



KEMPER PROFILER

The Basics & Profiling Guide 2013

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Please read the safety instructions on page 61.

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www.kemperamps.com

Table Of Contents

8 **Okay, so what did I just buy?**

9 **What is profiling?**

10 **Getting started**

More on connecting your gear

Choose your rig

Stomps

Stack

Effects

14 **Front Panel controls**

Rig navigation section

Type knob

Browse knob

Page navigation

Exit button

On/Off button

Lock button

Copy and paste buttons

Store button

Gain knob

Input button

Input LED

Noise gate knob

Output/Master button
Master volume knob
Volume knob
USB

23 Back panel overview

Main Output section
Monitor Out section
Direct Output/Send
Return and Alternative Input
Power connector
USB
Pedals and switches
MIDI
S/PDIF digital I/O
Speaker Output

27 Power Amplifier

Power Amp Switch
Power Amp Booster

29 Using the tuner

30 Building a rig

Stack section
Amplifier module
EQ button
Cabinet button
Effects section
Tap tempo

37 Configure your system preferences

- System button
- Module button behavior
- Using a MIDI pedal to switch rigs
- Rig button
- Quick button

39 Performance mode

- Editing Performances
- Switching Performances with a MIDI Foot Controller

41 Updates, backup and sharing sounds

- Updating the operating system
- Creating and restoring backups
- Importing rigs, performances and local presets

43 Kemper Profiler and MIDI

Profiling Guide

46 Profiling an amp

- General considerations

50 Making connections

- Connections for profiling a hardware guitar amp
- Connections for profiling a combination of amp and stomp box
- Connections for profiling a computer-based guitar amp simulation

54 Taking a profile

Evaluating the Profile

Refining the profile

The resulting profile

Under the hood

Legal

62 Communications and Safety Regulation Information

Declaration of conformity

Communication Statement

Important Safety Instructions

Notiz/Note

The Basics

Okay, so what did I just buy?

First of all, thank you for choosing the Kemper Profiler — Kemper Profiler for short. We've no doubt that once you realize everything it can do, you'll be as thrilled with it as we are. We designed the Kemper Profiler to be a complete solution for all your guitar playing needs. You can use it just like you would a regular amplifier, or you could use it as a multi-effects unit or even as the front end for your guitar-based studio.

Nearly all digital guitar amps available today offer the same features — simulations of classic and modern guitar amplifiers and stomp boxes, usually with some digital and studio effects thrown in for good measure. The Kemper Profiler is the first digital guitar amp that doesn't simply include digital versions of guitar amps, but lets you make a “profile” of your own guitar amp to use inside the Kemper Profiler — as well as load profiles of other guitarists' amplifiers into your Kemper Profiler, which gives you not just a simulation, but their exact digital sound!

We hope you'll find operating the Kemper Profiler straightforward, but if you need more information please check out our manuals. We call the guide you're reading “The Basics” because it will show you around and give you all the information you need to get started and find your own tone. We recommend that you read through this with your guitar and Kemper Profiler right in front of you - this way you can try out everything as soon as you learn it. Later in this book, the Profiling Guide will help you become an expert in creating your own amp profiles, and is a must read if you want to add your own amps and guitar rigs. Lastly, check out the Reference Manual for an explanation of every single parameter of the Kemper Profiler, and a deeper insight into many of the features. It does not repeat the information contained here, in The Basics, so both documents should be considered essential reading. The Reference Manual is available as a .pdf (English language only) from our website, and will be updated regularly alongside any software updates for the Kemper Profiler.

We update our documentation on a regular basis. The latest and greatest can be found here:

www.kemper-amps.com/start/

We recommend you check back frequently. But before we start to explore the exciting possibilities of this technical miracle let's have a word about what sets the Kemper Profiler apart from all the other amps: The Profiling process!

What is profiling?

Do you have a favorite setting on a favorite amp that produces your favorite sound? Would you like to be able to get that identical sound from the Kemper Profiler, and not have to bring your amp to the rehearsal, gig or studio? The method by which you can get that favorite sound into the Kemper Profiler is what we call “profiling”.

If you want a more technical description: the Kemper Profiler analyzes the sonic characteristics of a reference amplifier. This process allows it to faithfully recreate the characteristic sound of virtually any guitar amp, and adopt the behavior and interaction of the components of the analyzed amplifier.

With the Kemper Profiler it doesn't take a rocket scientist to match the sound of the original amp — or even enhance the original sound by using onboard features. And the Kemper Profiler doesn't just capture the sound of your guitar amp head alone; you can also capture the sound of the cabinet and the microphones (including the microphone distance and angle). This means that the complex sound of a specific setup can be analyzed, recreated and stored. In other words, the resulting Kemper Profiler profile is all you'll need to take your entire guitar rig with you everywhere you go.

Getting started

Okay, enough talk — let's plug in and get playing!

1. Connect your guitar to the INPUT on the right side of the front panel.
2. Connect the MAIN OUTS on the rear side to the inputs of your mixer.
3. Power the unit on by bringing the chicken head switch to the BROWSE position.

Immediately after the startup screen you will be prompted to set the time and date and enter your name. Do not skip this procedure, because any new sound that you store in the device memory will be tagged with both your name **as the rig author** and the correct date; this will help it to be found easily later and to be listed in an appropriate order. That's it! It's time to start browsing presets and playing some guitar.

More on connecting your gear

The Kemper Profiler is equipped with a studio-grade analog input section followed by a state-of-the-art A/D stage to get the best possible sound. Once your guitar signal has been processed, the high-quality D/A stage ensures that you'll get the best sound quality into your speaker rig. You'll notice that the Kemper Profiler offers multiple inputs and outputs in both analog and digital formats, which we'll describe in more detail down below. We included all this connectivity so you can use the Kemper Profiler as a central hub in your studio to connect your guitar to a variety of other amps, effects and recording gear and use the Kemper Profiler to switch among them.

In case you have any hum-related issues in your studio or stage, we provide ground lift switches for the analog outputs.

If you want to use the Kemper Profiler on stage you can connect a power amp to the MONITOR OUTPUTS.

If you want to make your own profiles you will need to connect your reference amplifier using the DIRECT OUT and the LOOP RETURN inputs. More details on profiling are provided both later in this manual, and in more detail in the *Profiling Guide*. In addition, the DIRECT OUTs can be used in conjunction with the LOOP RETURNS to connect to the effects loop of an external amp, or to connect any external effect unit, such as your favorite stomp box.

You can connect two pedals to control parameters such as volume or individual stomp parameters. Finally, the Kemper Profiler comes with USB connectors so you can connect it to your computer to transfer data and update the firmware.

Choose your rig

A complete signal chain is called a “rig”. Rigs consist of three sections located in the upper half of the panel. The signal flow begins with the Input stage, and then moves through the three processing sections at the top of the front panel of controls, and finally the OUTPUT stage. The order of the sections from left to right represents the signal flow inside the Kemper Profiler. Each section consists of three to four modules.

Each of the buttons in the signal flow gives you a unique and intuitive way to manage your sound. By pressing a corresponding button, you activate each module or section. Holding the button a little bit longer will focus the module and show its parameters in the display. In the lower line of the display you see up to four parameters that can be controlled by the soft knobs underneath. Tweak the knobs to change your sound. If this module offers more than four parameters, you can navigate between pages using the Page buttons. If you want to return to the main page, press EXIT.

If you changed a parameter setting, but want to return to the previous value, you can use the UNDO button on the left side of the display. It will always revert your most recent action. The REDO button will revert the action of the UNDO button.

In *Browse* mode you can select the desired rig using the RIG buttons on the right side of the front panel.

The LEFT and RIGHT buttons will advance in single steps, while the UP and DOWN buttons will change rigs in larger steps. You can also use the BROWSE knob above the right side of the display to see eight rigs simultaneously, as well as scroll through the list of all available rigs. You can change the sequence of rigs by using the soft button “Sort by ...” to sort them by date or author, and then load the selected rig with soft button “Load”.

Once you have found a rig that you like, you can use the soft knobs underneath the display to change the gain and the EQ of the rig. These controls display their current value on the LED collar around the knobs.

Stomps

The first section, labeled “STOMPS”, is for your stomp box effects. This section offers four stomp box slots which are represented by the four buttons labeled A, B, C, and D. Here you can place the built-in stomp effects in any order and configuration you’d like. These effects are applied before the signal reaches the STACK section.

◆ Stomp LED color coding

You’ll notice that the stomp LEDs aren’t simply lit green or not, but have many different colors. That’s because these LEDs use color to help you identify which kind of algorithm is being used for each stomp.

Stomp algorithms are color coded like this:

Distortion	Red
Wah	Orange
Chorus	Blue
Phaser & Flanger	Purple
Compressor	Cyan
EQ	Yellow
Delay	Green
Effect Loop	White

You can change the algorithm for a stomp that is shown in the display by rotating the TYPE knob above the left side of the display to scroll through the available algorithms. The BROWSE knob above the right side of the display can be used to select items from lists of “local presets” that are available for every stomp. Local presets are settings for a specific type of module (stomps and effects), stored independent from the rig itself.

Finally, you can select more stumps and effects in the EFFECTS section, and change the settings of the delay and reverb using their dedicated knobs.

Stack

In the middle of this signal flow, you'll find the “stack” section with the buttons for AMPLIFIER, EQ (equalizer) and CABINET. The stack section represents the raw virtual guitar amplifier as defined by the profile.

In the stack section, you can freely combine amps and cabinets by holding their respective buttons to bring them into focus, and then scroll through the available local presets using the BROWSE knob.

Effects

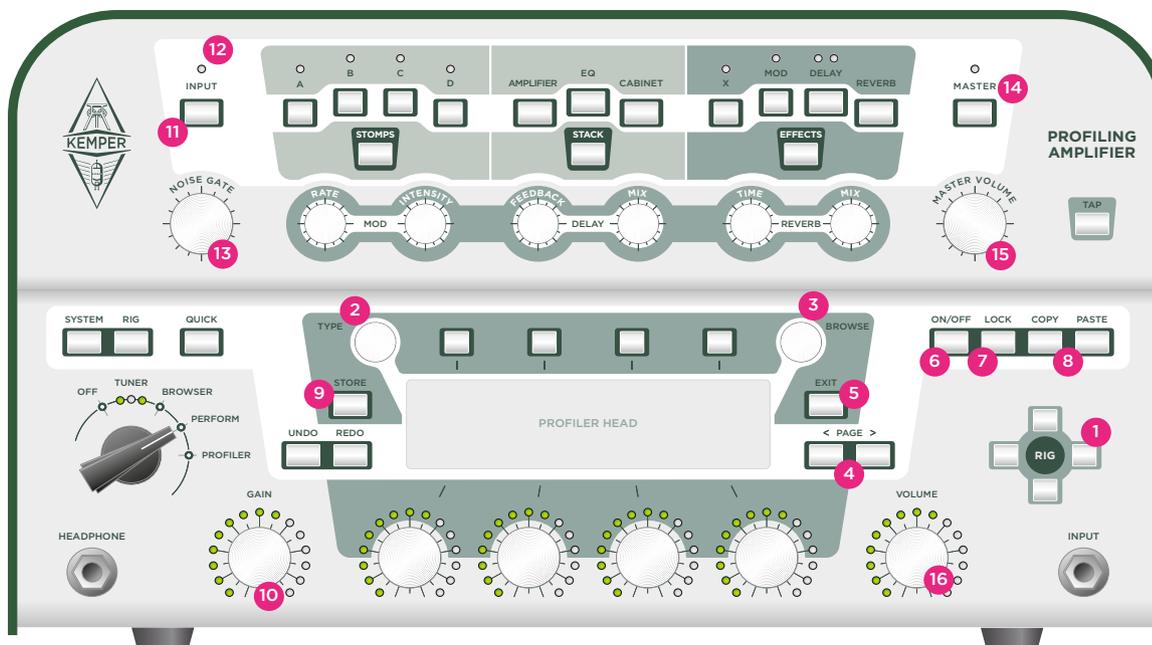
Here, you can add more built-in effects to the signal, after it has passed through the amplifier and virtual cabinet. The delay and reverb module in the effects section have a fixed position and purpose. The knobs underneath the signal flow give you direct access to the EFFECT MIX of the delay and reverb, as well as for DELAY FEEDBACK and REVERB TIME.

The X and MOD modules offers you a further choice of effects. We recommend you place a modulation effect into the MOD module, if you intend to use one in your rig, as you have direct access to its RATE and INTENSITY parameters with the line of knobs underneath.

- ✓ The stomp, stack and effect section can be stored as an individual local preset. To recall an entire stomp, stack or effect section, hold the respective section button and browse through the local section presets using the BROWSE knob.

Front Panel controls

Profiler Head:



Profiler Rack:



We already mentioned some of the buttons and knobs in the previous section, when we showed you how to adjust the various effects and settings within the upper half of the front panel. Below is a short explanation of what all of the front panel controls do

Rig navigation section ⁽¹⁾

Here you can navigate through the rigs. LEFT and RIGHT buttons will switch sequentially, while the UP and DOWN buttons will change in larger steps. A newly-selected rig is instantly recalled.

Type knob ⁽²⁾

When an effect or stomp is in the focus, the TYPE knob will select between different types of effect algorithms. For example, in stomp edit this knob will select distortions, compressor and modulations among others.

- ✓ When you switch between similar effects types, you will notice that parameters common to these effects will retain their values; this is to make the choice of algorithm easier. For example, you can make a dedicated setting for a Wah effect, and then step through the various Wah types; the effect will change, but settings for the various ranges and Wah pedal control will remain the same. You can also switch the type between phaser and flanger, to check the different impact of these two algorithms, and the modulation scheme will remain unchanged.

In Browse Mode you can select from a number of different “Views”. Each View filters the displayed rigs, to help simplify the selection.

All Rigs	No special view, you can see all rigs in your device.
Current Author	Only rigs by the Author of the last selected rig will be displayed.
Favorites	Only those rigs marked as favorites will be displayed. You can mark and unmark rigs as favorites by holding the RIG button for two seconds.

Last Imported	Only shows the rigs that you have imported recently.
My Rigs	Only shows the rigs that you have made your own (identified by your author name).

Browse knob ⁽³⁾

In Browse mode this knob can be used to quickly browse the list of available rigs. In Performance mode, it can be used to quickly browse the list of available performances. Turn the BROWSE knob to display a list of available items; further turns will select between them.

When an effects module is in focus, this knob selects between the local presets. In other words, it chooses between different presets for distortion stomps, reverb settings, etc. You can also store your own local presets by using the STORE button.

- ✓ Note: Remember the difference between turning TYPE and BROWSE: changing the Type will only change the effect algorithm while the parameters will stay the same; browsing effects with BROWSE will load new sets of parameters, including the respective Type setting.

Page navigation ⁽⁴⁾

When a module is in focus, these buttons will switch between pages if more than one page is available for a given module.

Exit button ⁽⁵⁾

This button is used to return to the “play” page. Also, you can use EXIT to cancel an operation.

On/Off button (6)

This button switches the currently selected module or section on and off. The light of the module or section button shows you if a module is active or bypassed. You can also switch a module on and off by pressing the module button itself.

Lock button (7)

The LOCK button will prevent a section or a module from being changed when you make rig changes. In other words, if you want to preserve all the settings for a module or section, press the Lock button. You could also refer to a module as being “global” when locked.

Let's say you want to lock a Wah effect on stomp A. To do this, choose or dial your desired Wah effect and press LOCK, while the Wah effect is still in focus. Now you can switch rigs as often as you want. The Wah will stay on stomp A until you unlock it again.

Another example would be to lock the reverb in its bypassed state, to make sure that all the rigs will sound dry for the rest of the session. To do this, bring the reverb into focus by pressing REVERB for half a second. Then switch it off, and press LOCK. This way, you can prevent the reverb from being switched on by the next change of rig.

You can also use the lock function creatively to find new combinations between several sections. For example: you can lock the stack section once you have found your favorite amp/cabinet combo, and then switch rigs, so you can try this amp with stomp and effects from other rigs.

Locking a module will only prevent it from being changed when you select a different rig. However you can still edit parameters of locked modules as usual. And you can still browse and recall local presets for locked modules.

To get an overview about the lock state of the modules: press and hold LOCK, and the status of the button LEDs will change - all locked modules will be lit, while all non-locked modules remain unlit. To lock or unlock individual modules, press their respective buttons while holding the LOCK button.

Copy and paste buttons (8)

Use the COPY and PASTE buttons to grab a module and copy its data to another similar location. For example, you can copy and paste the settings of one stomp to another, either within the same rig, or another rig entirely. To do this, select a module and press COPY. Next, select a destination module and press PASTE. Voilà!

In general, you can use common sense to determine if the Kemper Profiler will let you copy settings from one module to another. For example, you cannot copy the reverb settings to the amp module. However, it is possible to copy a Stomp to slot X or MOD in the effects section. Go ahead and try whatever you want; you will be alerted if what you're attempting is not possible.

Store button (9)

Use the STORE button on the left side of the display to save any changes you have made to a module or rig.

STORE allows you to save a rig or a module to the permanent memory.

Pressing Store in Browse mode will offer you three different options using the soft buttons: “Replace” will overwrite the currently selected rig with the new version while keeping the original name, “Store as” will save the rig under a new name while keeping the original rig as well, and “Rename” will allow you to change the name of the actual rig.

When you've got an effects module in focus and press STORE you are given the option to save either the settings of the currently selected module as a local preset, or to save the entire rig. Choose Soft Button A to create a new local preset and to dial in an appropriate name.

Your local preset can be found and reloaded later by turning BROWSE, when you have a similar effect in focus. In the next step you are able to edit the name of the rig.

Soft Button #1	Insert a space to the left of the selected character.
Soft Button #2	Clear the selected space or character.
Soft Knob #1	Toggle between upper case and lower case letters.
Soft Knob #4	Scroll through the available characters.

Press STORE again to complete the procedure.

Gain knob ⁽¹⁰⁾

The GAIN knob controls the amount of distortion and covers an extremely wide range from ultra-clean to totally distorted. The GAIN control allows for the same large range on all profiles, even if the original amp has a more limited gain range.

The gain parameter compensates for the loss in level with any amount of gain reduction. You can turn the gain value to zero for every amp profile and the result will be a totally undistorted and uncompressed sound that has the same perceived loudness as the fully distorted version.

Input button ⁽¹¹⁾

Press this button to enter the input section where you set the input sensitivity for your guitar. There are two parameters in this section: “Clean Sense” and “Distorted Sense”. Each one can be modified using a dedicated soft knob. The NOISE GATE, with its dedicated knob, also belongs to the input section.

◆ Clean Sense

Different types of guitars produce different output levels depending on their pickups and string gauge: for example, humbucker pickups generate higher voltages compared to single coils, and active guitars generate even hotter signal levels. If you feel that clean sounds are either very loud or very soft compared to dis-

torted sounds, you can adjust “Clean Sense” to a level where clean sounds have the same perceived loudness as distorted sounds. “Clean Sense” determines the volume of clean sounds, but not the way the amp or the effects are driven. A low level guitar output stays cleaner; a hot guitar will still distort more easily.

Extremely hot guitars can generate unwanted distortion, also indicated by a red Input LED. To prevent this, turn down “Clean Sense” a bit.

◆ Distortion Sense

Distortion Sense should normally stay at zero (middle) position. Every rig will react as if you have plugged your guitar to the original amplifier.

If you feel that your guitar tends to drive the distortion too hot (or too soft) for the majority of preset rigs, then calibrate your guitar by adjusting “Distorted Sense” accordingly.

- ✓ Note: Clean Sense is not a simple input gain; you will notice that it does not affect the gain of a distorted sound. Distortion Sense is also not a simple booster, as it does not affect the gain of clean sounds. Neither of these parameters colours the sound.

The input section is locked by default. The settings will be relevant for every rig or performance until you decide to unlock it. If you unlock this section, the input settings will be individually saved and recalled per rig. Alternatively, you can leave the input section locked, and create local presets for individual guitars. You can then switch between these presets independently of switching rigs.

For example: if you want to use different guitars, you can create a customized local preset for each. When you switch guitars, simply select the respective local input preset, and the rest of the rig will remain unchanged. Remember: the input section is locked by default, therefore changing rigs will not affect it.

Input LED ⁽¹²⁾

The LED reflects the level of the input signal. Green is OK, yellow is still OK, red is too high.

Noise gate knob (13)

This knob controls the NOISE GATE, which eliminates the noise and hum of your guitar in a very smart way. Turn the NOISE GATE knob to the right, until noise and hum have disappeared; do not turn it beyond that point, as this might alter the sound of your guitar. When set to the appropriate position, you will notice that the noise gate is capable of eliminating noise and hum, even when the strings still sound. There is no need for an additional release control as in classic noise gates. The noise gate settings can be stored as part of a rig.

With the chicken-head set to *Profiler* mode, the noise gate will also work with the connected amplifier, but without interfering with the result.

Output/Master button (14)

This button brings the Output settings into focus. These are:

- Volume settings for different outputs
- Volume Link buttons to link and unlink the individual volumes to the master volume knob
- Output Sources to feed the outputs with different signals
- Separate Main Equalizer and Monitor Equalizer
- “MonitorCabOff”, a global switch to bypass the virtual speaker cabinet individually for the Monitor Output

By engaging “MonitorCabOff” you can run the Kemper Profiler directly to a power amp driving a guitar cabinet on stage, while the Main Outputs still carry the full signal, including the virtual speaker, to be connected to the front mixing desk.

All the Output settings are global (or “locked”) and are therefore not saved with the rig, but like all other modules, you can save local presets for the Output settings. Store and use individual local presets for specific adjustments to suit different venues, studios or rehearsal rooms.

✓ Note: Read more about the Output settings and special applications in the “Reference Manual”

Master volume knob ⁽¹⁵⁾

“Master Volume” is always global, and therefore not stored with a rig. To control headphone volume, please use the dedicated soft control in the output section, which can be accessed by pushing the OUTPUT button. Changing the volume doesn’t affect the color of sound.

Volume knob ⁽¹⁶⁾

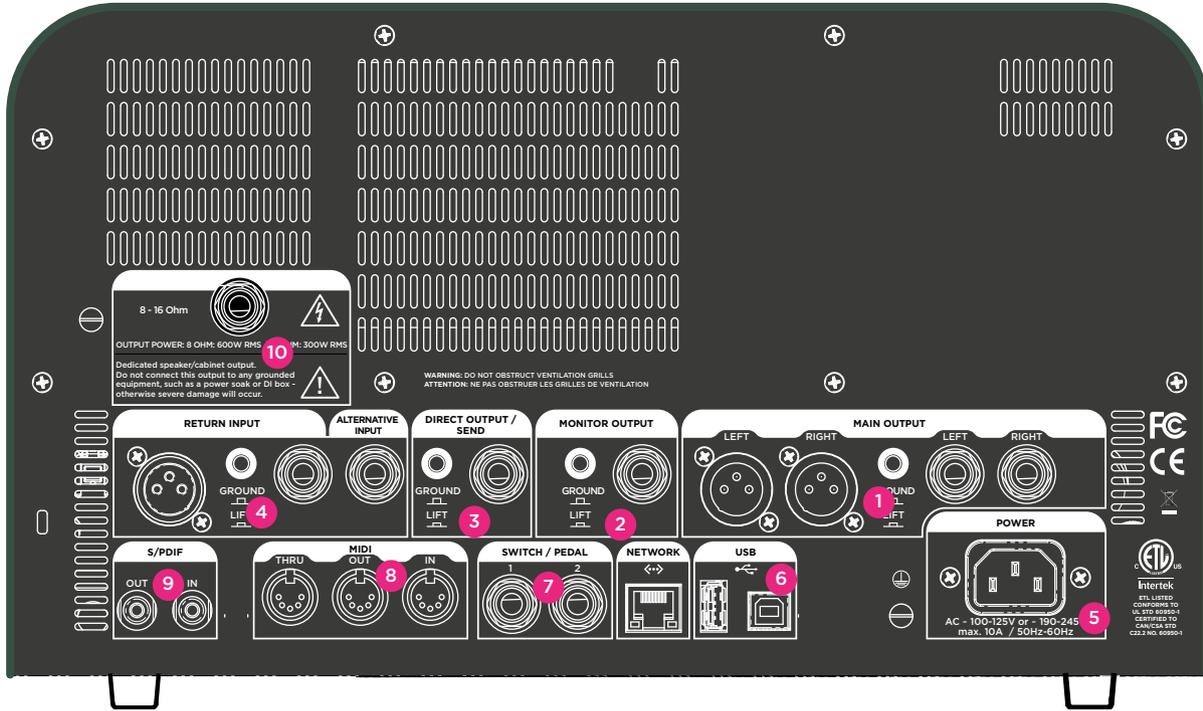
VOLUME controls the relative volume of a rig, and is stored as a part of it. Use this control to level out volume differences between rigs. Again, changing the volume doesn’t affect the color of sound.

USB ⁽¹⁷⁾

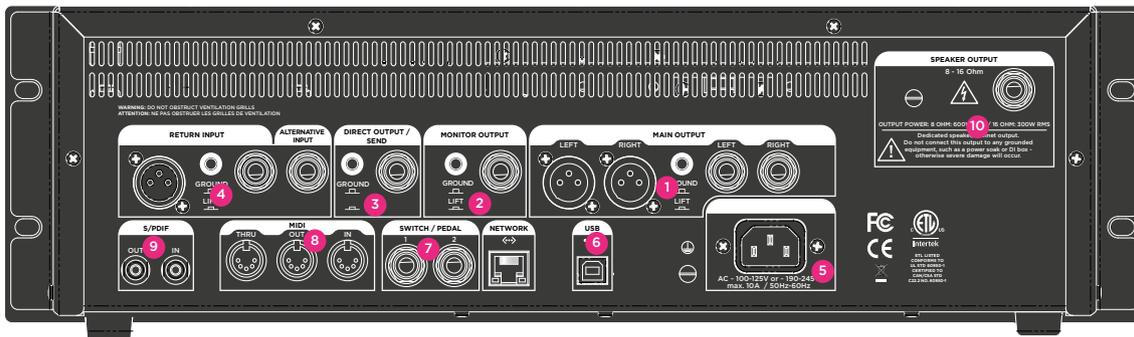
(Profiler Rack Only). Use the USB host port to connect USB sticks for backups and OS updates. See “Updates, backup and sharing sounds” for details.

Back panel overview

Profiler Head:



Profiler Rack:



Now that we've gone over the front panel, let's give you a basic overview of what you'll find on the back panel.

Main Output section ⁽¹⁾

This is your MAIN STEREO out. Use these outputs to connect to a mixing desk in a recording studio, or to the front of house mixer in a live situation. These outputs deliver the entire rig: amp, cabinet and all effects. You have a choice of XLR (symmetrical) or quarter-inch jack (not symmetrical). The XLR outputs are protected against 48V phantom power fed by a mixing desk. However you should avoid to feed phantom power into the Kemper Profiler to get the best audio quality. Like all inputs and outputs it offers a GROUND LIFT to prevent a hum loop.

Monitor Out section ⁽²⁾

Use this mono output to connect the Kemper Profiler to a stage monitor with its own level controls. This output also has its own GROUND LIFT.

You can also connect this output to a power amp and a regular guitar cabinet. In this case, you need to switch the cabinet simulation off, using the soft button "Monitor Cab Off" in the output page, to prevent unwanted coloration created by running a speaker-emulated signal through a guitar cabinet.

Direct Output/Send ⁽³⁾

This carries the direct output signal in glorious mono. The main purpose for this output is to feed signals into the reference amp while profiling. But it can do more than just that: you can also use the DIRECT OUTPUT in combination with the RETURN INPUT to create an effects loop. In this case, the DIRECT OUTPUT becomes a mono send. If you're not using this output as part of an effects loop, it will carry the original guitar signal. So, if you want to record your guitar dry, connect the DIRECT OUTPUT to the recording device or audio interface input.

- ✓ Note: The output purposes described here are just the standard settings. You can change the signal sources individually for each output in the Output Menu; e.g. you can set the Main Output to only deliver the wet Delay and Reverb signal, while the Direct Output carries the pure amp sound without effects. Refer to the Reference Manual for more information.

Return and Alternative Input ⁽⁴⁾

Use these inputs to connect the output of external equipment with your Kemper Profiler. Their main use is for profiling - use either input as the return from the reference amp. Use the quarter-inch input to take a line-level signal from a digital amp, speaker simulation or subgroup of a mixing desk. Use the XLR INPUT as appropriate, for instance with a microphone. Please note that the Kemper Profiler's XLR input does not provide phantom power.

As mentioned previously, the RETURN can also be used to create an external, mono effects loop in combination with the DIRECT OUT. Select "Loop Mono" or "Loop Distortion" in one of the stumps to include a hardware effect in your signal flow. In the EFFECTS section (X or MOD) you can also select "Loop Stereo". In this case, the RETURN works in combination with the ALTERNATIVE INPUT to achieve a stereo loop return.

Power connector ⁽⁵⁾

Connect this to your wall outlet using the supplied power cable. The internal, universal power supply accepts 100 - 240V AC via the usual IEC inlet.

USB ⁽⁶⁾

Use the USB host port to connect USB sticks for backups and OS updates. See "Updates, backup and sharing sounds" for details.

Pedals and switches ⁽⁷⁾

You can connect a variety of pedals and switches to control several functions. Pedal #2 is the volume pedal by default. When you connect a foot switch, use the parameters in System mode to assign that pedal to perform a variety of functions. Pedal #1 defaults to the control of Wah-type effects.

MIDI ⁽⁸⁾

Use these ports to connect the Kemper Profiler to MIDI equipment. You can send MIDI program changes to the MIDI Input of the Kemper Profiler to switch between rigs, and control changes to switch and control effects. If you send MIDI Clock to the Kemper Profiler, it will instantly sync its tempo, so tempo dependent effects like delay or tremolo will adapt their timing.

S/PDIF digital I/O ⁽⁹⁾

This is a digital input and output that can be used to connect the Kemper Profiler to other S/PDIF compatible devices such as certain computers and audio interfaces.

Speaker Output ⁽¹⁰⁾

Kemper Profiler PowerRack / PowerHead only. See Power Amp chapter for details.

Power Amplifier

The optional built-in power amplifier allows you to connect your Kemper Profier to all kinds of 8 or 16 Ohm guitar cabinets, as well as passive linear cabinets. It is internally cabled to the Monitor Output, so you can use all the features of the Monitor Output for the power amplifier as well. Please refer to the “Output” chapter of this manual for more detailed information.

If you intend to drive a guitar speaker cabinet, remember to activate our “CabDriver” algorithm, by setting “MonitorCabOff” in the Master/Output menu. CabDriver bypasses the cabinet simulation for the Monitor Output, while the Main Outputs feed the full studio sound to the main mixing desk of the live venue. The Monitor Output is still available and will carry the same signal that is fed to the power amp.

You will find more settings for the power amplifier on the dedicated page of the Master/Output menu:

Power Amp Switch

Switches the power for the built-in power amp. There is no specific need to switch it off when not in use; unlike a tube power amp, the built-in Class D amp is not in any danger when you have no speaker connected. Still, you may want to switch it off to reduce energy consumption.

Power Amp Booster

As mentioned, the power amp is connected to the Monitor Output, which provides enough headroom to support even loud attacks and transients of clean guitars. However, this comfortable headroom will naturally lower the signal volume for the power amp, so you might not achieve the desired loudness. Turning up the Power Amp Booster will increase the loudness by up to 12dB. Although this will shrink the headroom, this is no bad thing, as this happens in tube amps as well. Very loud signals and transients will then be compressed by a nice, organic-sounding soft-clipping circuit.

When the power amp is switched off, the Power Amp Booster is deactivated, thus returning the full signal headroom to the monitor output.

The internal power amp delivers 600 Watts at 8 Ohms; however, the wattage will be lowered to 300 Watts when used at 16 Ohms.

WARNING!

Never connect an active device to the power amp output! Any active devices (such as power soaks) that have a grounded circuit will destroy the power amp by creating a short cut.

Only passive speaker systems should be connected to the power amp output.

Please refrain from connecting devices with impedances lower than 8 Ohms, as the power amp could be damaged.

Using the tuner

The tuner LEDs above the chicken head knob are always active so you can monitor your tuning while you play. Even when you're not in tuning mode, the LEDs give you general information whether your guitar is in tune or not. If a guitar string is far out of tune, only the outer LEDs will be on. If your string is closer to proper tuning, the middle LED gets brighter. If your string is in tune, only the middle LED will be lit. So to tune your strings, make sure that the white LED in the middle is on, and the surrounding green LEDs are both off.

If you want a far more advanced tuner, you can use the chicken head knob to activate *Tuner* mode. When *Tuner* mode is engaged, a large tuner graphic appears and in addition, unique tuner functions become available:

Mute Signal	This determines whether the audio is sent to the MASTER OUTPUTS or not. To tune your guitar silently, enable "Mute Signal". The signal will then be muted, but only while you're in <i>Tuner</i> mode. This is a neat way to mute the signal temporarily; for example, to avoid unwanted noise when you change guitars.
Master Tune	Use "Master Tune" to adjust the base pitch of the tuner, in case you need to tune your guitar to something other than 440 Hz.

✓ When the *Tuner* mode is enabled, the LEDs become more sensitive to softer levels.

Building a rig

If you have ever used a digital guitar processor before, you will know that building your own rigs is part of the fun! In the Kemper Profiler you will find it surprisingly easy, as well. Simply bring any module or section into focus, activate it, and select from a range of presets using the BROWSE knob. Tweak to your liking, add spices if necessary. To help get you started, here is a brief overview of the available modules:

Stomp section

This is a mono section. It includes all the built-in stomp box simulations that you can place before (pre-) your virtual amplifier stack. An idle stomp slot can be activated by pressing and holding the corresponding Stomp A/B/C/D button. Once in focus, the soft button “Enable” recalls the default Wah algorithm. Alternatively, use the Type knob to browse through all available stomp algorithms. Selecting an option will recall the stomp and close the list browser.

◆ Stomp Types

There are several types of stomp boxes available in the stomp section, such as various Wah effects ranging from bandpass to comb filters. There are also several distortion stomps available, which were modeled after famous vintage pedals. On top of all this, modulation stomps such as Vintage Chorus, Hyper Chorus, Vibrato, Air Chorus, Flanger, Phaser, Tremolo and Rotary Speaker are included.

Most stomp parameters are self-explanatory, and a detailed overview of all available stomp parameters can be found in the *Reference Manual*.

Stack section

This is your “amplifier stack” consisting of your amplifier profile, speaker cabinet profile, and EQ. Pressing the STACK button and holding it for a short moment will enter the stack edit mode. You can rename the stack using soft button “Rename” or browse through the available stacks using the BROWSE knob.

Amplifier module

Hold the AMPLIFIER button to display the amplifier settings.

◆ Definition

This parameter determines the way the preamp distorts when overdriven. Every guitar amp produces a different kind of distortion. The “Definition” parameter controls the characteristic fingerprint of the preamp. The profiling process automatically sets “Definition” to the position that best represents the reference amp.

Settings on the left of the parameter range	Woody, muted, <i>bluesy</i> , or earthy textures with a limited dynamic range.
Settings in the middle of the parameter range	Fat and creamy textures with a greater dynamic range.
Settings at the right of the parameter range	<i>Sparkling</i> , brilliant, interactive and boutique.

As you can see, by tweaking “Definition”, you can change the preamp distortion characteristic completely. So you could, for example, use this control to modernize the profile of a vintage amp without having to use additional stumps. Alternatively, start with a profile of a modern tube amp and use “Definition” to give it a more vintage sound, when driven.

You can also use “Definition” to align the sound of your guitar to the sound of your amp, if required. Don’t be afraid to experiment until you get the balance that sounds best to you.

◆ Power Sagging

Power sagging models the interaction between the guitar signal and the distortion stage. Often, you hear guitarists talk about how the tubes “breathe” — that’s power sagging.

Increase the amount of “Power Sagging” to emphasize the velocity and energy of crunch sounds. The guitar sound gains additional energy and presence, without raising the perceived volume of the distorted signal.

When you turn “Power Sagging” beyond 50% you will go beyond what can be achieved with an analog tube amp, but without losing any of the natural characteristics of the sound. At full force, “Power Sagging” can make sparkling clean notes sound louder than distorted ones. In other words, you can use power sagging to expand the dynamic range of the original sound. At 0% the original dynamic range is maintained.

◆ Pick

This is another unique feature. It allows you to control the level and sharpness of the pick attack independently from the sustained portion of the sound. The result is independent from the amount of distortion. You can use this parameter to make clean sounds even more percussive without using a compressor. With fully distorted sounds you can resurrect the attack phase of any notes that get drowned in the natural compression caused by distortion. This will help you to make the riff cut through the mix more effectively. If you set “Pick” to a negative value you will soften the attack, resulting in a more fluid sound.

◆ Compressor

The compressor in the stack section is different from the others, because it is a part of the simulated amp circuit. In other words, it allows for completely different sounds compared to compressors that are inserted before (pre-) or after (post) the amp section. Distorted signals are not affected by compression; only clean signals will be boosted. The dynamics of your playing are fully retained. Depending on the strength of your picking, you can go from a crunchy sound to a compressed, clean sound. The volume knob on your guitar works exactly as you would expect: for instance, reducing the volume of your guitar will transform a dynamic crunch into a clean, compressed sound with full energy.

✓ You can find more information regarding the remaining amp parameters in the *Reference guide*.

EQ button

Holding the EQ button will bring it into focus. The soft knobs underneath the display control the following parameters for the EQ:

Soft Knob #1	Low frequency range.
Soft Knob #2	Mid frequency range.
Soft Knob #3	Treble frequency range.
Soft Knob #4	Presence.

Cabinet button

The CABINET button brings the cabinet section into focus. You can freely combine cabinets and amps from different profiles to create new stacks, as well as tweak the following three parameters for every cabinet:

◆ High Shift, Low Shift

Both of these parameters influence the characteristic formants of a cabinet profiles. “High Shift” will make the higher formants more prominent, whereas “Low Shift” does the same for the lower ones. These controls simulate the effect of changing the size of the cabinet.

◆ Character

Use this parameter to change the overall character of the cab. Turning the knob to the right will enlarge the highs and lows in the frequency response curve. This will result in more presence, but may sound too penetrating at extreme values. Turning it to the left will smooth the differences between the peaks and troughs in the frequency response curve. Of course, this will also flatten the character of the cabinet. To-

wards the left most position, the sound will resemble that of analog cabinet simulations (which often have a very limited frequency response and little character).

Effects section

The Effects section is where you can add stereo effects after (post-) the mono stomp section and the amp stack. It consists of the following modules:

◆ X

The X stomp can use the same effects as the stomp boxes, but in stereo, which is especially useful with effects like chorus that spread the sound over the stereo image.

◆ Mod

MOD can also use the same effects as the stomp boxes. However, this module is equipped with hardware controls which are designed to work specifically with modulation effects such as Chorus, Flanger, Phaser or Rotary. For this reason we recommend saving this slot for these types of effects. Modulation rate and intensity can be controlled using the dedicated RATE and INTENSITY knobs.

◆ Delay

These are the built-in delay effects. You can determine the stereo placement of the delay signals, the rhythmic values of the repeats, and also the character of their sound. Delay feedback and mix can be controlled conveniently using the dedicated hardware controls.

The Profiling Amplifier provides three types of delays in the DELAY module on the right.

Tap Delay	The delay time is linked to the tempo as selected in RIG settings, or by the TAP tempo button.
Free Delay	Delay time is freely adjustable in milliseconds, and independent from the TAP tempo. The delay time can be changed transparently, with no audible artifacts, which is also true for the tap delay.
Analog Delay	Delay time is adjustable in milliseconds, like in the free delay. However, adjusting the delay time will create those crazy pitch shifts or Doppler effects, known from the good ol' bucket brigade delays.

Beside these differences, all three delay types work in the same way, and offer easy ways to create mono or stereo (ping pong) delays. Only the left delay tap will feed its signal back to both delay taps; this simplification will help you to create great rhythmic delay patterns without increasing the density of the sound. More details about delay parameters can be found in the “Reference manual”.

◆ Delay LEDs

The delay LEDs will indicate the delay pattern by blinking in sync with the tempo.

◆ Reverb

This is the built-in reverb effect. It includes several room- and hall-type reverbs. The reverb's TIME and MIX parameters can be controlled with the dedicated hardware knobs on the upper half of the front panel.

- ✓ Both delay and reverb tails will even survive rig changes that use different delay and reverb settings. This is called “spill over”.

Tap tempo

◆ Tap button

A number of effects allow timing parameters to be determined by the tempo of the song you play. These include the delay time in the Tap Delay, and the rate parameter of the Phaser, Flanger, Tremolo and other modulation effects. All factory rigs have the tempo disabled by default, as we cannot know in advance what tempo you are going to need.

When no tempo has been set, these parameters will show you the absolute time values in Hertz or seconds.

There are three ways to activate the tempo:

- Tap the desired tempo on the TAP button.
- Select the specific beats per minute (BPM) using the “Tempo” parameter within the rig menu.
- Send MIDI Clock from another device.

When the tempo is engaged and active, the respective rate parameters of the modulation effects will show you musical values instead of absolute time values.

Between each regular musical value you will find dotted and triplet values. The unnamed values in between will rarely make musical sense, but will allow you to dial through the rates in a fine resolution, even when the tempo is engaged.

You will also find a soft button labelled “Tempo Enable” in the rig menu. Here, you can enable/disable the tempo, as required. To really get the most out of TAP tempo, you can assign a foot switch to this parameter, and simply tap the beat with your foot while you play.

- ✓ If a rig has a set tempo, all tempo related parameters are displayed in note values.

Configure your system preferences

System button

Press SYSTEM to access the “global settings” pages. Global settings remain unaffected when you change to another rig. Parameters in the system menu include “Pedal Settings”, “LED Intensities”, “Display Contrast”, “Time And Date”, among others.

Module button behavior

You have learned that the module buttons have two purposes:

- Switch a module on or off (press button briefly).
- Bringing a module into focus (hold the button for a little while).

If you feel uncomfortable with holding the module buttons to put an effect into the focus, you can change the behavior of the buttons in the system menu by activating “Direct Edit”. In this mode a short push of a module button puts the module into focus, just as the RIG or SYSTEM buttons do.

There are still two ways to switch a module on and off: either bring the effect into focus and use the ON button, or hold the ON button while pressing the module buttons that you want to switch. This procedure will work in any situation. Even while editing one effect, you can switch other effects on and off by holding the ON button while you press the respective module buttons.

Using a MIDI pedal to switch rigs

You can assign a unique MIDI program change number to each rig, up to a maximum 128 rigs:

- Select a rig in Browse mode
- Press the SYSTEM button
- Navigate to the “Browse Mode PrgChg” page
- Use the soft knob to select a Program Change Number
- Press “Assign” to assign this number to the actual rig

Now here’s a deeper explanation of how the assignment works on this page: You can see two lines of text on the display: the upper saying “Current Rig”, the lower “PrgChg#”. You can change the rig by using the RIG navigation keys, just as you would in Browse mode, but you don’t have to leave this page to do so. The lower line shows the actual Program Change Number followed either by the name of the rig assigned to it, or by “unassigned”. You can select a new number with the soft knob. Press “Assign” to link the actual rig to the actual number. Any existing assignment to another rig will be lost. If you want to unassign an existing link, choose the respective rig and press “Unassign”.

Rig button

This button is used to access rig-related parameters that are not covered elsewhere on the front panel. You will find settings for the tempo and the volume pedal, as well as other features that are further described in the Reference Manual.

Quick button

The QUICK button calls up a user-selectable page in an instant.

Performance mode

Performance mode is a powerful tool that allows you to organize rigs in ‘performances’. A total of 125 performances are available, each of which can hold up to five rigs in one logical place. You could, for example, use a performance to store the sounds dedicated to the intro, verse, chorus, bridge, and outro of a song, and switch between them using a foot controller.

Editing Performances

You can navigate through the 125 performances using the UP and DOWN buttons of the navigation cross on the front panel. Use the LEFT and RIGHT buttons to select a slot within a performance. By default, all slots of each performance are pre-loaded with an initialized rig. The performance itself will have a default name.

Once you have selected the slot, choose the rig you want to assign to it via the BROWSE knob. Once you have made your selection, press EXIT, and the rig will show up in the highlighted slot. At this point, we should mention that any edits will be lost if you select another performance without storing it first.

Rigs contained in performance slots are stored in a dedicated memory, so you can modify them independently from their parent rigs in Browse mode. Editing rigs in Performance mode is very similar to Browse mode.

The soft button “Arrange Slots” opens another page where you can easily rearrange and rename slots within the selected performance. This concept is very similar to the STOMPS edit screen. You can COPY and PASTE slots within and beyond performances.

The soft button “Arrange Performances” opens a screen where you can easily rearrange and rename performances, for example if you want to order them according to the set list of your next concert.

Any adjustment you make to a performance will be lost if you forget to store it.

Switching Performances with a MIDI Foot Controller

Depending on the capabilities of your MIDI foot controller, we have prepared a couple of approaches to select performances and slots via MIDI.

You can select any performance and rig directly via MIDI bank select and program change. The bank select and program change numbers associated with any slot are displayed in the dark box, on the left hand side. For example, slot 5 of performance 125 can be selected by choosing MIDI bank 5, followed by program change 113.

Some foot controllers are not capable of sending MIDI bank select; however, you might still be able to use MIDI control changes. We have added MIDI control change numbers to scroll up and down through the list of performances and select one of the five slots within the actual performance.

For more detailed information regarding remote control via MIDI please consult the Reference Manual.

Updates, backup and sharing sounds

The Kemper Profiler's operating system can be updated to receive refinements and new features. All you need is an internet connection, a PC or Mac and a USB stick.

Updating the operating system

Please perform the following simple steps to update your Kemper Profiler to a newer operating system:

You will need to use an **empty** USB stick in order to transfer the files from your Mac or PC to the Kemper Profiler for the first time. When you connect a USB stick for the first time, the Kemper Profiler will format it to ensure maximum reliability.

The next step is to download the latest operating system. Updates are free of charge and can be downloaded from the following URL:

www.kemperamps.com/start/

Expand the downloaded .zip archive and search for the update file called "kaos.bin" inside. Copy the file into the "OS Update" folder on the pre-formatted USB stick using your Mac or PC. Next, unmount the USB stick from your computer and plug it into the Kemper Profiler. Follow the on screen instructions which will appear after a couple of seconds.

Creating and restoring backups

We recommend that you backup your rigs and performances on a regular basis. To do so, please plug the prepared USB stick into your Kemper Profiler, switch to *Browse* mode, hit soft button "External Storage" and you'll be presented with the following options:

◆ Backup

Use this option to backup your Kemper Profiler. The backup will contain all user rigs, performances and local presets. If an older backup is already present, it will not be deleted but renamed automatically. To backup, select the soft button “Backup” and wait until you’re notified that the backup has been completed. This procedure can take several minutes. Never remove the USB stick until you’re prompted to do so. All successful backups can be found inside a folder called “Backups” on your USB stick.

◆ Restore

This option restores a backup from your USB stick to the Kemper Profiler. When multiple backups are detected, the most recent one will automatically be restored. Confirm by selecting the soft button “Restore” and wait until the procedure has been completed. Note that restoring a backup will replace all rigs, performances and local presets with the backup. In order to merge a backup file with the existing content, please proceed as follows:

Importing rigs, performances and local presets

Over time, we will give you access to a mind-blowing variety of the highest quality profiles and rigs. Those and other goodies can be downloaded from our website here: www.kemperamps.com/start/

In order to transfer these files from your Mac or PC to your Kemper Profiler, please copy them to the directory called “Shared” on your dedicated USB stick. Next, plug the USB stick into the USB slot on the rear panel of your Kemper Profiler and switch to *Browse* mode. Wait for a couple of seconds and then press the soft button “External Storage.” You will then be presented with an option to import the new content. Importing the content will merge the new data with your existing profiles, rigs and performances.

- ✓ Unlike other platforms, you don’t need to unmount the USB stick, you can simply remove it once the task is completed.
- ✓ In certain cases you may want to merge a backup with the existing content. To do so, copy the backup in question from the “Backups” to the “Shared” folder using your Mac or PC and perform an import as described above.

Kemper Profiler and MIDI

You can use MIDI to send program changes to switch between rigs. You can send MIDI messages to the Kemper Profiler either using your computer and a MIDI interface, or by using a dedicated MIDI control pedal. For more detailed information please consult the Reference Manual.

Profiling Guide

Profiling an amp

Now we're getting to the fun stuff! Profiling your own amp, custom digital simulation, or favorite stomp box is what sets the Kemper Profiler apart from every other digital amplifier out there. We've spent years getting our profiling system to deliver the goods in terms of sound quality, playability, and ease of use — all wrapped in a user-friendly interface. So while there's a lot of science and technology behind the concept of profiling, you'll find that it's quite easy to actually do; this guide can show you the basics and get you started right away.

General considerations

In order to make a profile, the original amplifier (which we will refer to as the “*reference amp*”) has to be connected to the Kemper Profiler using the DIRECT OUTPUT and the RETURN INPUT on the back. The Kemper Profiler then sends various tones and signals into the reference amp — it will sound like warbles and static at various pitches and intensities, in other words: not too musical! To get technical for a moment: these dynamically-changing sounds allow the Kemper Profiler to learn about the nonlinear behavior of the tube architecture and the dimensions of the passive components in the original amp. The Kemper Profiler then listens to how the reference amp reproduces these sounds and analyzes the results. These characteristics are then recreated in the virtual signal flow of the Kemper Profiler. Even the characteristics of the speaker cabinet and microphones, including all the frequency buildups and cancellations, are detected and become a part of the profile.

If that sounds a bit complicated, don't worry about it. The important thing to understand is that those weird sounds are how the Kemper Profiler determines the unique way that your reference amp changes the sound of your guitar dynamically over time. With the information the Kemper Profiler gets from those weird sounds, it is able to create a digital *profile* of your *reference amp*.

You can also profile solid-state amps and modeling amps, although the results from profiling modeled amps can sometimes be underwhelming. The reason for this is that some emulations try to mimic the typical tube sound using techniques that don't necessarily match the analog reality.

◆ Profiling with effects in the recording chain

Many guitarists get their signature sound by combining distortion pedals, booster pedals and equalizers/filters with a tube amp. If you want to do this, you can keep these in the signal chain during the profiling process — they will all be accurately profiled as a part of the reference amp sound. However, there is one exception: some distortion pedals use a special design that cannot be profiled accurately, for instance the Tube Screamer.

If you do include your effects chain with your amp profile, but are not happy with the result, try again without the distortion pedal. Remember, you can always use one of the modeled distortion pedals in the Kemper Profiler instead when building your rig.

Other effects should be bypassed during the profiling process because they will adversely affect the result, making it sound less natural and different to the original amp tone. These include: compressors, noise gates, and time/modulation/reverb effects such as delay, reverb, chorus, and so on.

You might also run into trouble when profiling a sound in which both the pre- and power amps of the reference amplifier are driven into distortion. If the resulting profile sounds unsatisfying, try to reduce the volume of the power amp. This will make the result sound somewhat more transparent, without significantly reducing the amount of distortion. The same is true for those modeling amps which offer a separate gain control for pre- and power amp.

The Kemper Profiler only allows for mono profiling. Stereo profiling is not currently supported, but really, how many *classic* guitar amps feature true stereo circuitry, anyway?

Since the Kemper Profiler sends its own test-tones into the reference amp during profiling, it should be obvious that the sound of your guitar isn't part of the result. The Kemper Profiler is designed to react to *any* guitar in an identical way to the reference amp that was profiled.

◆ Monitoring while taking profiles

The output of the reference amp can be monitored through the outputs of the Kemper Profiler. This way, you can switch between listening to the original reference amp signal and the profiled version using the soft buttons in the profiling mode. In fact, we recommend that in order to avoid any confusion between what you are hearing and what the Kemper Profiler is profiling, the reference amp should only be moni-

tored using the Kemper Profiler. To ensure that you are only hearing your reference amplifier through the Kemper Profiler, it's a good idea to place the speaker cabinet of the reference amp in a different room (in other words, somewhere you won't hear it) and away from the monitor system you are using for the Kemper Profiler. Keep in mind that this will not change the result of the profiling process in any way, but will make A/B comparisons between the reference amp and the Kemper Profiler much easier.

If you want to make profiles of computer-based amp simulations, but without using any kind of external mixer for monitoring purposes, you need to be careful not to create a feedback loop. One easy way to avoid potential feedback loops is by using only headphones to monitor the output of the Kemper Profiler while profiling. You can also make appropriate settings in your DAW to prevent the output signal of the Kemper Profiler from being routed back into the Kemper Profiler.

◆ Considerations regarding noise and hum

If you're profiling a very high-gain sound, you'll probably hear a certain amount of noise from your guitar amp. This is the well-known "high-gain hiss" and nothing unusual. However, if you detect hum, or other noisy artifacts, from your reference amp then you probably have a ground loop. Press the GROUND LIFT switch on the back of the Kemper Profiler for both the MAIN OUTPUTS and the RETURN INPUT. If that does not solve the problem, try different combinations using the other GROUND LIFT switches. It is important that at least one of the GROUND LIFT switches is *not* pressed to make sure that the Kemper Profiler has at least one ground connection.

- ✓ Remember that hum and noise is undesirable and might have a negative influence on the profiling process. Often, the best results are achieved by pressing the GROUND LIFT buttons for all outputs except for the DIRECT OUT.

◆ Other considerations

- ✓ Make sure that you are hearing the previously-selected rig in the Kemper Profiler when you set the A/B comparison to "Kemper amp", and the to "Reference Amp" when you switch to *reference amp*. If you don't, re-connect your *reference amp* to the Kemper Profiler.
- ✓ Playing back profiles over the MONITOR OUT using a regular guitar cabinet is one of the main features of the Kemper Profiler, but it is not recommend to use a guitar cabinet as a reference monitor for a profiling

session. For best results it is crucial to do the profiling session in a typical studio setting using linear studio monitors or a PA.

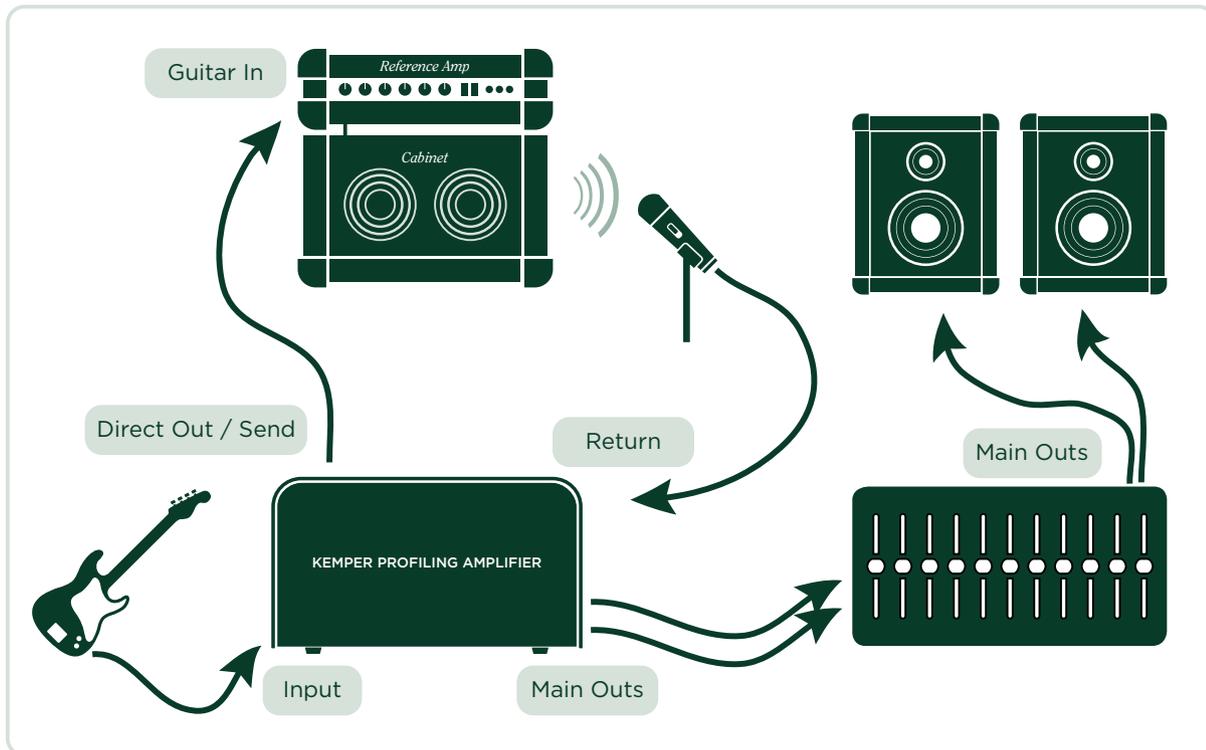
- ✓ If your amp provides a spring reverb, remember to turn it off for the profiling process.

Making connections

Connections for profiling a hardware guitar amp

Here are a few typical scenarios for the most common profiling setups:

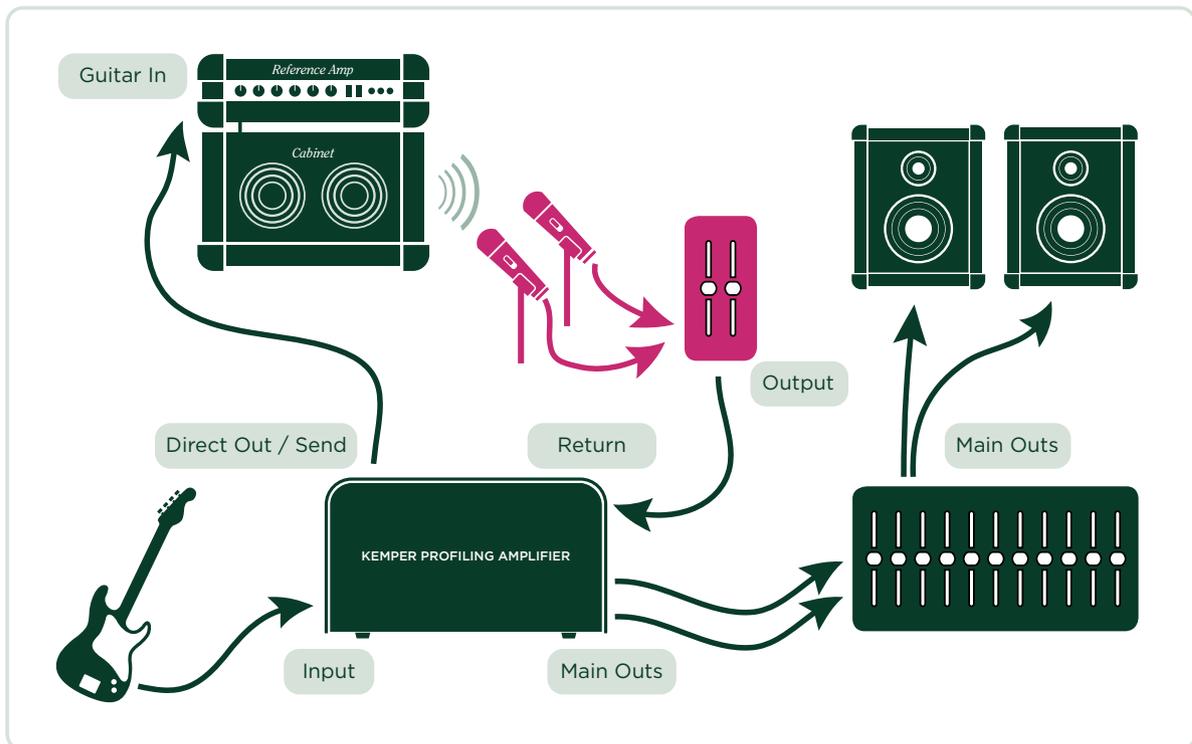
- Connect your guitar to the INPUT jack of the Kemper Profiler.
- Connect the DIRECT OUTPUT/SEND of the Kemper Profiler to the guitar input of your hardware amplifier.
- Connect your microphone or microphone preamp to the RETURN INPUT jack of the Kemper Profiler (use either the XLR or quarter-inch input depending on your microphone or microphone preamp).



The above assumes that you are miking the speaker cabinet connected to your *reference amp*. If you are taking a direct, cabinet-simulated output either from the amp itself, or from a speaker load box such as the Hughes & Kettner Redbox or Palmer boxes, you can connect the line-out from a load box directly to the RETURN INPUT of your Kemper Profiler.

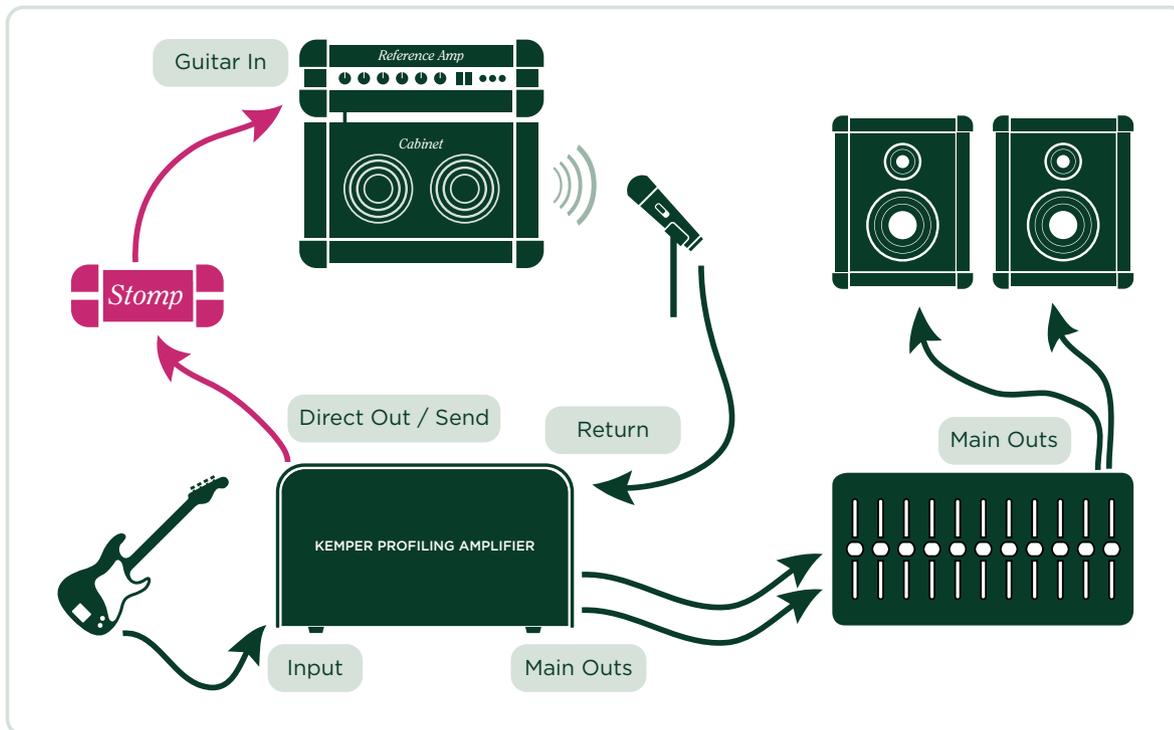
The *reference amp* that you want to profile has to be connected to the Kemper Profiler in such a way that only the Kemper Profiler will send and receive the signals. This effectively turns the Kemper Profiler into a monitoring device.

Avoid any other connections that might lead to confusion and end up corrupting the results. For example, if you want to use several microphones with your *reference amp* you should route the signals of these microphones to a subgroup of your mixer, and then route the output of that subgroup directly to the PROFILING INPUT. You can use the EQ and phase switches on the mixer to optimize the mix. Make sure that the signal is only routed to the KEMPER PROFILER and isn't duplicated at the main outs of the mixer.



It's a good idea to make the Kemper Profiler the central hub for all your guitar recordings and use it as your main switching device. That way you can use all of your favorite amps alongside the internal effects of the Kemper Profiler. Once you've finished recording, it will only take a few button pushes to preserve the exact sound for future use.

Connections for profiling a combination of amp and stomp box



- Connect your guitar to the INPUT of the Kemper Profiler.
- Connect the DIRECT OUTPUT/SEND from the Kemper Profiler to the input of your stomp box.
- Connect the output of the stomp box to the input of your *reference amplifier*.
- Connect the microphone or microphone preamp to the RETURN INPUT of the Kemper Profiler.

- ✓ The Kemper Profiler can only accurately profile preamp stomp boxes such as overdrive and distortion pedals, Eqs and filters, tube preamp pedals, and so on. Attempting to profile a delay, reverb or modulation pedal is unlikely to work as expected. In other words: your mileage might vary.

Connections for profiling a computer-based guitar amp simulation

- Connect your guitar to the INPUT of the Kemper Profiler.
 - Connect the DIRECT OUTPUT/SEND from the Kemper Profiler to the appropriate input on your computer's audio interface.
 - Route the output of your guitar amp simulation software to a specific hardware output of your computer's audio interface.
 - Connect the output in question to the RETURN INPUT of the Kemper Profiler.
-
- ✓ When profiling a guitar amp simulation, be sure to switch *off* the noise gate in your guitar amp simulation software.

Taking a profile

Once the *reference amp* is setup just the way you like it, it's time to start profiling. Don't worry, once you read through this guide and tried it for yourself, we are sure you'll agree that profiling is a very simple and straightforward process.

Start by choosing a rig in *Browse* mode. It's a good idea to choose a profile that is somewhat related in character to the *reference amp*. This will give you the chance to compare the existing rig with that of the setup you are about to profile, thereby ensuring that you get a result that is even better suited to your needs.

- ✓ Switch off any effects loop in the rig you have chosen, to prevent your *reference amp* from sitting in the effects loop of its own profile. Effects loops are indicated by the LED color white.

Using other built-in Kemper Profiler effects in the reference rig while you are profiling is not a problem. Those effects you have engaged will still be audible when you switch to your *reference amp*, so you can configure the Kemper Profiler's stomp boxes and other effects in the Profiling amp to suit your *reference amp* tone, even before taking the profile. When you have taken the profile and stored it as a part of a new rig, all the stomps and effects that were part of the original rig will be stored also.

- ✓ If you prefer a pure sound with no effects, you can either switch any stomps and effects off prior to profiling, or choose a rig with no active stomps and effects.

Next, turn the chicken-head to the *Profiler* position. At this point, you will still hear the previously selected rig. Use the soft buttons to switch between the *reference amp* and the Kemper Profiler/profile.

◆ levels

Set the Return Level (Soft Knob 4) so that the level of the reference amp roughly equals the level of the internal sound of the Kemper Profiler. You can check level differences by switching back and forth between the current rig and your reference amp. If the Output LED turns red when you play your reference amplifier, the level is too hot. You might notice audio clicks when you turn the Return Level; this is the analog Return Input stage switching the level in the analog domain, to ensure the best signal-to-noise ratio. This feature allows you to capture any signal level, from the softest microphone to the hottest studio level out-

put. Don't worry too much about achieving a perfect volume match; during the profiling procedure the Return Level will be further fine-tuned automatically to match the unity level of the Kemper Profiler.

Please remember to leave a few decibels of headroom in your microphone preamps and the rest of the signal chain. The test signals can get a bit louder than a regular guitar signal, and might cause clipping in your signal chain if you don't leave enough headroom. Be sure to watch your level meters while the profiling is in progress, just to be sure there are no overloads.

Press the soft button labeled "Next".

On this page you can inform the Kemper Profiler whether the sound you want to profile is *clean* or *distorted* by pressing the appropriate soft buttons. If your *reference amp* has a clean sound you can set the Kemper Profiler to "Clean". In truth, this step isn't strictly necessary; the Kemper Profiler will detect if the reference amp is clean automatically during the profiling process. However, if you already know you're profiling a clean amp, setting the Kemper Profiler to "Clean" before you begin profiling will ensure that no extremely loud signals are sent to the *reference amp*.

Why might you want to do this? Remember, a clean amplifier has a wider dynamic range than a distorted amp (because amp distortion also has a compressing effect), so pressing "Clean" can save your monitoring equipment and your ears. To profile a distorted sound, press — you guessed it — "Distorted". You can also use the EQ in this page to further shape the sound of the reference amp before you start profiling.

As soon as you select "Start profiling", the Kemper Profiler will send measurement signals (those weird sounds we talked about at the beginning of this guide) to the reference amp.

Evaluating the Profile

Once the Profiling procedure has ended, you can make the first A/B comparisons between your reference amp and the new profile. Use the soft buttons to switch between the reference amp and the Kemper Profiler/profile. You might notice that your reference amp is not muted when you listen to the internal profile; this is intentional, as the acoustic signal of your reference amp will always mix with the sound of your studio monitors, even if you have it in a separate room. While this may influence your perception of the sound through the studio monitors, it shouldn't affect the A/B comparison. However, if your reference amp was

muted everytime you switched back to the Kemper Profiler/profile, a valid A/B comparison would be impossible.

When you are satisfied with the A/B comparison, you may wish to evaluate the pure profile; in this case, it would make sense to mute your reference amp. Press the ON/OFF button to mute the reference amp; any other action will unmute it again.

Refining the profile

After the automatic profiling procedure, the profile is nearly done and very close to the original already. Now it's time to give it the final polish: press "Refine Profile" and play your guitar for about 20 seconds. This is no time for a meaningful solo - you need to play several chords, with attitude! This will generate intermodulation in the distortion that the Kemper Profiler needs to do its refining. Be sure to strum especially hard so that the Kemper Profiler has a chance to analyze the transients. When you feel that you have refined the profile enough, press the blinking soft button to stop the process. Now make another A/B comparison to check the result. Repeat the process if necessary as many times as needed.

The Refining process is actually independent of the type of your guitar. It is about adapting the distortion characteristics, as well as polishing the attack and dynamic response. The resulting profile will act and respond accurately no matter what guitar or pickup you use.

With completely clean sounds, you don't need to worry about refining the distortion characteristics, so "Refine profile" isn't available. If you find that the profile offers a wider dynamic range, and a higher volume in the transients compared to the original, the reason is probably that the original sound was, in fact, slightly distorted. This would have caused a small amount of compression, thereby affecting the result of the profiling process. In such a case, simply repeat the whole procedure, but without using the "Clean" option.

Power amp tubes generate a different type of overtone structure than preamp tubes. They distort with a harsher sound, because the negative feedback in the power amp circuit linearizes the tube amplification. This makes the distortion curve edgier. If you notice in the A/B comparison that the reference amp produces more high frequency distortion when light distortion is applied, you should set the "Tube Shape" parameter to about 9.0, to get the same behavior from the profile.

The resulting profile

Once you are happy with the result of the profiling, you can store the sound in the Kemper Profiler as a new rig. We highly recommend that you save the profile before you start modifying its parameters to preserve the original settings.

Congratulations! You have added a new amp and a new cabinet to your Kemper Profiler's arsenal. You are now free to combine each of them with other amps or cabinets in the Kemper Profiler to create new hybrid stacks.

You will notice that the GAIN knob is automatically set to the same (audible) position as the *reference amp* and the amp volume is the same as the other amp volumes to make it easy to compare different amps. The actual gain range of the Kemper Profiler is probably much larger than your original amp. This means that you can play the new profile from ultra clean to super distorted, even if you couldn't do so on the reference amp itself.

In those situations where the reference amp was clean, the GAIN knob will be set to the minimum position, while retaining all of the original volume. Of course, you'll have no trouble turning up the GAIN knob to distort this sound if you want to! Inside the Kemper Profiler, the "Preamp Definition" parameter has been set to the center position, and can be modified at any time.

When it comes to crunch or high-gain sounds, the "Preamp Definition" value is automatically set to a position that matches the reference amp. You can thus identify the virtual age of the *reference amp* and even modify it on-the-fly.

When you create a new profile, "Power sagging" is set to zero by default. By increasing the amount of power sagging, you can increase the dynamic range of your profile. This can be especially useful if you have profiled a reference amp that had a distorted sound with a limited dynamic range.

✓ **Tip:** If you set "Power sagging" to the two O'clock position, and set "Preamp Definition" a little higher than its original setting, you can make the profile of a great reference amplifier sound even better, and more dynamic, than the original!

The sound of the reference amp's equalizer circuitry becomes an intrinsic part of the profile, but the actual settings of the equalizer knobs are not replicated. We assume that the sound of the reference amp is exactly the tone that you want to achieve, hence the equalizer in the Kemper Profiler is set to a neutral state, leaving you free to tweak the sound to your taste.

To make another amp profile, just press the soft button labeled “Create New Profile”. See? We told you it was easy!

◆ Profiling a rotary speaker cabinet

The Kemper Profiling Amp already ships with some rotary speaker profiles and rigs which were captured from the real thing, but if you have access to a different brand of rotary speaker, you can take your own profiles, too.

To do this, first set up the rotary speaker as you would in a normal recording situation. Next, connect the whole chain to the Kemper Profiler, just as you would with a guitar amp. This time, however, two microphones should be used to capture the cabinet - one for the bass rotor, and one for the tweeter horn.

Connect the microphones to a mixer, create a mono mix of the two, and send this to the Kemper Profiler’s RETURN INPUT. The idea is for both microphones to be captured at the same time, resulting in a single profile. Now, switch your Rotary speaker to high speed and start the profiling procedure. The profiling process will ignore the rotation of the cabinet and only capture the typical sound character. The resulting profile will probably sound weird and uninspiring on its own, but when you engage the “Rotary speaker” stomp in the MOD module, you’ll hear the rich and animated sound of your original rotary cabinet.

✓ **Tip:** Although the profile is captured in mono, you can use the “Rotary speaker” stomp in the MOD or X slot to recreate the typical stereo movement of the signal. The Rotary speaker effect will automatically separate the bass rotor from the tweeter horn.

Under the hood

In case you enjoy reading about technical details, below is a description of what the Kemper Profiler is doing during the profiling process:

During the first phase, you will hear white noise with a rising amplitude. The Kemper Profiler is now collecting data about the frequency response of the *reference amp*. The frequency response will change dramatically as the gain increases. This is how the Kemper Profiler learns about the circuitry of the *reference*

amp and the frequency response of the cabinet. Also, the characteristic impedance curve of the speaker, including its feedback to the power amp, is detected in fine detail.

In the next phase, slowly pulsating white noise is sent to the *reference amp*. The volume of the white noise is set to a level at which the reference amp starts to distort. This is how the Kemper Profiler learns about the dynamic distortion curve of the tubes in the *reference amplifier*. Using this information, the Kemper Profiler is able to recreate that curve with the highest possible accuracy. This is also true for transistor-based and digitally-modeled distortions.

In the third step, the Kemper Profiler sends a complex tonal texture that follows a mathematically-based set of rules to the reference amp. This texture creates unique interference patterns that allow the Kemper Profiler to take a “fingerprint” of the DNA of the reference amp’s particular sound. The distortion of the speaker, along with the partial pattern of the loudspeaker diaphragm (also known as “cone breakup”) are excited by this tonal mixture. They complete the characteristic interference pattern that the Kemper Profiler will reproduce faithfully, once the measurements have been taken.

Legal

Communications and Safety Regulation Information

◆ Compliance Statement

This model **Kemper Profiler** complies with the following standards regulating interference and EMC: FCC Verification procedure – 47CFR §15.101

Other Class B digital devices and peripherals: EN 55022 Class B: 2006+A1:2007 EN 61000-3-2: 2006 + A1:2009 + A2:2009 EN 61000-3-3: 2008 EN55024:1998 (Profiler Head) + EN55024:2010 (Profiler Rack) + A1:2001 + A2:2003

◆ Radio and Television Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

◆ Summary of compliance with National Differences

List of countries addressed: Compliance with the National requirements of the CENELEC countries as given in CB Bulletin was also confirmed. (CENELEC= Belgium, Bulgaria, Denmark, Germany, Estonia, Finland, France, Greece, Ireland, Iceland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Austria, Poland, Portugal, Romania, Sweden, Switzerland, Slovakia, Slovenia, Spain, the Czech Republic, Hungary, the United Kingdom and Cyprus). The national differences for USA, Canada, Australia/New Zealand and Korea as given in CB Bulletin have been checked. The requirements of the following countries have also been checked and found to include no national differences: Malaysia, South Africa, Ukraine, China, Thailand, Kazakhstan and Russia.

The product fulfils the requirements of IEC 60950-1:2005 (2nd Edition); Am 1:2009

Declaration of conformity

We Kemper GmbH, Königswall 16-18, 45657 Recklinghausen Germany, Tel: +49 (2361) 9376824, declare under our sole responsibility that the product **Kemper Profiler** complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference.
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Communication Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

Reorient or locate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help. Any modifications to the unit, unless expressly approved by Kemper, could void the user's authority to operate the equipment.

Important Safety Instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.

- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/ accessories specified by the manufacturer.
- 12) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 13) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 14) The apparatus shall not be exposed to drippings or splashing and no objects filled with liquids (such as vases) shall be placed on the apparatus. **Warning!** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- 15) The apparatus should be connected to a properly-grounded (earthed) outlet.
- 16) Ensure that under any circumstance, the power plug can be easily reached.
- 17) The apparatus is not for outdoor use.

