bottom-end, go for the Heavy Lead variant with Hi Gain activated.

21 LEAD II GAIN
This knob determines the Lead II channel's input sensitivity and preamp saturation level.
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 and possibly Presence levels of a connected poweramp in order to prevent unchecked feedback!
A tip from the designer:
The two Lead channels' fundamental tones are not worlds apart: Lead II boasts a bit more gain and bottom end than Lead I, and works very well for fat, in-your-face solos and chunky riffs with a big bottom end with plenty of low-frequency punch. Its response is not quite as speedy as Lead I's, and the low-end can turn muddy at high Gain settings in combination with high-testosterone pickups.

22 BASS
This is the preamp voicing section's passive low-frequency EQ for Main Channel 2's Lead I and Lead II modes.

23 MIDDLE
This is the preamp voicing section's passive midrange EQ for Main Channel 2's Lead I and Lead II modes.

24 TREBLE LEAD I
This is the preamp voicing section's passive high-frequency EQ for Lead I mode.

25 TREBLE LEAD II
This is the preamp voicing section's passive high-frequency EQ for Lead II mode.
A tip from the designer:
To help you get acquainted with the preamp's fundamental sounds, I recommend that you set all tone controls to about the center or 12 o'clock position. For higher-gain, high-volume lead sounds, your best bet is to turn the Treble knob down to prevent the pickups and speakers from generating feedback (a setting in the 9-to-1 o'clock range is recommended).
If your power amp - say, an ENGL tube power amp - features a Presence knob, you could turn up the preamp's Treble knob a bit and back off the power amp's Presence knob when in Lead mode. If your power amp is not equipped with a Presence knob (meaning that the power amp's frequency response is fairly linear), it is recommended that you set the two Treble knobs to relatively low values in order to prevent feedback. Besides, over-the-top Treble settings result in overly aggressive, piercing lead tones.

The Lead I and Lead II channels are equipped with dedicated Treble knobs so you can tweak the top end of each of these two channels separately to suit your taste. Though this passive voicing section's controls range is narrower than that of a comparable active system, its EQ curve is tweaked specifically for its designated purpose, and will give you satisfying results. What's more, in combination with the two sound-shaping buttons Contour and Mid Edge, you have heaps of voicing options for tailoring basic sounds to taste.

26 CONTOUR ACTIVE
Contour shapes midrange frequencies for Main Channel 2's Lead I and Lead II modes. When activated, Contour boosts low mids from 300 to 600 hertz as well as the frequency at 1500 hertz. Note that the Contour setting influences the functionality and range of the Mid knob (23). The LED above the button lights up to indicate Contour is activated. This feature may also be switched via MIDI program change or the ENGL Custom Z-9 Footswitch.
A tip from the designer:
Though this voicing section is passive and its control range is therefore somewhat narrower, with Contour and Mid Edge you have two additional tools available for shaping the midrange. And for good reason music is made in the mids, and these frequencies are critical to dialing in happening lead tones. You can employ Contour to scoop mids radically and conjure rabid heavy metal tones or boost them to elicit assertive lead sounds.

27 MID EDGE
This sound-shaping tool addresses midrange frequencies by slightly lowering the Mid knob's frequency spectrum. The LED above the button lights up to indicate Mid Edge is activated. This feature can also be switched via MIDI program change or the ENGL Custom Z-9 Footswitch.
A tip from the designer:
Like Contour, Mid Edge is a passive voicing feature. Consequently, its effect on the soundscape is rather subtle. Technically speaking, it actually re-voices the Mid knob. Activating Mid Edge smoothes out lead tones' rough edges. Deactivating Mid Edge and Contour thins out the lead tones' midrange, creating a more brittle tone. This brand of tone is better suited for rhythm work because it is not as aggressive or overly assertive. Different combinations of Mid Edge and Contour yield four additional tonal variants in Main Channel 2, and these variations can be programmed, stored and accessed via MIDI.

28 LEAD I VOLUME
Determines the Lead I channel's level. Use this knob to adjust the Lead I channel's volume and dial in the desired balance in comparison with the other channels' levels. Because this knob is located pre effect loop, it also determines the effect send level in Lead I mode. The red LED to the right of the knob lights up to indicate the Lead I channel is on.

29 LEAD I
Push this button to activate the preamp's Lead I channel directly (in reciprocation with Clean, Crunch, Lead II, Preamp Defeat). The red LED to the right of the Lead I Volume knob (28) lights up to indicate Lead I channel is active. It may also be activated via MIDI program change, the ENGL Custom Z-9 Footswitch, or a dual footswitch.

30 LEAD II VOLUME
Determines the Lead II channel's level. Use this knob to adjust the Lead II channel's volume and dial in the desired balance in comparison with the other channels' levels. Because this knob is located pre effect loop, it also determines the effect send level in Lead II mode. The red LED to the right of the knob lights up to indicate the Lead II channel is on.

31 LEAD II
Push this button to activate the preamp's Lead II channel directly (in reciprocation with Clean, Crunch, Lead I, Preamp Defeat). The red LED to the right of the Lead I Volume knob (30) lights up to indicate the Lead II channel is active. It may also be activated via MIDI program change, the ENGL Custom Z-9 Footswitch, or a dual footswitch.

32 MASTER
Master volume knob. Located post effect loop, it controls the overall preamp output level. You can also set the master level to 0 via MIDI controller 7. To learn how to do this, see section 57 in the Rear Panel Features chapter.
A tip from the designer:
The Master knob affords you instant access to the preamp's overall output level. It lets you quickly adjust the master volume without having to modify the individual channels' volumes.
Remote control via (MIDI) footswitch is a nifty little utility: If your arsenal includes MIDI gear - for instance, the ENGL Z-15 MIDI Footcontroller - you can use the preamp's master volume mute circuit to swiftly and conveniently set the preamp's output level to 0 during short breaks or when switching axes.

33 NOISE GATE
Press this button to activate an onboard Noise Gate and suppress excess noise in the Crunch channel or the two Lead channels. Control the Noise Gate using the two Level Threshold (40) and Mute Depth (39) knobs on the back of the preamp. The LED above the button lights up to indicate the Noise Gate is activated. This feature can also be switched via MIDI program change or the ENGL Custom Z-9 Footswitch.
IMPORTANT note; please read and heed: The Noise Gate may open up inadvertently when the Noise Gate is activated, a high-gain Lead channel is selected, and the volume exceeds the Threshold knob setting. At very high volume and gain settings, this may generate instant feedback, particularly if your guitar is facing the speakers. Rather than musical and controlled, this is the shrill, unpleasant and potentially harmful variety of feedback squealing that sends your audience and fellow musicians packing. Though the preamp is not more susceptible to feedback when the Noise Gate is activated, the fact that it suppresses extraneous noise means you can't hear those

telltale signs that feedback is swelling and consequently can't take measures to suppress it. For this reason, make an extra effort to be careful when the Noise Gate is activated: Before you approach the preamp or 19" racksystem and speaker cabinet with your guitar in hand, turn the guitar's volume knob to the far left position (to 0 so that no signal is audible) to prevent the pickups and speakers from interacting!

A tip from the designer:

Noise is a definite no-no in many situations. For example, studio etiquette demands that you keep a lid on extraneous noise during short breaks. It's in the nature of high-gain rigs to generate undesirable peripheral noise in overdriven channels. This is attributable to the physical properties of an amp's constituent components, in particular its active components. That's right; those cherished tubes are the culprits. The Noise Gate is a tool that lets you silence this noise during breaks by way of signal mute circuit. Note that electric guitars pick up interference signals, and these are amplified tremendously at high gain levels in Lead mode. The most common source of noise is 50 or 60 hertz mains hum, particularly when the guitar is positioned near transformers and power units. Because in worst-case scenarios this humming can attain extremely high levels, the Noise Gate can hardly distinguish between the musical signal and noise. This makes it hard to find the right Threshold setting. It is entirely possible for this humming and other noise to rise to a level that deactivates the Noise Gate and therefore becomes audible. My advice is to stay as far away from transformers and power units as space allows.

34 WRITE/COPY

Press this button to store the modified setting of a programmable feature to a MIDI memory slot (generally called a preset). Here's how to distinguish between Write and Copy: with the former you're actually programming or writing a new MIDI preset, with the latter you're making an exact duplicate of an existing preset.

The system will select a Write operation whenever you edit a MIDI preset, that is, when you have modified a programmable feature. You'll know that this is the case because the Status LED flashes steadily when you edit one or several programmable features. If you press the button and did not edit a MIDI preset, the system will select Copy. This means that the given preset becomes the source, and its contents are dumped to another preset and stored there. When you press this button, the Status LED lights up continuously to indicate Copy is activated. The system quits Copy mode autonomously if you do not select a new MIDI preset within about 30 seconds.

The preset programming process -- the Write command, that is -- is not carried out as soon as you press the button. Pressing the button merely initiates the process. You must hold it down for about a second until the Status LED flashes three times in rapid succession. This mechanism is designed to prevent inadvertent programming. You can cancel the programming process at any time before the Status LED first illuminates by releasing the Write button. Again, the preset will only be programmed successfully if you press and hold the button until the Status LED flashes three times.

You'll have to go through a similar routine to copy a preset once you select a target preset: When the Status LED extinguishes, the copy operation is underway and can no longer be cancelled. The LED flashes three times to indicate the preset was copied successfully. You can cancel the copy operation by releasing the key, but only for as long as the LED lights up continuously.

IMPORTANT note; please read and heed:
MIDI preset 1 activates when the preamp is powered up. If you want to edit and/or store other MIDI presets, you must connect a MIDI foot board or another MIDI send device to the MIDI In port (55) and use this outboard device to select the desired MIDI preset on the preamp.

More good-to-know info:
Note that the Status LED also indicates the status of components unrelated to Write and Copy. The microcontroller runs a short system check after you switch the preamp on. Should it find a defect in the memory chip (EEPROM), the LED will flash in a pattern of five short bursts.

Press the Write/Copy copy button to confirm that you got the message. Once you have done this, the system will be ready to run, although you may encounter problems when attempting to select or store MIDI preset.

35 POWER
Mains power on/off.

Rear Panel Features
At the back of the manual you'll find a folded page offering diagrams of the front and rear panels. Please unfold and refer to it as you read through the descriptions of features and functions!

36 Mains 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 preamp up, ensure the voltage value printed on the label under 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.

37 MAINS FUSE BOX:
The rear chamber contains the mains fuse and 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! To this end, please refer to the fuse ratings table.**

38 GROUND LIFT SWITCH
This switch severs the circuit connecting the preamp's internal ground to the wall receptacle's ground terminal. You can set the switch to Ground Floated when you have connected a signal processor or power amp and want to prevent the two devices' grounds from forming a ground loop that manifests in annoying humming.
Please note: A ground loop is an extraordinary condition. Under ordinary circumstances, ensure the button is set to Ground to earth the preamp to the mains ground, thereby preventing ungrounded line noise!

39 MUTE DEPTH
This knob setting determines to which extent the level drops when the active Noise Gate mutes the signal; in other words, it sets the residual volume level. The further you twist the knob clockwise, the greater the drop in (noise) level when the Noise Gate mutes the signal.

40 THRESHOLD LEVEL
Use this knob to set a threshold value (that is, the noise level) at which the Noise Gate activates to suppress the signal. The further you twist the knob to the right, the higher the signal level at which the Noise Gate kicks in. The Noise Gate can be activated and deactivated as required for the Crunch channel and the two Lead channels by pushing the front panel button (33).
A tip from the designer:
Crunch, Soft Lead and Heavy Lead generate different levels of noise, and I tuned the ENGL 570 preamp's Noise Gate accordingly. However, there is some minor matching variance between the three. Heavy Lead (Lead channel and Hi Gain activated) stands to benefit most from the Noise Gate, so I suggest that you tweak its two knobs for this mode.

41 STEREO FREQUENCY COMPENSATED LINE OUTPUT
This stereo ¼" jack serves as the output of the frequency-corrected line filter. It delivers an unbalanced stereo-signal and it is equipped with a ground terminal. You can patch the preamp signal routed through this jack to a recorder or a PC's audio card via some type of adapter (depending on the type of inputs on the audio card). Dial in the desired signal level via the Level knob (43).

42 OVERLOAD
This LED lights up to tell you the Line Out is saturated. If it illuminates, simply roll back the signal level using the Level knob (43).

43 LEVEL
This knob determines the level of the frequency-comensated Line outputs (41 & 44, 45). Use it to adjust the preamp's line output signal level to match the input gain of the mixing desk or recorder's input.
A tip from the designer:
The following factors determine Line Out level: the preamp input level (Gain), the given channels' Volume knobs, and to some extent, the tone controls and sound-shaping buttons' settings as well as the position of the Master knob. Those are a lot of variables, so I recommend you proceed as follows: Configure buttons as desired and dial in the desired settings on the front panel. Adjust the levels of connected FX devices and signal processors. Finally, use the Level control to adjust the line level. The Line Out is not overloaded until the Overload LED (42) lights up continuously. You can push the level up to this point to match a mixer desk or recorder's input level requirements. Use the given device's input sensitivity or gain control to fine-tune the line level.

44 & 45 FREQUENCY COMPENSATED LINE OUT BALANCED

These are the frequency-corrected (compensated) and balanced right and left channel line outputs. Pin 2 and 3 of the XLR jack carry the signal, pin 1 = N.C. or ground depending on the position of the Ground switch (46). The signal routed to this output limits the response of a guitar cabinet. You can insert the signals routed through these outputs directly into a mixing console or recording gear equipped with balanced inputs. The advantage of a balanced circuit is that this type of connection will not create a ground loop, provided of course it is wired correctly. Dial in the desired signal level for the two balanced line outputs by adjusting the Level knob (43).

46 LINE OUT GROUND

This switch assigns pin 1 of the two XLR sockets to ground (Ground to Pin 1). You'll find this option comes in handy when you want to earth the circuit you have routed to a mixing console or recording device.

IMPORTANT NOTE: You encounter something called a ground loop if your preamp is connected to a mixing console or recording gear and pin 1 of both devices' XLR connectors serve as ground terminals (the XLR Ground button on the preamp is set to Ground to Pin 1). A ground loop is readily identified by the infernal humming emanating from your speakers. Set this button to the position "Ground Floated" to solve the problem!

47 LEVEL

This button determines the output level of the stereo output jacks. Press the button to set a higher level (up to +15 dB) suitable for driving less sensitive power amps. Do not press if you need a lower level (up to -5 dB) to feed the signal to additional signal processors or extremely sensitive power amp inputs.

48 STEREO OUTPUT RIGHT

This unbalanced ¼" line out jack carries the preamp's right channel signal. You can patch the signal routed to this jack to a power amp or a signal processor using a shielded cord equipped with ¼" plugs.

49 STEREO OUTPUT LEFT

This unbalanced ¼" line out jack carries the preamp's left channel signal. You can patch the signal routed to this jack to a power amp or a signal processor using a shielded cord equipped with ¼" plugs.

50 FX LOOP RETURN RIGHT

Connect the right FX Loop input to a signal processor's right channel output/send jack using the shortest possible shielded cord equipped with 1/4" plugs. Activate and deactivate it via the Stereo FX Loop (17) button. In the signal path, the Stereo FX Loop is located post channel Volume controls and and pre the Master volume control and the output driver stage.

51 FX LOOP RETURN LEFT
Connect the left FX Loop input to a signal processor's left channel output/send jack using the shortest possible shielded cord equipped with 1/4" plugs. Activate and deactivate it via the Stereo FX Loop (17) button. In the signal path, the Stereo FX Loop is located post channel Volume controls and and pre the Master control and the output driver stage.

52 FX LOOP SEND
Connect this FX Loop output to a signal processor's input/return jack using the shortest possible shielded cord equipped with 1/4" plugs. Activate and deactivate it via the FX Loop Active (17) button. In the signal path, the Stereo FX Loop is located post channel Volume controls and pre the Master control and the output driver stage.

53 AUXILIARY INPUT
This is the preamp's ancillary input. The circuit is wired in series with the input located on the front panel. Use it to connect the preamp to a 19" rack setup. The front panel input has priority. In other words, when you insert a plug into the front panel jack (1), the signal routed in via the Aux. Input is cut off.

54 MIDI THRU
This 5-pin DIN port patches incoming MIDI data from the MIDI In (55) to any other connected MIDI device.

55 MIDI IN
This 5-pin DIN port accepts data sent by a MIDI sender (for example, the ENGL MIDI Z-12, Z-15, or Z-9 foot controllers) or from or routed through another MIDI device.
Switch no. 56 lets you activate the preamp's power supply if you have an ENGL MIDI foot controller connected to this port.
CAUTION: Before you connect any other MIDI footswitch or effects device, always make sure that switch no. 56 is set to the right to avoid damaging the device.

56 POWER SUPPLY FOR THE ENGL MIDI FOOTCONTROLLER
This selector activates a MIDI In port power supply for connected ENGL MIDI foot boards. Power is fed to the board via the MIDI circuit. When the switch is set to the left position, power is routed to the MIDI In port's pin 1 and pin 2 (refer to page 30 for pin assignments). If you choose to use another MIDI foot board, be sure to set the switch to the right to avoid damaging it. If the foot board you are using is designed to handle phantom power, consult its operating manual to learn how it is wired (that is, which pins carry its power supply) and what its voltage and current specifications are. If the voltage and current specifications and wiring match, you may set the switch to the left to power this foot board via the MIDI cable.
Please read and heed: Note that a MIDI foot board may not draw more than 200 milliamperes of current if you want to power it via this port. You must also check and verify if this MIDI foot board is able to handle 11 volts of alternating current (AC)! If you are in any doubt, be sure to consult a specialist, meaning an amp technician or electronics engineer who earns a living with a screwdriver!

57 MIDI CHANNEL & VOL.0

Use this set of encoding buttons (1, 2, 3, 4 and 5) to assign the MIDI channel. This tells the preamp's MIDI system over which channel it will receive MIDI program change commands. Your choices are the standard 16 MIDI channels (numbered from 00 to 15), as well as OMNI mode (whereby all MIDI data is received regardless of the MIDI send channel). The encoding button settings for a specific channel and OMNI mode are listed in the following table.

Encoding button number 6 lets you program the preamp so that it is muted when it receives a MIDI controller 7 command. When this command has a value of 0 (and less than and equal to 5), the preamp's master volume is muted. At values greater than or equal to 5, the preamp is back on line at the volume level determined by the currently active Master knob.

Setting the encoding button S6 to ON activates Master Volume Mute.
Setting the encoding button S6 to OFF deactivates Master Volume Mute.

MIDI channel assignment using the encoding buttons:

MIDI-channel:	S 1	S 2	S 3	S 4	S5	S6
OMNI	OFF	XX	XX	XX	XX	XX
CH 1	ON	OFF	OFF	OFF	OFF	XX
CH 2	ON	OFF	OFF	OFF	ON	XX
CH 3	ON	OFF	OFF	ON	OFF	XX
CH 4	ON	OFF	OFF	ON	ON	XX
CH 5	ON	OFF	ON	OFF	OFF	XX
CH 6	ON	OFF	ON	OFF	ON	XX
CH 7	ON	OFF	ON	ON	OFF	XX
CH 8	ON	OFF	ON	ON	ON	XX
CH 9	ON	ON	OFF	OFF	OFF	XX
CH 10	ON	ON	OFF	OFF	ON	XX
CH 11	ON	ON	OFF	ON	OFF	XX
CH 12	ON	ON	OFF	ON	ON	XX
CH 13	ON	ON	ON	OFF	OFF	XX
CH 14	ON	ON	ON	OFF	ON	XX
CH 15	ON	ON	ON	ON	OFF	XX
CH 16	ON	ON	ON	ON	ON	XX

A tip from the designer:

As the table indicates, encoding button 1 switches between Poly and OMNI mode. Bear this in mind for practical applications, because this is a fast way to go from a preset Poly channel to OMNI mode and vice versa.

58 FOOTSWITCH: SERIAL AMP CONTROL PORT

This serial data input accepts the Custom ENGL Z-9 Footswitch (optional), which lets you control various preamp functions remotely. Connect the Z-9 Footswitch to the serial amp control port using a cord equipped with stereo ¼" jack plugs. This MIDI-

enabled foot board is a custom design that switches every preamp feature designated as footswitchable in this manual. To learn if a given feature may be controlled remotely, refer to its description herein. The MIDI In port is disabled when the Z-9 Footswitch is connected.

CAUTION: Connect only the ENGL Z-9 Footswitch to this 6.3 mm (1/4") stereo jack! Connecting any other switching device may damage it and/or the preamp's circuitry!

A tip from the designer:

The Custom Z-9 Footswitch was designed with the non-MIDI guitarist in mind. It's sure to delight if you don't or won't use MIDI systems. Based on a rather nifty switching concept, it provides direct access to the four channels and Preamp Defeat. As an alternative to the Preamp Defeat option, you can opt to control any other switchable preamp functions, for example Modern/Classic, Hi Gain, etc. Another tremendous benefit of this microcontroller-driven foot board is that it connects to the amp via an easily obtained, standard stereo cord. But that's not the last of the Z-9's advantages: At some point, you may decide to ramp up or connect to a MIDI system. This won't render the Z-9 obsolete because it also serves as a simple MIDI foot board with a MIDI OUT (5-pin DIN connector) that selects 10 MIDI patches (or presets, if you prefer). Again, I want to emphasize that you should never connect another foot board to this jack: The Z-9 controls the preamp via a proprietary ENGL serial data protocol, and the Serial Amp Control Port was developed exclusively for ENGL amps. No other foot board will work and in fact is likely to damage the foot board or preamp's circuitry!

59 FOOTSWITCH: CH 1 /CH 2, SUB I/II

Use this jack to connect a conventional footswitch with two switching functions (for example, the ENGL Z-4) that let you access the four channels Clean, Crunch, Lead I and Lead II. One of the two switches activates Main Channel 1 and 2, while the other activates the selected Main Channel's two subordinate channels, Clean and Crunch or Lead I and Lead II, as the case may be. The onboard channel switching facility, to include Preamp Defeat switching, is disabled when you plug a footswitch into this jack.

Note also: A footswitch may be equipped with LEDs indicating the given switching status. Each of the two switches is provided with 15 milliamperes current, which suffices to power a standard LED.

The jack's mono terminal selects the Main Channel, while the stereo terminal selects the sub channel (refer to Pin Assignments on page 30).

A few words from the designer on your ENGL 570 Preamp's sounds and settings as well as some practical tips:

On the Subject of Sounds and Settings

A great deal of effort went into tuning this tremendously versatile tube preamp; I devoted particularly painstaking attention to the details: The Clean and Crunch channels are matched so that their Gain ranges overlap somewhat; the same goes for Lead I and Lead II. This is intentional, and serves very sensible sound-sculpting purposes. For instance, higher Gain settings (in the 12-to-3 o'clock range, depending on pickups) push the Clean channel into moderate overdrive, and activating Gain Boost propels this channel into the dirt zone that much earlier. This means you can use this channel for ultra clean chord work, jazz-style comping and clucking chicken-picked lead lines. And courtesy of that typical tube overdrive, it means the same channel is great grittier riffs and leads, with the amount of dirt hinging upon how hard you attack the strings. If you add the guitar's volume knob to the sonic equation, you get a vast spectrum of fine tonal distinctions in just this one channel. The same goes for the Crunch channel: Its spectrum ranges from clean (when Gain is set no higher than about 10 o'clock, depending on pickup) to fat, wooly, and warm tube overdrive at higher Gain settings. High-output pickups such as humbuckers will even serve up enough oomph for punchy leads. Though these application areas overlap somewhat, the Crunch and Clean channels are voiced differently. Crunch features an additional triode, making it a tad more dynamic and eliciting a slightly different frequency response. When used in combination with high-output pickups, I recommend that you roll off the bottom-end (and give Mega Lo Punch a wide berth) a touch to forestall low-end mud.

Main Channel I (Clean and Crunch) voicing controls respond differently than those of Main Channel II. In consequence, I suggest that you start by dialing in settings between 12 and 3 o'clock, tweaking each to taste and comparing the differences. Again, I opted for passive tone controls, which puts each knob's control range at about 10 dB. As you're experimenting with modifying settings, you may notice that when the Crunch or Lead channels are in Classic mode and you are pushing the preamp hard, the EQ seems slightly less assertive than in Modern mode.

All these options harbor vast and musically meaningful sonic potential. I'm confident that the Gain knobs, tone controls and sound-shaping buttons will let you conjure all the sounds you have in mind and that you'll discover a world of tones while you're tweaking.

On top of all that, with Modern and Classic, you have two voicing options for every preamp channel: Particularly in the high-gain channels, these give you two very distinctive distorted sounds for each channel. The contrast between the two sonic flavors is not merely a matter of different gain levels. The structures of the saturated signals differ, and each is fine-tuned to work its tonal magic with a specific genre. Modern packs a mighty low-end thump and boasts truckloads of gain that's the way to go to for heavy-duty, power chord riffing typical of contemporary styles.

Note that you can tighten up and focus Lead channel tones using the two sound-shaping buttons Contour and Mid Edge. Tweaked for a fatter, warmer sound, Contour adds a healthy help of mids around the 500-hertz mark. The two parameters Bass and Mega Lo Punch put a remarkable array of low-end tweaking options at your fingertips.

Mega Lo Punch sound-shaping button is programmable, providing instant MIDI access to a host of sonic configurations.

In addition, I made a point of tuning the two Lead channels to respond slightly differently: Lead I's response is a bit more aggressive, faster and more precise it all but lunges when you attack strings. Lead II, on the other hand, is not quite as testy. Its response is not as rabid, and with an extra sprinkling of low end added to the sonic recipe, it also delivers warmer tone. Lead II demands rather precise technique, while the more forgiving Lead I is easier to handle. The feature Hi Gain gives you two more voicing options for each of the two Lead channels - Soft Lead (moderate Gain level) and Heavy Lead (ultra high Gain shred). What's more, you can even tweak each individually using the dedicated Gain, Volume and Treble knob. This brings a bunch of benefits to you, including greater freedom and more precision in sound-shaping. The four Soft Lead variants (Lead I + Modern, Lead II + Modern, Lead I + Classic, Lead II + Classic) run the gamut of crunch tones from light (with the Gain knob set no higher than 11 o'clock) to heavy crunch (with the Gain knob somewhere between 10 and 1 o'clock), with tonal properties differing quite markedly from Crunch channel sounds. These modes even let you dial in relatively lean clean sounds. So if clean is your thing and your music mandates a range of different clean variants, simply set the Gain knob below the 9 o'clock mark and select Soft Lead (Lo Gain) to see what you can come up with.

Because it is chock full of tone-tweaking tools, this preamp is sure to surprise you time and again with new sonic variants. However, there's no need to panic in face of its sophisticated functionality. At ENGL, ease of use is paramount. We design all our amps so that players can dial in great sounds from the start - without hours spent researching the manual and struggling with settings. Despite being so easy to use, the ENGL 570 preamp puts into the hands of the innovative, creative guitarist an all but inexhaustible bonanza of sound-shaping resources. And I am convinced that guitarists with more traditional leanings are equally well-served with this preamp's smorgasbord of tasty tube tone!

A few comments on the Noise Gate:

The advantage of a Noise Gate that is installed in and matched to the preamp is that it lets you fine-tune its threshold with extreme precision, thereby separating the useful, musical signal from useless background noise. Indeed, this Noise Gate was designed to address the signal the most beneficial spot in the signal chain - the preamp - to make it more effective. First and foremost, it is designed to suppress ambient noise such as hissing and humming during breaks when the Lead channel is in Heavy Lead mode. For this reason, I tuned its threshold (that's the level at which the gate triggers) range to suit this preamp mode, and then adjusted it for Soft Lead (Lead channel, Hi Gain deactivated) and Crunch configurations. To get acquainted with how the Noise Gate works, I suggest you start by setting the Threshold knob to the far left (Noise Gate opens at low signal levels) and slowly twist it clockwise to gradually raise the gate's trigger threshold. When the knob arrives at the far right position, the Noise Gate will not trigger until the signal reaches a very high level. This means that the preamp must amplify the guitar signal considerably to open up (or deactivate) the Noise Gate. In practice, your best bet for suppressing loud noise when running Lead channels at high Gain levels is to set the Threshold knob higher than 12 o'clock. If you're doing the low-

gain thing in Crunch or Soft Lead modes, dial in a lower Threshold knob setting (below 12 o'clock) to prevent the gate from throttling notes (that is, the musically useful sounds) as they decay particularly if you like to work the guitar's volume knob.

Programming sounds (settings, actually) to MIDI presets:

For reasons of convenience and handling ease, we made programming sounds to MIDI presets a piece of cake. Because this preamp offers so many programmable switching functions, Copy is indeed a handy tool. It lets you copy the settings of one MIDI preset to another. You'll come to appreciate its utility when you begin programming your own presets. Dumping a stored setup from one MIDI preset to another, and editing and storing changes in the target preset, is so must faster and more convenient than programming from scratch every time. MIDI preset 1 is called up automatically when you switch the preamp on. This ensures that when you power up, the settings for programmable sound-shaping functions are immediately enabled in the configuration stored in the most recent programming session - without having to first connect a MIDI foot board.

The programming process in steps:

1. Select the desired MIDI program (also called a preset or patch) using a MIDI foot board connected to the amp's MIDI In (55).
2. Set all programmable features as required, configuring Hi Gain, Countour, Lead I, Mega Lo Punch, Noise Gate, and so forth as you please. All programmable functions are designated as such in their descriptions herein.
3. The Status LED flashes to indicate you have edited one or several settings.
4. Press and hold the Write/Copy button (34) for about one second until the Status LED extinguishes, and then flashes three times in rapid succession. The current settings of all programmable functions are now stored in the selected MIDI patch.

Copying:

1. Select the desired MIDI preset using a MIDI foot board connected to the E570 preamp's MIDI In port. This is the preset that you want to copy, which is why in geek-speak it is called the "source."
2. Press the Copy/Write button briefly. It is essential that during this routine you do not change the settings of programmable functions in the selected source preset. That Status LED lights up continuously to indicate that Copy is activated.
3. Select the target preset via the MIDI foot board; you have approx. 30 seconds to do this. (The preamp automatically quits Copy mode 30 seconds after it is activated.)
4. Press and hold the Write/Copy button (34) until the Status LED extinguishes, and then flashes three times in rapid succession. The current settings of all programmable functions stored in the source MIDI patch (that's the preset you selected first when you activated Copy) have now been dumped to the newly selected target preset.

Handling and Care:

Keep the preamp safe from hard knocks and shocks. Tubes are fragile and tend to suffer when exposed to mechanical stress!

Let the preamp cool down before you transport it. Ten 10 minutes or so will do to spare the tubes.

Tubes take some 20 seconds to warm up after you switch the power on. Make a habit of giving your preamp plenty of time to get toasty before you start playing.

Avoid storing the preamp in damp or dusty rooms to spare jacks, switches and potentiometers. If you don't use the preamp all the time, I recommend that you drape a covering over it to prevent the intrusion of dust.
If you install your preamp in a 19" rack, close the rack's lid when not in use for extended periods.

Never use caustic or scouring detergents to clean the preamp'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 front and rear panel labels. Keep liquids well away from the preamp, particularly the interior of the housing.

Make sure air can circulate at the two sides and rear panel of the preamp to allow for adequate cooling, which increases component life.

High ambient temperatures place an additional strain on diverse components; so if at all possible, avoid operating the preamp at temperatures far higher than 30°C for longer periods. Running the preamp 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 loss of Gain. Tube replacement is a job best left to experienced and authorized specialists.

Glossary

MIDI-Preset:
In this manual, MIDI programs are called presets and patches.
Though the MIDI standard defines program numbers 000 to 127, almost all MIDI devices and foot boards indicate and control these programs using a 1-to-128 numbering scheme.

MIDI Channel:
MIDI specifications define 16 channels for sending and receiving MIDI data. The encoding buttons on the back of the preamp determine the MIDI data receiver channel. MIDI channels: 1 to 16, or OMNI (meaning that all 16 channels receive MIDI data).

MIDI-Volume and Master Volume Mute:
This option lets you access the preamp's Master Volume Mute function via a suitable MIDI foot board. This foot board must like the ENGL Z-15 - be able to send MIDI controller 07 data. In order to afford access to Master Volume Mute, this function must be enabled using the corresponding encoding button on the back of the preamp.

The Status LED above the Write/Copy (34) button indicates the following conditions:

1. A programmable function's (or functions') setting(s) has (have) been edited;
Indication: LED flashes regularly; What to do: If desired, restore this MIDI preset's original configuration (e.g. by selecting it again); the Status LED also extinguishes once the new setting has been stored.

2. Copy process was activated by pressing the Write/Copy button;
Indication: LED lights up continuously; What to do: If desired, cancel the Copy operation by changing the setting of a programmable feature; the Status LED also extinguishes once the preset has been copied.

3. Memory error (possibly a defect in the EEPROM); Indication: LED flashes in five short bursts; What to do: Press the Write/Copy button (this resets the LED, but does not solve the problem).

Troubleshooting

Programmable features fail to respond when you change settings:
-> Powerful static charges, strong radio signals or mains voltage spikes can affect microcontroller-driven systems, setting them to an undefined status (commonly called a hung chip). In this event, your only choice is to reset the system. Simply switch the preamp off and on again.
-> If a reset doesn't solve the problem that is, the chip is still hung there is a defect in the control system (presumably on the logic board holding the microcontroller). In this case, consult an authorized service center or a professional specialist.

The preamp fails to respond when you try to switch presets via MIDI foot board.
-> Is the MIDI foot board connected to the MIDI IN port (55)?
-> Is the MIDI cord you are using intact and wired properly? (Refer to page 30 for pin assignments.)
-> Is the preamp set to the MIDI channel over which the MIDI foot board is sending program change commands? You can set the encoding button S1(57) to OMNI reception to check if the preamp is actually receiving data.
-> Is another foot board (the ENGL Z-9 or a two-way footswitch) connected and therefore blocking MIDI reception?

The preamp is not providing an output signal / no sound is emanating from the speaker/s.
-> Are all cords (guitar, effect, poweramp and speaker) connected properly and are they functional?
-> Unplug connected effectors and see if the preamp works fine without these peripheral devices.
-> Check the function of the connected poweramp and the cabinets.
-> Is the Noise Gate activated in one of the Lead channels and the Threshold (40) knob set to a high value? Deactivate the Noise Gate (33) for a quick check.
-> Are the Master knob and the Gain and Volume knobs set to a value greater than 0? If any of these knobs is set to 0, no signal is routed to the preamp's outputs.
-> Did you send via MIDI foot board a MIDI controller 7 command with a value less than or equal to 5? This activates Master Volume Mute, thereby silencing the preamp.
You can check this by deactivating the Master Volume Mute by resetting the appropriate encoding button (57) accordingly.
-> You may be looking at a faulty tube or another defect. In this case, be sure to take the preamp to an authorized, professional service center.

The speaker, recodring device or P.A. system is emitting humming noises:
-> Is the Ground Lift switch (38) set to Ground? If you are operating the preamp with other grounded gear (power amp, effect devices) connected, this switch must be set to the "Ground floated" position; otherwise, it's goodbye

silence, hello humming! In this case, the preamp will hum even without a guitar connected.

-> Cords connected to the input, effect loops or to the power amp may not be shielded properly. Replace them to check if this is indeed the case.

-> The preamp or speaker cords may be picking up interference from powerful magnetic fields (for example, of nearby power transformers or electrical motors). Reposition the preamp and connector cables.

-> The preamp 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.

-> If you are feeding the signal to recording equipment or a mixing console via the preamp's Line Out and the XLR Ground (46) button is set to Pin 1 to Ground, the problem may be a ground loop that has been formed with the connected device's ground. Set the button to Ground Lifted.

Technical Data

Input sensitivity

Input:	from -20 dB, nominal, max. 0 dB;
Effect Return:	from -20 dB nominal, max. 0 dB;

Output level

SEND, level range:	from -20 dB to approx. 0 dB max.;
Level Lo:	ca. -5 dB max.;
Level Hi:	ca. +15 dB max.;
Frequ. Comp. Line Out:	ca. 0 dB max., (depends on frequency);

Power consumption: approx. 35 watts (VA) max.;

Fuses:

external:

at 230/240 mains voltage	0,25 ATL (0,25 amps slo-blo)
at 100/115/120 mains voltage	0,5 ATL (0,5 amps slo-blo)
internal:	2 x 0,315 ATL (0,315 amps slo-blo)
Important:	**Replace these with fuses of the same type and rating only!**

Tubes:

V1:	ECC83 F.Q., input tube;
V2, V3:	ECC83 selected;
V4:	ECC83 standard;
Consult Tube Map to view tube array	Replace tubes with selected sets only!

Logic control system:

Processor, software:	AT89C52 µC with internal 8K Flash Memory for software source code; Upgradeable with external Programmer;
Memory:	EEPROM 93C66 for data retention;

System interfaces:

MIDI:	Asynchronous data protocol according to the MIDI standard; MIDI program changes 0 - 127; MIDI channels 1 - 16 MIDI controller 7 (main volume), value 0-5 = Master Volume Mute, Mute, value > 5 = default Master Volume level;
Serial Amp Control:	Proprietary ENGL asynchronous data protocol.

Dimensions: 19" rack, 2 rack spaces, 360 mm overall depth, approximately 300 mm chassis depth;

Weight: approx. 8 kg

Tube Map:

V1   V2   V3   V4

Power
Transformer

internal
Mains Fuses

Tube replacement report:

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

Replaced tube(s): _

Reason: _

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

Replaced tube(s): _

Reason: _

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

Replaced tube(s): _

Reason: _

Wiring of Principal Connectors

LINE OUT BALANCED (44 & 45), XLR male connector

Pin 1 - or ground,
depending on the
position of the switch
XLR GROUND (46)

Pin 2: signal +

Pin 3:
signal -

page: 17

MIDI IN (55), DIN connector

Pin 3 - N.C.

Pin 1 - power supply
approx.11 volts AC *

Pin 5 - MIDI-data wire

Pin 4 - MIDI-data wire

Pin 2 -
power supply
approx.11 volts AC *

page: 18
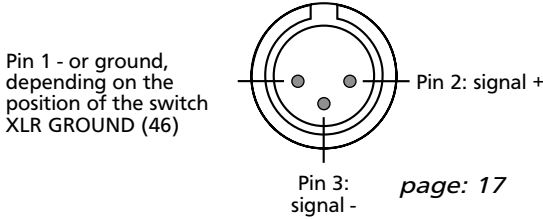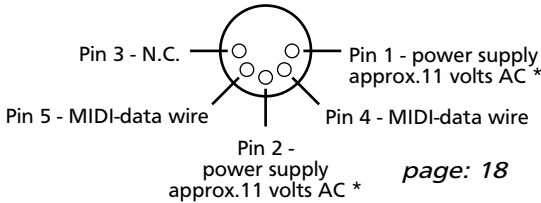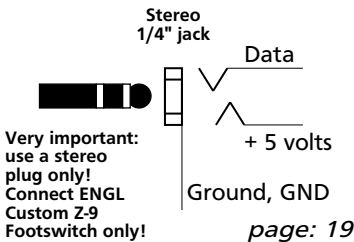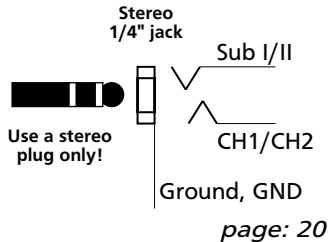
*: AC voltage is routed to pin 1 and 2 only when button 56
   is set to ENGL MIDI Footcontroller.

Serial Amp Control Port (58)

**Stereo
1/4" jack**

Data

Very important:
use a stereo
plug only!
Connect ENGL
Custom Z-9
Footswitch only!

+ 5 volts

Ground, GND

page: 19

Dual Footswitch (59)

**Stereo
1/4" jack**

Sub I/II

Use a stereo
plug only!

CH1/CH2

Ground, GND

page: 20

# Options for controlling the ENGL 570 Preamp remotely:

1./2.   2. 3.
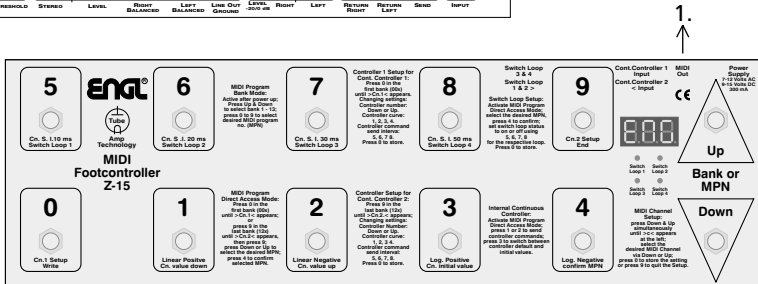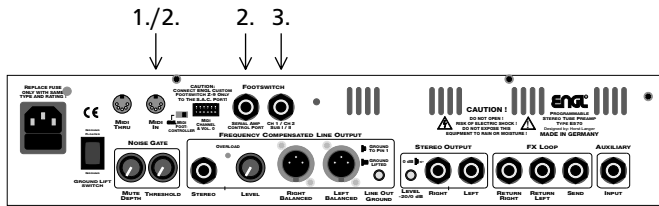
1. MIDI foot board (for example, the ENGL Z-12 or ENGL Z-15 pictured above): Connect the foot board to the preamp using a standard 5-pin DIN cable. All 5 terminals of both connectors must be wired in a 1:1 configuration: MIDI data transmission requires two wires, and the ENGL MIDI foot board uses two more wires for purposes of power supply. This combination affords access to all of the amp's 128 MIDI presets.
The Z-15 foot board also lets you control Master Volume Mute via MIDI controller.

1.   2.
or
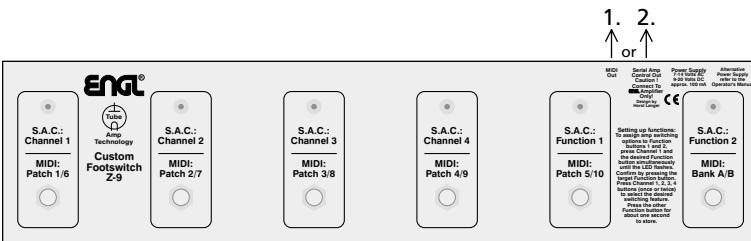
2. ENGL Custom Z-9 Footswitch: This special foot board connects to the preamp via a ¼" stereo cord plugged into the Serial Amp Port (58) or via a 5-pin DIN cord plugged into the MIDI IN port (55). The former option affords switching access to channels and two special functions (for example, *Hi Gain* or *Mega Lo Punch*). In the latter setup, the Z-9 serves as a MIDI foot board that accesses the first 10 MIDI presets.

3.

3. Two-way footswitch (e.g. ENGL Z-4): Connect two-way footswitches to the amp by plugging a stereo ¼ " cord into jack no. 59.
Functions: Ch.1 / Ch.2 (Main Channels) and
Sub Channel I/II Clean - Crunch and Lead I - Lead II.
This means you can't activate sub channels directly, and must first switch to the other Main Channel.
As an alternative to a two-way footswitch, you can connect a MIDI switcher (the ENGL Z-11 will do nicely) to this jack (59) to control the two switching functions.
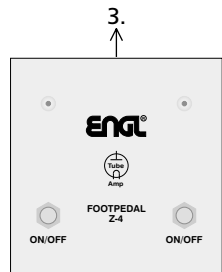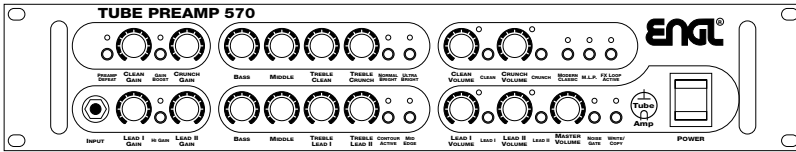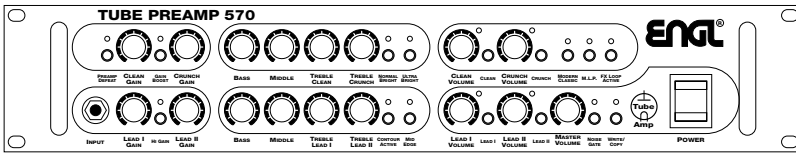
Noting Settings:
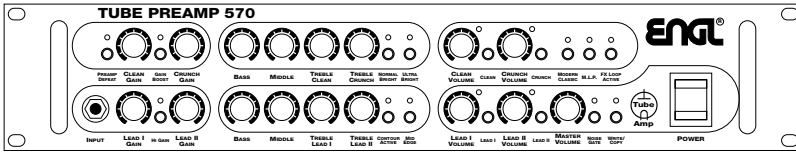
Sound title: _   Preset: _ _ _ _ _ _ _ _ _

comment: _

Sound title: _   Preset: _ _ _ _ _ _ _ _ _

comment: _

Sound title: _   Preset: _ _ _ _ _ _ _ _ _
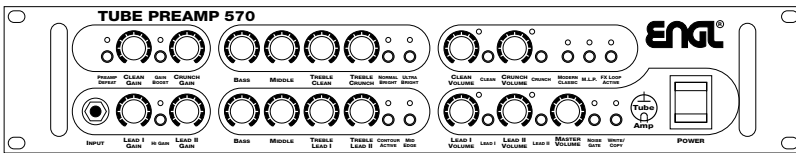
comment: _

Sound title: _   Preset: _ _ _ _ _ _ _ _ _
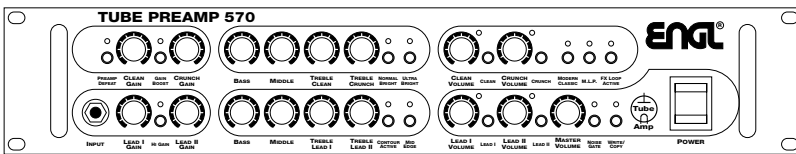
comment: _

Sound title: _   Preset: _ _ _ _ _ _ _ _ _

comment: _

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

TUBE PREAMP 570

ENGL®

| PREAMP DEFEAT | CLEAN GAIN | GAIN BOOST | CRUNCH GAIN | BASS | MIDDLE | TREBLE CLEAN | TREBLE CRUNCH | NORMAL BRIGHT | ULTRA BRIGHT | CLEAN VOLUME | CLEAN | CRUNCH VOLUME | CRUNCH | MODERN CLASSIC | M.L.P. | FX LOOP ACTIVE |

Tube Amp

| INPUT | LEAD I GAIN | HI GAIN | LEAD II GAIN | BASS | MIDDLE | TREBLE LEAD I | TREBLE LEAD II | CONTOUR ACTIVE | MID EDGE | LEAD I VOLUME | LEAD I | LEAD II VOLUME | LEAD II | MASTER VOLUME | NOISE GATE | WRITE/ COPY | POWER |

18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

54 55 56 57 58 59

REPLACE FUSE ONLY WITH SAME TYPE AND RATING !

CE

GROUND FLOATED

GROUND

MIDI THRU **MIDI IN** MIDI FOOT-CONTROLLER

CAUTION:
CONNECT ENGL CUSTOM FOOTSWITCH Z-9 ONLY TO THE S.A.C. PORT!

MIDI CHANNEL & VOL. 0

FOOTSWITCH

SERIAL AMP CONTROL PORT CH 1 / CH 2 SUB I / II

CAUTION !
DO NOT OPEN !
RISK OF ELECTRIC SHOCK !
DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE !

ENGL®
PROGRAMMABLE Stereo Tube Preamp TYPE E570
Designed by: Horst Langer
MADE IN GERMANY

FREQUENCY COMPENSATED LINE OUTPUT

GROUND LIFT SWITCH

NOISE GATE

OVERLOAD

GROUND TO PIN 1

GROUND LIFTED

STEREO OUTPUT

0 dB <-

FX LOOP

AUXILIARY

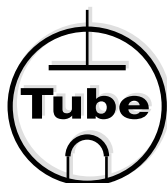| MUTE DEPTH | THRESHOLD | STEREO | LEVEL | RIGHT BALANCED | LEFT BALANCED | LINE OUT GROUND | LEVEL -20/0 dB | RIGHT | LEFT | RETURN RIGHT | RETURN LEFT | SEND | INPUT |

Typenschild

36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53

ENGL ®

Tube Amp Technology

ENGL Gerätebau GmbH
Germany
Internet: http://www.engl-amps.com