



KEMPER PROFILER

Main Manual 5.5

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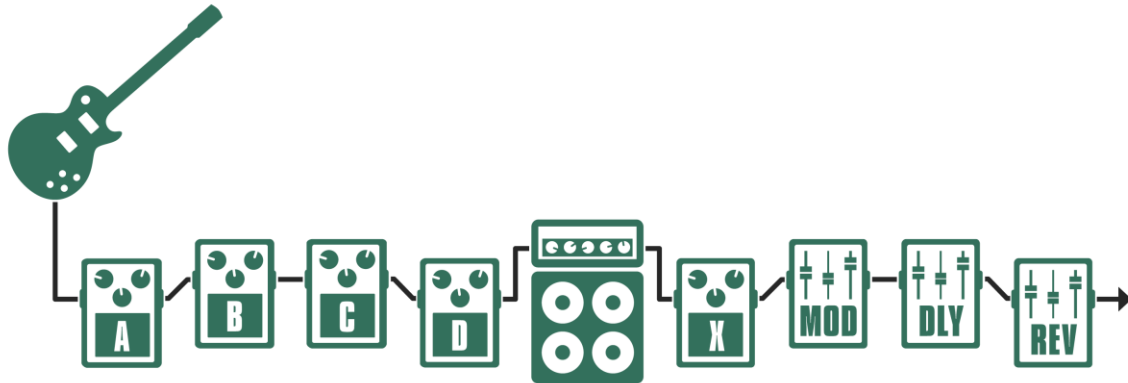
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Main Manual

About this Main Manual

Welcome to the KEMPER PROFILER™ Main Manual. We assume that you have already read the PROFILER and Remote Quick Starts. This Main Manual starts with a description of [Rigs and their signal chain](#) followed by all [front panel controls](#) and [connections on the back panel](#). Most of this Main Manual is dedicated to the description of all parameters for the [effects](#); however, we will also provide additional details about certain aspects of the product and try to give you a deeper understanding of how things work in the PROFILER. Last, but not least, you will find a dedicated chapter on [how to create a PROFILE of an amp](#).

Rigs and Signal Chain



A Rig and its signal chain

A complete signal chain comprising amplifier, guitar cabinet and potentially multiple effects is called a “Rig”.

The signal chain of any Rig begins at the [Guitar Input](#), passes through four effects modules, the stack section, and then followed by another four effects modules. From there, the signal is sent to the outputs. The sequence of the modules and sections from left to right represents the signal flow inside the PROFILER™ and is reflected by the corresponding controls on the upper row of the front panel.

Each of the buttons in the signal flow provides a unique and intuitive way to manage your sound. By pressing a corresponding button, you activate that module or section. Hold the button a little bit longer to focus the module and show its parameters in the display. The lower line of the display shows up to four parameters that can be controlled by the [soft knobs](#) underneath. Tweak the soft knobs to change your sound. If the module offers more than four parameters, you can move between pages using the [PAGE buttons](#). To return to the home screen, 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 – this is a great way to compare two settings.

In Browser Mode, you can select the desired Rig using the buttons of the [RIG navigation cross](#) on the right side of the front panel. Press left/right to advance in single steps, or up/down to jump to the next group. Another way to scroll Rigs is by using the [BROWSE knob](#) located above the right-hand side of the display. The advantage of using the BROWSE knob method is that it allows you to view eight Rigs at once - the RIG navigation cross can then be used to move the cursor around the list. You can change the sequence of Rigs by using the soft button labelled [Sort Order](#) to sort them by date or author, and then load the selected Rig with the “Load” soft button.

Once you have found a Rig that you like, you have immediately control over the [gain](#), which displays its current value on the LED collar around the dedicated knob. You can also use the [soft knobs](#) below the display to change the tone of the amplifier in the Rig.

Effect Modules

Each Rig contains eight effect modules. The first four labeled “A, B, C, and D”, are all mono, and are applied before the signal reaches the stack section. These are best suited to stomp boxes like distortions or wah effects. Once the signal has passed through the amplifier and virtual cabinet, you can add four stereo effects in the modules labelled “X, MOD, DLY, and REV”.

The list of available effect types in modules A, B, C, D, X, MOD, DLY is identical. The REV module is different in that it has dedicated types and presets.

The DLY and REV modules have a predefined position and purpose. The knobs beneath these modules give you direct access to the Delay Feedback and Mix parameters and the Reverb Time and Mix parameters.

If you intend to use a modulation effect in your Rig, we recommend placing it in the MOD module, as both the Head and PowerHead provide two additional knobs for controlling the Rate and Intensity parameters.

Effect Categories, Types and Presets

You will notice that the effect LEDs aren't simply lit or unlit but have many different colors. That's because these LEDs use color to indicate which effect category and type is being used. A detailed description of all available effect types and their corresponding colors can be found in the [Effects](#) chapter.

If one of the effect modules is open, you can rotate the [TYPE knob](#) above the left side of the display to choose one of the effect types listed. Example: Lead Booster.

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

The [BROWSE knob](#), above the right side of the display, can be used to select from the list of effect presets in the right column of the screen. Effect presets contain an effect type and custom settings for all its parameters and are treated as user data in the same way that Rigs are. You are free to create presets of your own, delete any you don't need, or import them from your USB memory stick. While a Rig always includes the complete signal chain from the Input Section to the REV module, a preset consists of just one module or one section. Each PROFILER comes with a set of factory presets preinstalled for demonstration purposes. These can be excellent starting points when you intend to configure a specific effect setting - just find a preset that comes close and then fine-tune its parameters to your needs.

Presets allow you to store your preferred Rig building blocks under a name of your choice, so your favorite wah wah, booster, delay, etc., can be immediately available for you to use in any Rig.

There are two ways to load presets via soft button above the right side of the display: either manually by pressing "Load" when the soft button is blinking, or by selecting the "Autoload" option. In this case, presets are loaded automatically a couple of seconds after they have been selected.

Let's summarize the two methods of selecting a stump:

- Select an effect type. In this case, only the type changes while all parameter settings are maintained.
- Select one of the factory presets, or one of your own, and then load it either manually or via autoload. In this case, the type will be loaded along with all its parameter settings as stored in the preset.

Stack Section

In the middle of this signal flow, you will find the stack section with the buttons for AMPLIFIER, EQ (equalizer) and CABINET. The stack section represents the raw, virtual guitar amplifier and cabinet, as defined by the PROFILE™.

All the powerful possibilities to further fine-tune Profiles are explained in a dedicated chapter about the [stack section](#).

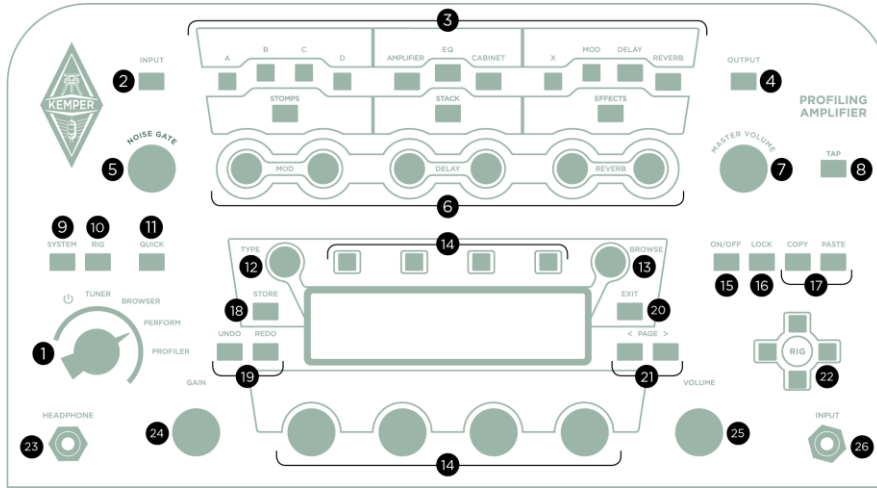
In the stack section, you can freely combine amps and cabinets. Hold their respective buttons to bring them into focus. Then use the [BROWSE knob](#) to either:

- select soft button labeled “Presets”, to browse through the list of amplifier or cabinet presets stored on your PROFILER,
- or select soft button labeled “From Rigs”, to load an amplifier or cabinet from another Rig in the browse pool of your PROFILER.

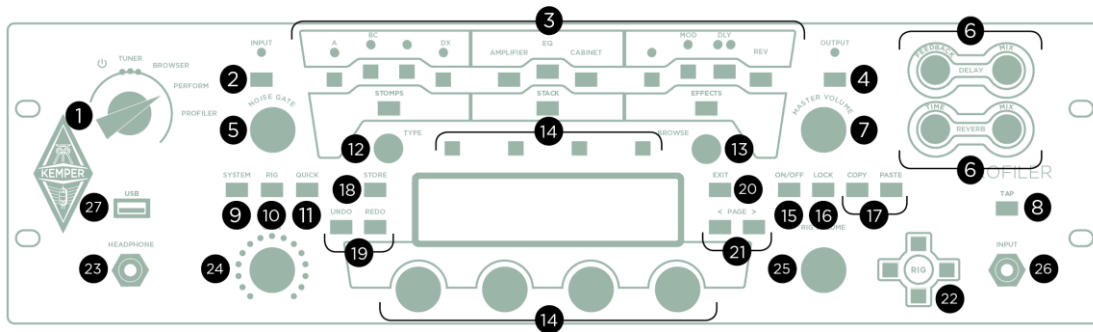
While the stack section is in focus, you have the same choice of either selecting stack presets or loading stacks from other Rigs.

As with effect presets, the presets in the amplifier, cabinet modules and the stack section are also user data that you can save with a relevant name or delete as you see fit. The PROFILER ships with several examples onboard. If you have a favorite Amplifier PROFILE with settings that you like, and want to reuse later, storing it as a preset could prove very useful.

Front Panel Controls



PROFILER Head:



PROFILER Rack

Chicken Head Knob (1)

Use the chicken head knob to switch the PROFILER on and off. You can select one of the following modes:

Tuner Mode	Open the tuner to fine-tune your instrument. Please find details in the chapter Using the Tuner .
Browser Mode	Here you can browse through your Rig pool stored in the PROFILER.
Performance Mode	Here you can organize your sounds for live performances. A chapter of this manual is dedicated to Performance Mode .
PROFILER Mode	This is the place to create your own PROFILES. Details can be found in chapter PROFILING an Amp .

INPUT Button (2)

Press this button to enter the Input Section. Here, you can set the input sensitivity and select the physical input for your guitar signal. In Browser Mode, the Input Section is locked by default. This means that the settings will be applied to every Rig, unless you decide to unlock it. If you do unlock this section, the input settings will be recalled individually with each Rig. In [Performance Mode](#), the Input Section is not locked by default, because most users prepare and store their Performances with specific settings of the Input Section for particular songs and guitars. The [Noise Gate](#), with its dedicated knob, also belongs to the Input Section.

◆ Clean Sens

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

Extremely “hot” guitars can generate unwanted distortion, indicated by the [INPUT LED](#) flashing red. This is only relevant for clean sounds, however - prominent amp distortion will completely mask a subtle clipping of the input.

◆ Distortion Sens

Distortion Sens should normally stay at zero (middle) position. Every Rig will react as if you had connected your guitar to the original amplifier.

If you feel that your guitar tends to drive the distortion too hot (or too soft) for most of your Rigs, then calibrate your guitar by adjusting Distortion Sens accordingly.

✓ Clean Sens 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 colors the sound.

✓ A tutorial video about the Input Section and how to adjust Clean and Distortion Sens can be found on: www.kemper-amps.com/video

Other parameters of the Input Section are explained in the [Instrument Input and Reamping](#) chapter.

INPUT LED (2)

The LED reflects the level of the input signal. Its base color can be changed from green to blue with the option [Signal LEDs Blue](#) in System Settings.

Module and Section Buttons (3)

These buttons are associated with the modules and section of the signal chain as described in the chapter [Rigs and Signal Chain](#) before. A short press will switch the associated module or section on and off. Press longer to open the associated menu. Once inside a menu use the [PAGE buttons](#) to scroll through pages of parameters.

OUTPUT/MASTER Button (4)

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

- volume settings for different outputs
- [Volume Link](#) soft 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](#)
- “Monitor Cab Off”, a global switch to bypass the virtual speaker cabinet individually for the MONITOR OUTPUT and consequently for [the built-in power amplifier](#) of the PowerHead and PowerRack models

By engaging “[Monitor Cab Off](#)” you can run the PROFILER directly to a power amp driving a physical guitar cabinet on stage, while the MAIN OUTPUTS still carry the full signal, including the virtual speaker, which would be connected to the front mixing desk.

All the settings in the Output Section are global (or "[locked](#)") and will therefore not be saved with the Rig. However, as with all other modules, you can save the settings for the Output Section as presets. This allows you to create output presets with adjustments tailored to specific venues, studios or rehearsal rooms.

- ✓ Read more about the settings in the Output Section and special applications in the chapter [Output Section](#); there is also a tutorial video specifically about the Output Section and recording setups, which can be found on: www.kemper-amps.com/video

OUTPUT LED (4)

The PROFILER performs soft clipping and is very forgiving in terms of amplitude clipping, so here is no need to panic if the OUTPUT LED flashes red occasionally. Typically, you might experience this with clean sounds. In such cases you could either decrease [Rig Volume](#) or another Volume in the Rig e. g. [Amplifier Volume](#), or perhaps consider enhancing your clean Rig with a [Compressor](#) effect.

NOISE GATE Knob (5)

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 noise and hum are eliminated, even when the strings are still sounding. There is no need for an additional release control as found in classic noise gates. The Noise Gate settings can be stored as part of a Rig.

Like "[Clean Sens](#)", the Noise Gate setting is part of the Input Section and is stored with the Rig. It is also stored as part of any input preset. When the Input Section is [locked](#), the noise gate is locked as well.

For metal sounds, we recommend adding one of the special noise gate stumps in addition, which are explained in the [Noise Gate Stumps](#) chapter.

With the [chicken head knob](#) set to PROFILER Mode, the Noise Gate will also work with the connected amplifier, but without influencing the resulting PROFILE.

- ✓ A tutorial video about the Input Noise Gate can be found on: www.kemper-amps.com/video

Direct Control Knobs (6)

Direct control knobs provide instant access to specific effects parameters. There are six on the PROFILER Head and PowerHead, and four on the Rack and PowerRack models:

- Modulation Rate and Modulation Intensity in the MOD module (Head/PowerHead only),
- Delay Feedback and Delay Mix in the DLY module,
- Reverb Time and Reverb Mix in the REV module.

The same parameters are also available in the respective effect menus.

MASTER VOLUME Knob (7)

Master Volume is the master of all output volumes and is always global. It is not stored as part of any Rig. Changing the volume will not affect the color of the sound.

Volumes of all analog outputs including the [HEADPHONE output](#) are linked to Master Volume by default. These links can be activated and deactivated with soft buttons in the [Output Section](#) (e. g. “Headphone Link”).

Master Volume maintains the relative volume settings of all outputs linked to it. For example, if MONITOR OUTPUT Volume is set relatively low and Main Output Volume relatively high, and both are linked to Master Volume, you

might need to crank up Master Volume quite a bit before the MONITOR OUTPUT will send a signal. In an extreme case, one output could still be dead even with Master Volume at maximum. Please use the individual volume controls in the Output Section to balance their levels according to your needs. As a rule, it's best to avoid extreme volume differences between any of the outputs linked to Master Volume.

As output volumes of linked outputs might vary, Master Volume doesn't follow a dB scale, but a simple 0-10 scale.

TAP Button (8)

This button triggers [Tap Tempo](#). The PROFILER Remote offers another [TAP button](#) for foot control. Hold it down to activate [Beat Scanner](#).

SYSTEM Button (9)

This button opens [System Settings](#) which contain multiple pages of global parameters. Global settings are not stored by Rig, so they remain unchanged when you load different Rigs or Performances.

RIG Button (10)

The RIG button opens [Rig Settings](#) with contain multiple pages of settings that are stored and recalled with each Rig.

QUICK Button (11)

This button can be configured to assume different functions, according to your preference. By default, the QUICK button returns to the most recently accessed module or section edit page. You can find more details of what functions are available in the [Quick Functions](#) chapter.

TYPE Knob (12)

When an effect or stomp is in focus, the TYPE knob will select between different types of effect algorithms. In stomp edit, for instance, this knob will select distortions, compressors, modulations, etc.

On the home screen in Browser Mode you can select different View modes via the TYPE knob or soft button labelled “Views”. For more information see [Views](#).

BROWSE Knob (13)

In Browser Mode, this knob can be used to quickly browse the list of Rigs within your current [View](#). You can then select one of the listed Rigs, load it with the corresponding soft button, or delete it with the soft button labelled “Delete”. 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 a module or section is in focus, this knob selects between the corresponding [presets](#).

- ✓ Remember the difference between turning the TYPE knob and the BROWSE knob. Using the TYPE knob will only change the effect type while all parameter settings will stay the same - this makes it easy to compare how different effect types sound with the same settings; browsing effect presets with the BROWSE knob will load all the parameter settings, as well as the respective effect type.

Soft Buttons and Soft Knobs (14)

There are four soft buttons above the display and four soft knobs below. They assume different functions depending on the menu and page currently in focus. On the home screens of Browser Mode and Performance Mode, the soft knobs represent the amplifier's equalizer.

On the Head and Power Head, the soft knobs have an LED collar which reflects their value. On the Rack and PowerRack, values are displayed as numbers on the screen.

ON/OFF Button (15)

This button switches the currently selected module or section on and off. The light of a 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 (16)

Use the lock function to prevent a section or a module from being changed when you switch Rigs. To lock or unlock individual modules, press their respective buttons while holding the LOCK button. Essentially, you can think of a locked module as being "global".

To get an overview of the lock status of all modules, press and hold LOCK - all locked modules will be lit, while those that are unlocked will remain unlit.

- ✓ The lock function works independently between Performance Mode and Browser Mode. So, you could, for example, lock your Input Section in Browser Mode while keeping it unlocked in Performance Mode (which happens to be the default setting).

COPY and PASTE Buttons (17)

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!

- ✓ Once you have performed the paste, the PASTE button LED will switch off - however, the most recent contents of the clipboard are retained until the unit is powered off, so you are free to continue pasting them as many times as you like.

In general, you can use common sense to determine whether the 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/paste the content between the effect modules A, B, C, D, X, MOD, and DLY. Go ahead and try whatever you want - you will be alerted if what you're attempting is not possible.

STORE Button (18)

Use the STORE button, on the left side of the display, to save any changes you have made to a module, Rig, Slot, or Performance. Store allows you to save changes to the permanent memory.

Pressing Store in Browser Mode will offer you three different options via 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 and won't delete the original Rig. “Rename” will allow you to change the name of the current Rig.

If you press the STORE button with a module or section in focus, you are given the opportunity to save either a preset of the settings of that module or section only, or to save the entire Rig. Choose [soft button “... Module”](#) to create a new preset and to give it a suitable name.

Your preset can be found and reloaded later by turning the [BROWSE knob](#), while a module or section is in focus.

UNDO and REDO Buttons (19)

With the UNDO and REDO buttons you can revise, or step back-and-forth through any modifications you have made to the settings within the current Rig.

EXIT Button (20)

Press this to return to the home screen.

PAGE Buttons (21)

If there is more than one page within a particular module, you can use these buttons to switch between them.

RIG Navigation Cross (22)

Use this to 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.

HEADPHONE Output (23)

Plug in your stereo headphones.

GAIN Knob (24)

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 always compensates for loss in level, no matter how much you reduce it by. 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.

Rig VOLUME Knob (25)

The VOLUME knob on the right lower side of the front panel is the individual volume of the current Rig. Note that this parameter does not drive the sound into any power amp distortion, so it will only change the volume of the sound, not the character. The setting is stored with the Rig. If you want to modify the overall volume of your PROFILER, use the [Master Volume](#) instead.

The PROFILER is designed so that every PROFILE, distortion or compression will produce approximately the same loudness, thereby avoiding any extreme volume drops or peaks when you browse through the Rigs. All the factory Rigs come with Rig Volume set to the center position, which is the unity or default volume.

If you feel that clean Rigs sound softer or louder than distorted Rigs, please don't try to fix it by adjusting the volume of the individual Rigs! Instead, you should readjust the [Clean Sens](#) parameter in the Input Section to match your guitar to the PROFILER.

Use the [VOLUME knob](#) to adjust the level of each Rig to suit a song in a set list, rather than to balance the levels between all the Rigs.

If you feel that any of the Rigs sound particularly loud or soft, check to see if there is an active effect causing the problem. Check the individual volume settings of the active effects, in case they are boosting or attenuating the sound.

If you can't pin it on an effect, then it might be the PROFILE itself differing from unity gain. In this case, adjust the "Volume" parameter, found in the amplifier module, until the Rig sounds at the correct level. Be sure to store the Rig afterwards, if you want the volume change to be permanent for that specific Rig.

- ✓ None of the volume controls mentioned here will color the sound. If you feel that a sound is colored by a volume control, be aware that the human ear tends to perceive a simple loudness change as a change in color.

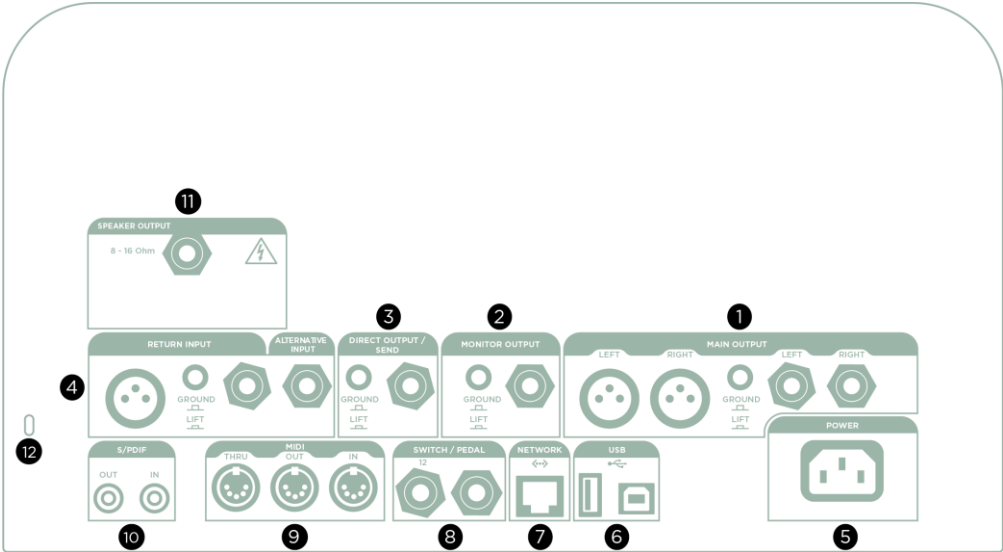
Front INPUT (26)

This is the default input to plug in your instrument cable.

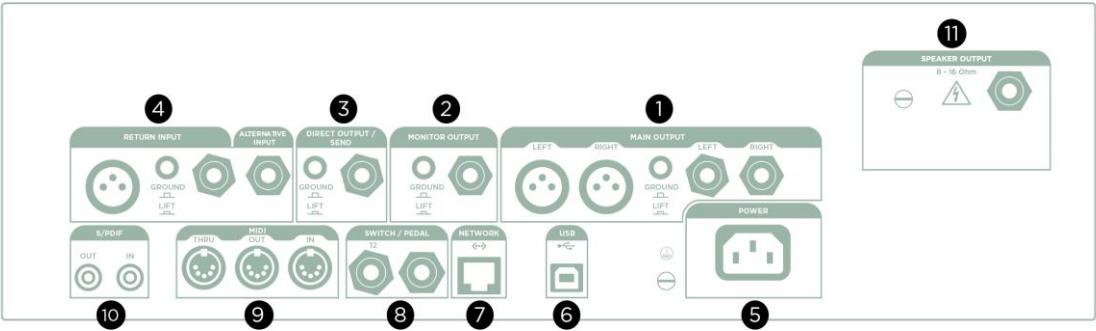
USB (27)

Use the USB type A port to connect USB memory sticks for backups and operating system updates. Please consult the chapter [Updates, Backups and Sharing Sounds](#) for details. Head and PowerHead users find this port on the rear side.

Back Panel Overview



PROFILER Head:



PROFILER Rack:

MAIN OUTPUTS (1)

These are your main stereo outputs. 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 (balanced) or quarter-inch TS-jacks (unbalanced). The XLR outputs are protected against 48V phantom power fed by a mixing desk. However, you should avoid feeding phantom power into the PROFILER if you want the best audio quality. Like all inputs and outputs, it offers a ground lift to prevent a loop hum.

MONITOR OUTPUT (2)

Use this mono output to connect the 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 Section, to prevent the unwanted coloration that would result from running a speaker emulation through a guitar cabinet.

Bypassing the cabinet module can also be done by simply pressing the CABINET button. However, there are two differences compared to enabling "Monitor Cab Off":

- Bypassing cabinet is an individual setting to each Rig, unless you lock the cabinet module in its "off" state. Monitor Cab. Off is a global setting.
 - It will bypass the cabinet module for all outputs, whereas "Monitor Cab Off" will only affect the signal routed to the MONITOR OUTPUT (and the built-in power amp of PowerHead and PowerRack).
- ✓ If you select the option "Monitor Stereo", MONITOR OUTPUT and DIRECT OUTPUT become one logical pair of stereo outputs. Functions like Monitor Output Source, Monitor Output Volume, Monitor Volume Pedal, Monitor Output Link, Monitor Cab. Off, Monitor Output EQ, and Aux In > Monitor are applied to both outputs automatically.

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 during PROFILING™. This is not its only purpose, however: you can also use the DIRECT OUTPUT/SEND in combination with the [RETURN INPUT](#) to create an [effects loop](#). In this case, the DIRECT OUTPUT/SEND becomes a mono send. If you're not using this output as part of an effects loop, it will normally carry the original guitar signal. So, if you want to record your guitar dry, either connect the DIRECT OUTPUT to the recording device, or to the input of your audio interface.

- ✓ The functions described in the above paragraph are only the standard settings. You can change the signal sources individually for each output in the Output Section; e.g. you can set the [MAIN OUTPUTS](#) to only deliver the wet [delay](#) and [reverb](#) signal, while the DIRECT OUTPUT carries the pure amp sound without effects. There is also a tutorial video specifically about Output and setup for recording available on: www.kemper-amps.com/video

RETURN and ALTERNATIVE INPUT (4)

The ALTERNATIVE INPUT can be used as a rear-side guitar input, which is especially convenient for the Rack, and PowerRack models. The parameter "[Input Source](#)" needs to be set accordingly in the Input Section.

The RETURN is available as balanced TRS or XLR input. While it plays a key role during PROFILING™, as explained in the chapter [Taking a PROFILE](#), it can also be used in combination with the DIRECT OUTPUT/SEND to loop in external equipment. In combination, RETURN and ALTERNATIVE INPUT can function as a pair of stereo returns. Details can be found in the [Effect Loops](#) chapter.

Both the RETURN and the ALTERNATIVE INPUT can also be used as [auxiliary inputs](#). You could, for instance, use this feature to mix in music from your mp3-player and play along. You will find the corresponding mix controls in the [Output Section](#).

- ✓ Please note that the XLR input does not provide phantom power.

POWER (5)

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

USB (6)

Use the USB type A port to connect USB memory sticks for backups and operating system updates. Rack and PowerRack users can find this port on the front panel. See chapter [Updates, Backups and Sharing Sounds](#) for details.

The type B port is used to connect to the [Rig Manager](#) application on your PC or Mac.

NETWORK (7)

Here, you can plug in a [KEMPER PROFILER Remote](#).

SWITCH/PEDAL (8)

You can connect expression pedals and momentary switches to control several functions. Details about technical conditions, cabling, and set-up of pedals and switches can be found in the dedicated chapter [Expression Pedals and Foot Switches](#) and in tutorial videos on: www.kemper-amps.com/video

MIDI (9)

Use these ports to connect the PROFILER to MIDI equipment. You can send MIDI program changes to the MIDI Input to switch between Rigs, and MIDI control changes to switch and control effects. If you send [MIDI clock](#) to the PROFILER, it will instantly sync its tempo, so that any tempo-dependent effects, like delay or tremolo, will adapt their timing accordingly. Details about MIDI can be found in a dedicated chapter [MIDI](#).

S/PDIF INPUT and OUTPUT (10)

This is a digital input and output that can be used to connect the PROFILER to other S/PDIF compatible devices, such as certain computers and audio interfaces. Details related to connection and configuration can be found in the chapter [Reamping](#).

SPEAKER OUTPUT (11)

PROFILER PowerRack / PowerHead only. See chapter [Power Amplifier](#) for details.

Kensington™ Lock Connector (12)

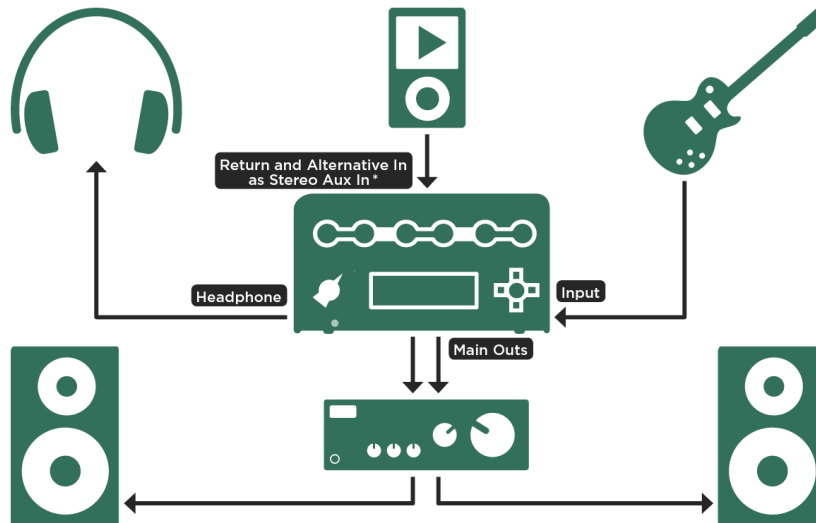
Here, you can connect a Kensington™ lock to protect your PROFILER against theft.

Basic Setups

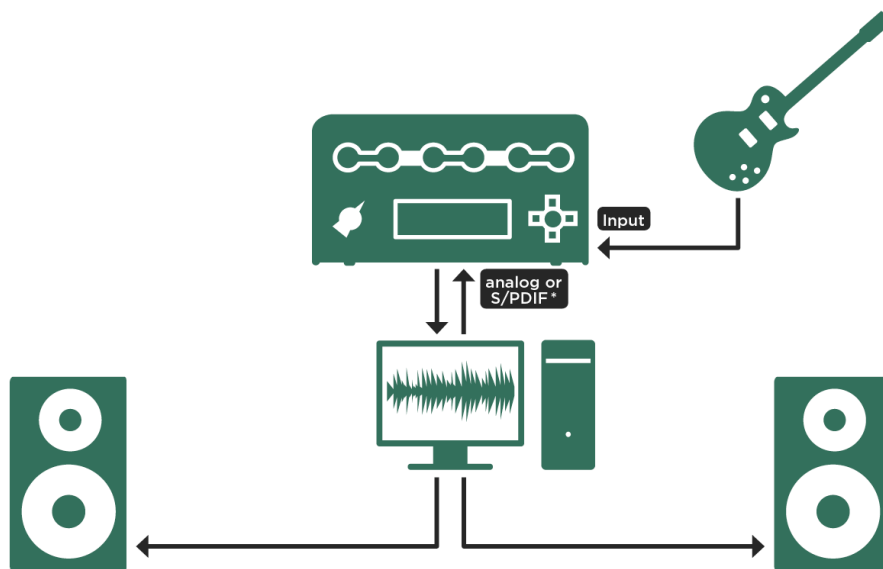
The PROFILER is equipped with a studio-grade, analog input-stage, followed by a state-of-the-art A/D stage for the best possible sound. Once your guitar signal has been processed, the high-quality D/A stage ensures that you get the best sound quality back out again. You will notice there are multiple inputs and outputs in both analog and digital formats, which we will describe in more detail below. We included all this connectivity, so you can use the PROFILER as a central hub in your studio, allowing you to connect your guitar to a variety of other amps, effects and recording gear, and switch between them easily.

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

First, let's illustrate a couple of basic environments the PROFILER can be used in. More specialized setups will be covered later, in the context of the specific features they require.



This typical home setup includes MP3-player and monitoring via headphones or entertainment-system.



This studio setup shows the PROFILER connected to a DAW with studio monitors attached.

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 as to whether your guitar is in tune or not. If a guitar string is far out of tune, only the outer LEDs will be on. As your string gets closer to the correct tuning, the middle LED becomes 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. While Tuner Mode is engaged, a large tuner graphic appears, and additional, unique tuner functions become available:

Mute Signal	This determines whether the audio is sent to the outputs or not. To tune your guitar silently, enable "Mute Signal". The signal will then be muted, but only while you're in Tuner Mode. This is a neat way to mute the signal temporarily; for example, to avoid unwanted noise when you change guitars.
Bubble Tuner	The "Bubble Tuner" option allows you to switch between the Strobe Tuner and the traditional PROFILER Bubble Tuner display.
Reference Pitch	Use "Reference Pitch" to adjust the base pitch of the tuner between 424 Hz and 456 Hz, in case you need to tune your guitar to something other than 440 Hz.
Tuner @ Volume 0	Deactivate the "Tuner@Volume 0" option if you don't want the Tuner to be activated automatically by the Volume Pedal in heel position.

There are multiple ways to engage the Tuner Mode:

- the chicken head knob in the TUNER position,
- the [TUNER button of the PROFILER Remote](#),
- an external analog switch, e. g. the PROFILER Switch, connected to one of the [PEDAL inputs 1-2](#) of the PROFILER or [PEDAL inputs 3-6 of the PROFILER Remote](#),

- MIDI control change #31,
- or the Volume Pedal in heel position, which equates to MIDI control change #7 value 0, if the option “Tuner@Volume 0” is activated.

While the Tuner Mode is enabled, the LEDs become more sensitive to softer levels.

Rig Settings

The [RIG button](#) is used to access all Rig-related parameters that are not covered by the knobs on the front panel.

Tagging

“Rig Tags” enters a list of tags. Since hundreds of Rigs can be stored in the browse pool, and with numerous ways to organize them, it is crucial to tag your Rigs with meaningful information. Some tags are linked to the Rig, e.g. “Rig Author”. Others are linked to Amplifier and Cabinet, e.g. “Amp Manufacturer” and “Cab Model”. To make this easier soft buttons labelled “Amp Tags” and “Cabinet Tags” are provided in the amplifier and cabinet modules.

Here is a list of all the available tags:

Rig	Rig Name, Rig Author, Instrument (Guitar/Bass/Acoustic), Rig Comment
Amplifier	Amp Name, Amp Author, Amp Location, Amp Manufacturer, Amp Model, Amp Year of Production, Amp Channel, Pickup Type, Amp Comment
Cabinet	Cab Name, Cab Author, Cab Location, Cab Manufacturer, Cab Model, Cab Comment, Speaker Manufacturer, Speaker Model, Speaker Configuration, Mic Model, Mic Position

Many tags are already pre-filled, but it's worth taking the time to enter accurate information, because it makes managing your sound archive so much easier. Current factory Rigs already include some excellent tagging examples.

Use the “Rig Tags” [soft button](#) in Rig Settings, or “Amp Tags” and “Cabinet Tags” in amplifier and cabinet modules, to access the list of associated tags. Use the “Scroll” [soft knob](#) to select a tag that you would like to fill or modify. The “Edit” soft button opens the Tag Edit screen with the following controls:

ABC	Use the "ABC" soft knob to switch between upper- and lower-case characters.
<PAGE>	The PAGE Buttons control the position of the cursor.
Character	Use the “Character” soft knob to select a character.
Insert	Use the soft button “Insert” to insert a space before the current cursor position.
Clear	The soft button “Clear” deletes the character at the current cursor position, and closes the gap. If you hold for about one second, the whole tag is cleared.
COPY	The COPY button stores up to ten tags in the clipboard.
PASTE	The PASTE button recovers tags from the clipboard, in last in first out order.
Done or EXIT	When you have finished editing, press the soft button “Done”, or the EXIT button, to complete the task.

Alternatively, the PC- and Mac-based [Rig Manager](#) application can be used to modify tags in a very comfortable manner.

Favorites

By setting this flag, the current Rig will be designated as one of your favorites. Read more about Views and Favorite Rigs in the chapter [Getting Organized](#).

Rig Spillover Off

If this option is selected, the effects placed in the DLY and REV modules will not generate spillover, should you switch to another Rig or Slot. This means their delay and reverb tails will be cut as soon as the Rig is changed, rather than decaying.

- ✓ Effects in any modules other than DLY and REV will never generate spillover, regardless of this setting.

Snapshots

Snapshots are copies of entire Rigs, which you can capture by simply pushing the soft button labelled “Store Snapshot” on the regular home screen at any time. Snapshots are stored outside of your browse pool.

On the “Details” page in Rig Settings, the soft button labeled “Browse Snapshots” opens a list of all Snapshots. Here, you can compare sounds easily. Use the [BROWSE knob](#) to select a Snapshot from that list, which you can then load, delete, or store as a Rig in your browse pool.

Panorama

This parameter allows you to move the signal within the stereo field. The “Panorama” parameter affects the [HEADPHONE output](#) plus all “Master...” [Output Sources](#) of [MAIN OUTPUTS](#) as well as [S/PDIF OUTPUT](#). Panorama can also be controlled via [MIDI](#).

Transpose

This is the same “digital capo” effect also available as [Transpose](#) effect type. Using it here in Rig Settings means you don’t have to tie up an effect module.

Rig Volume

This is the same parameter controlled via the [Rig VOLUME knob](#). In case you want to [morph](#) Rig Volume, and own a PROFILER Rack, you can adjust the Base Sound and Morph Sound values more conveniently by using the display on this page.

Tempo

The “Tempo Enable” soft button enables or disables the tempo for a Rig. When tempo is disabled, all tempo-related values in the PROFILER revert to the default tempo of 120 bpm and the values are displayed in milliseconds and Hertz. An additional soft button labelled “Use Perf. Tempo” is available in Performance Mode that allows you to set a

unique tempo for your current Performance. With the “Lock Tempo” soft button you can even lock the tempo globally. [soft knob “Tempo”](#) sets the tempo in beats per minute (bpm).

Several time-based parameters allow their timing to be determined by the tempo of the song you play. This includes delay time as well as the “Rate” parameter of the [Phaser](#), [Flanger](#), [Tremolo](#) and other modulation effects. There are four ways the tempo can be controlled, stored and retrieved:

- Turn the “Tempo” [soft knob](#) in Rig Settings to set the desired beats per minute (bpm).
- Tap the desired tempo on the [TAP button](#) or external switch.
- Use the [Beat Scanner](#) by holding the TAP button or external switch.
- Receive [MIDI clock](#) from another device.

Read further about Tap, Beat Scanner and MIDI clock below.

All factory Rigs have “Tempo” disabled by default; this is because we cannot know in advance what tempo you are going to need. When “Tempo” is disabled, the “Rate” parameters of the respective modulation effects will show you the absolute time values in Hertz or seconds. Whenever you want the effects to sync to a specific tempo, activate “Tempo” by tapping the TAP button, or by any of the above methods.

Once activated, the TAP button starts blinking and the “Tempo Enable” soft button in Rig Settings is highlighted. Now that “Tempo” is engaged and active, the respective “Rate” parameters of the modulation effects (Phaser, Flanger, and Tremolo) will show you musical values instead of absolute time values.

The “Rate” control is based on a special philosophy, that allows continuous control over the speed of the modulation, even when linked to the current tempo. The “Rate” control spans a wide range - from 32 bars to about a 1/64 note for Phaser and Flanger effects, and from a 1/2 note to about 1/64 note for Tremolo. Within those ranges the speed doubles a couple of times. For every doubling of the rate, you can dial through twelve individual speeds in nearly equal spacing. The distance from one value to the next is about 6%, which should be fine enough to accommodate any speed you might desire. Within each of the twelve values, you will find the value for the binary division (quarter notes, eighth notes, etc.). You can also choose dotted and triplet positions between those. All other values are marked with a simple “_” due to space restrictions. However, even those values have a certain time division. This distribution is repeated with every doubling of the Modulation Rate.

If you want to disable “Tempo”, press the soft button labeled “Tempo Enable” in Rig Settings. The TAP button will stop blinking and the “Modulation Rate” parameters will show absolute time values again.

The selected tempo and the “Tempo Enable” status are stored with the current Rig. In Performance Mode, you will find the soft button labeled “Use Performance Tempo” on the “Tempo” page in Rig Settings. When highlighted, the current tempo is applied to each of the five Slots, to ensure an equal tempo for the setup of a song. The tempo settings of the individual Rigs are ignored. “Performance Tempo” is stored with the Performance.

Be sure to enable “Tempo” for all Slots in the Performance for which the tempo is relevant - e.g. for a delay - by pressing the TAP button once when the respective Slot is in focus. Activating “Performance Tempo” will overrule the Rig’s tempo settings, but not the “Tempo Enable” status.

The “Lock Tempo” soft button will prevent Rig or Performance changes affecting the current tempo. This tempo will now stay indefinitely, until you tap a new one, or change it via one of the other methods described above.

Tap Tempo

Tap the [TAP button](#) in quarter notes (crotchets) to create the desired tempo. A tempo is taken with the second tap, but the more you tap, the more accurate the tempo will be. 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. You can also assign a button of a MIDI controller to the Tap function. PROFILER Remote offers a dedicated TAP button. Learn more about this in chapter [PROFILER Remote](#) and [MIDI](#).

Tap Tempo not only influences the time value of the delay, but also that of any other tempo-related effects in the present Rig as well. To achieve the desired beats per minute (bpm), it is essential that you only tap in quarter notes (crotchets). “To Tempo” must be selected to sync delay to tempo. The rhythmic pattern of the delay is determined by the respective musical values for each delay channel.

Beat Scanner

The Beat Scanner is a nice alternative to the [TAP button](#); instead of tapping, just keep the TAP button, or foot switch pressed to activate it. Now, continue playing guitar. The Beat Scanner algorithm listens to the rhythm of your playing and will detect the bpm in a few seconds. You don't need to play a special beat - any riff should suffice, as long as it is played with a degree of accuracy. Avoid playing prominent triplets or dotted notes, as this might fool the Beat Scanner into selecting a wrong tempo. When the tempo is set to your satisfaction, just release the TAP button or switch, and the tempo will stay constant. You can create any tempo between 80 and 160 bpm.

The Beat Scanner is not able to differentiate between half or double tempo. For instance, for a tempo that could be either 70 or 140 bpm, it will always choose 140 bpm.

MIDI Clock

MIDI clock is a continuous time signal generated by all digital audio workstations and other devices and transmitted via a MIDI cable when desired. You can use MIDI clock from any such device to automatically sync your delay and modulation effects to the music, even on stage. The PROFILER will automatically sync to a MIDI clock signal received by its [MIDI INPUT](#). MIDI clock received is indicated by a small icon “c” on the right side of the home page.

The PROFILER can send MIDI clock via its [MIDI OUTPUT](#) to sync other devices. This feature needs to be activated in the [System Settings](#). If [MIDI THRU](#) is used as an auxiliary MIDI output, MIDI clock is also funneled to MIDI THRU.

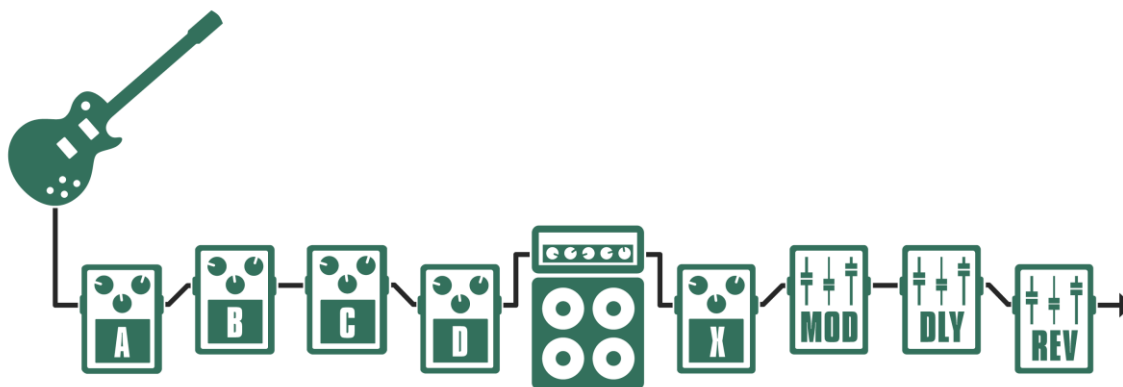
Volume Pedal

The Volume Pedal function does not have its own effect type, as this would block a module. Instead, you will find two parameters for the Volume Pedal in Rig Settings. Please refer to the chapter [Expression Pedals and Foot Switches](#) for details.

Parallel Path

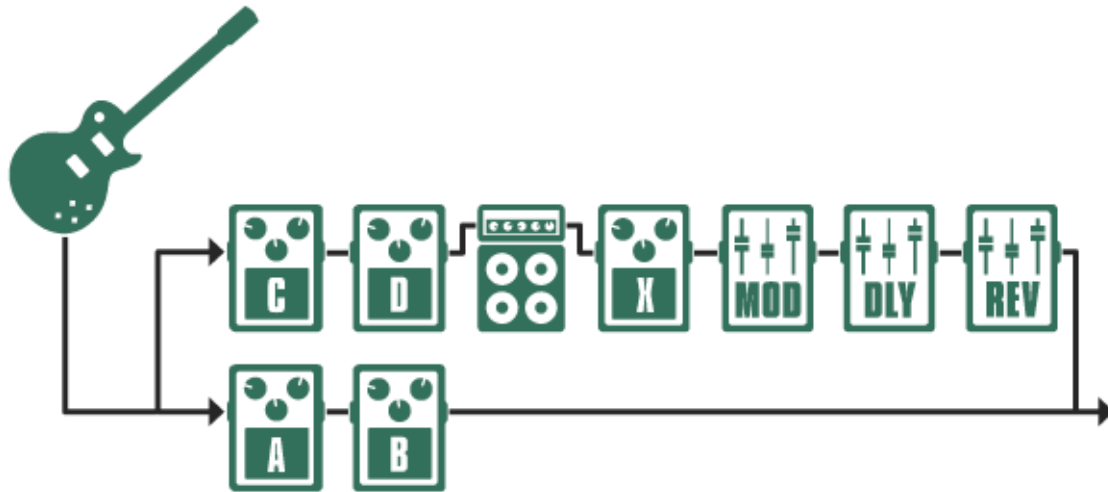
This feature was designed for bass players, but you are free to use it with any other instrument. The PROFILER offers a wide variety of PROFILES for bass players, as well as numerous effects and distortions that can be used in combination with a bass. Distortion or overdrive introduced by amps or pedals can result in the bass guitar losing some of its fundamental frequencies, as well as some dynamic range. To compensate for this, a parallel feed of the undistorted bass signal is usually mixed to the distorted, or otherwise processed, signal.

The normal signal flow looks like this:



Standard signal flow

The Rig Settings provide a parallel signal path, which feeds directly to the Output Section, bypassing both the stack section and the effect modules X, MOD, DLY, and REV. When “Parallel Path” is activated, module A and B become exclusive to the parallel path, allowing you to add compression and EQ, for example. modules C and D remain within the regular signal path, along with the Stack and subsequent effect modules. This routing is visualized by the signal chain on the home screen.



Signal flow with Parallel Path

[soft button](#) "Parallel Path" enables and disables this function. When enabled, the "Parallel Path Mix" parameter determines the balance between the parallel path (more to the left) and the regular signal path (more to the right).

If you use effects like distortion or compression in one of the two paths, you might find that the levels of each differ significantly. This is because the signal level is usually dependent on the instrument level, but this is often not the case when distortion or compression are involved. You can avoid level deviations like this by adjusting "Clean Sens" in the Input menu. "Clean Sens" balances clean and distorted (or compressed) sounds to equal levels. This also affects the Parallel Path.

- ✓ To learn more about the "[Clean Sens](#)" parameter, refer to the respective paragraph or to the tutorial about the Input Section available at: www.kemper-amps.com/video
- ✓ A tutorial video dedicated to Parallel Path can also be found at: www.kemper-amps.com/video

Morph

The functions on this page will be explained in the [Morphing](#) chapter below.

Working with Amplifier PROFILES, Cabinet PROFILES, Power Amps and Guitar Cabinets

Feel free to skip this chapter, if you do not intend to play through physical guitar speaker cabinets, create PROFILES yourself, swap PROFILES of cabinets, or import impulse responses.

Separating Amps and Cabinets: CabDriver

Regular Studio PROFILES are created using a guitar amp and a guitar cabinet, captured by a microphone (or several microphones). The resulting Studio PROFILE is split into two portions: Amplifier PROFILE and Cabinet PROFILE, with the sound of the microphone becoming an integral part of the Cabinet PROFILE. Since the Studio PROFILE is taken in one go, it is complete and perfect as it is. While there is no exact information about the separate sound of the amp or cabinet, the PROFILER uses an intelligent algorithm to create the best approximation of a separation line between the Amplifier and Cabinet PROFILES. This algorithm is called CabDriver. CabDriver makes it possible to separate the Amplifier and Cabinet PROFILES of a Studio PROFILE and combine them with those chosen from another Rig or preset. It also allows you to switch off the guitar cabinet simulation (“[Monitor Cab Off](#)”) to drive a physical guitar cabinet. The typical interactions between the original tube power amp and the cabinet are captured within the Amplifier PROFILE. The result is thus highly authentic, and ready to be amplified by a solid-state amp, or the optional, [built-in class D power amp](#) of the models PowerHead and PowerRack.

- ✓ Fully authentic results can be achieved by taking or using so-called [Direct Amp PROFILES](#). This is described further below.

Browsing Amps or Cabinets

There are two sources from which to select Amplifiers, Cabinets or the complete stack. With the respective module or section in focus, turn the [BROWSE knob](#) by one click – soft buttons will now allow you to select between "Presets" or "From Rigs". The "From Rigs" method will insert the element in focus, e.g. Cabinet, from other Rigs in your browse pool, according to the View that you have selected on the home screen. This method can be applied to the Amplifier and cabinet modules, as well as the entire stack section.

Module and section presets contain modules or sections of the signal chain, e.g. amplifier, cabinet or stack, which users can store themselves. If you haven't created any Presets yet, you might find just the selection that we prepared and included in the factory content for demonstration purposes.

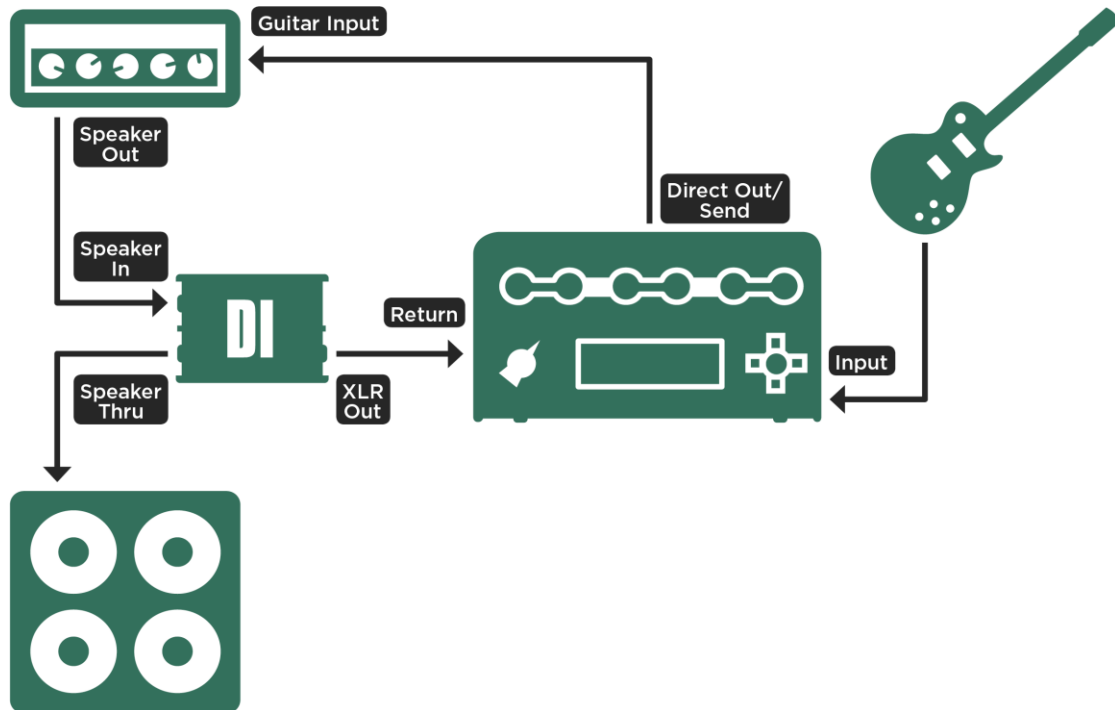
There are two additional methods to insert modules from other Rigs:

- Copy and paste any module or section from another Rig using the [COPY and PASTE buttons](#).
- [Lock](#) any modules and/or sections while you browse through the Rigs in your browse-pool.

Direct PROFILES

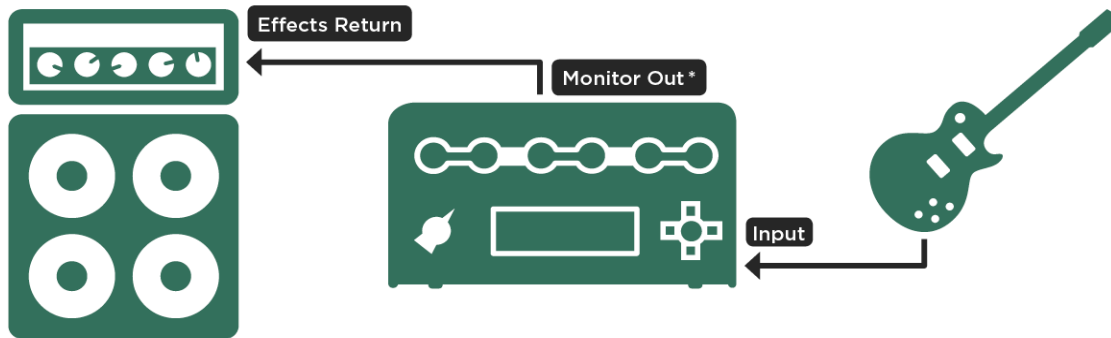
In addition to the regular Studio PROFILES, which include the guitar amp, guitar cabinet and microphone, we also have Direct PROFILES. Here are some examples:

- A Direct Amp PROFILE, tapped at the power amp speaker output, using the PROFILER DI box or another appropriate DI box. A PROFILE such as this represents the whole amp, excluding the guitar cabinet and microphone. This can then be played back through a physical guitar cabinet using a solid-state power amplifier, such as the optional built-in amplifier of PowerHead and PowerRack. The Direct Amp Profile is the most relevant kind of Direct PROFILE, which will be discussed in detail in the chapter [Direct Amp PROFILE](#).



Capturing a Direct Amplifier PROFILE

- A PROFILE of an acoustic-guitar amp, or an acoustic-amp simulator. This allows you to play an acoustic guitar with piezo pickups, and sound like it was captured by a microphone instead.
- A PROFILE tapped at the direct output of a bass amp.
- A PROFILE of a guitar amp, tapped at its effect-loop send jack, representing the preamp section of this amp. This Direct Preamp PROFILE can then be played back into the effect-loop return of the guitar amp, and further through its power amp section and a guitar cabinet. The following graphic illustrates this configuration for information only - we don't recommend this setup.



* Cabinet simulation deactivated for Monitor Out

Using a guitar amplifier and cabinet for monitoring Direct Preamp PROFILES

Direct PROFILES imply that the sound is uncolored by either a guitar cabinet or microphone. They do not provide the characteristic high-frequency damping that a guitar speaker normally applies, which means that listening through full-range speakers with high gain, or other distortion, will result in a harsh sound. Direct PROFILES are either intended to be played through a speaker that adds coloration or are intended to be played without distortion.

The second difference, compared to Studio PROFILES, is that the cabinet module is switched off, because there is no virtual cabinet included. In other words: Direct PROFILES are contained entirely within the amplifier module. If

your Direct PROFILE needs a cabinet, either load a cabinet preset or choose a cabinet from a Rig in the browse pool.

A Direct PROFILE will be taken by feeding the output of the reference device directly, or via DI box, into the [RETURN](#) of the PROFILER, rather than capturing the sound by microphone. No further preparation is needed. During the process, the PROFILER will automatically detect the character of a Direct PROFILE and disable the cabinet module accordingly. However, not every DI box is suitable for this job - because the DI box has to be placed between power amplifier and guitar cabinet, it needs to be capable of handling such signal levels. Some DI boxes are only suitable for line level signals and cannot be used. If the DI box provides speaker simulation, or attenuation, these features need to be inactive. Some DI boxes don't allow complete deactivation.

Direct Amp PROFILES

Direct Amp PROFILES consist of the pre-amp and power amp of the reference amp, and have the distinct benefit of making a solid-state power amp sound like a tube power amp. Even the important impedance interactions between the power amp and the guitar cabinet are captured, despite the cabinet itself not being included.

A Direct Amp PROFILE can run a physical guitar cabinet with the highest possible authenticity, amplified by a solid-state amp, or the built-in class D power amp of PowerHead and PowerRack. No tube power amp is required, because the power amp interactions are already captured within the Direct Amp PROFILE and played back perfectly, via a linear power amplifier. Playing back a Direct Amp PROFILE through a tube power amp would not lead to an authentic sound, as you would end up with two tube-amps in the chain - one virtual, and one physical.

Since the cabinet module of any Direct PROFILE is empty, it could also be enhanced by a Cabinet PROFILE from another Rig or cabinet preset. To do this, bring the cabinet module into focus and turn the BROWSE knob to locate a suitable cab from your own presets, or any other Rig.

Cabinet Impulse Responses

Cabinet presets are also commercially available from third party companies in the shape of so-called “impulse responses” (IR). These can be converted into a proprietary format using the KEMPER Cab Maker software, available for Mac and PC. The resulting files can then be imported to the PROFILER by using a USB memory stick. To find such imported cabinet presets, first press the CABINET button, then use the [BROWSE knob](#). OS versions from 5.5 onwards include 18 cabinet presets based on impulse responses provided by Celestion®*.

There is a tutorial video available which demonstrates the whole process of migrating an IR into a cabinet preset at:

www.kemper-amps.com/video

An impulse response is the perfect companion of any [Direct Amp PROFILE](#). While the latter is a perfect reproduction of the full guitar amp, the cabinet IR is the perfect reproduction of a guitar cabinet. Combined, they are as authentic as a Studio PROFILE.

We highly recommend that you select cabinet IRs that have been captured using a solid-state amp, rather than a tube power amp. Since the interaction effects of amp and cab are reproduced by the Amp PROFILE, it is a good idea not to have them reproduced in the Cabinet PROFILE a second time.

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Merging Studio PROFILES and Direct Amp PROFILES

In case you were wondering, [Direct Amp PROFILES](#) can be merged seamlessly with cabinets of Studio PROFILES, resulting in a single PROFILE that contains the sound of both. To do this, create a Direct Amp PROFILE (without cabinet) and a Studio PROFILE (with cabinet and microphone) of the same reference amplifier and store them separately. It's good practice to keep all settings of the reference amplifier the same for both PROFILES, to yield as

authentic a result as possible. Both PROFILES can then be merged by copying the cabinet of the Studio PROFILE into the Direct Amp PROFILE, and then pressing the soft button labeled "Merge Cabinet". Here's the procedure in full detail:

- Select the Studio PROFILE in Browser Mode.
- Hold the CABINET button for at least one second until it's in focus.
- Press [COPY](#) on the front panel.
- Press [EXIT](#) and select the respective Direct Amp PROFILE.
- Hold the CABINET button for at least one second to bring it into focus.
- Press [PASTE](#).
- "Merge Cabinet" will appear under a soft button. Push it!
- You can [undo and redo](#) the merging by pressing "Merge Cabinet" again, and compare results.
- Press [EXIT](#) and store your new PROFILE.
- Once stored, it is no longer possible to undo the merging!

Your Merged PROFILE now features the authentic "amp with cabinet" sound of the Studio PROFILE, whenever the cabinet module is active. If you switch off the cabinet module, you will get the authentic "amp only" sound of the Direct Amp PROFILE, ready to be fed into a physical guitar cabinet. The original Direct Amp and Studio PROFILES are now fully contained in the Merged PROFILE, so feel free to delete them now, if you like.

A positive side-effect is that the Cabinet of the Merged PROFILE has become an "authentic" guitar cabinet, comparable to one based on an imported impulse response. If you copy a "merged" Cabinet PROFILE such as this into another Studio PROFILE later, it will not undergo the usual approximation of the CabDriver algorithm. Whereas the "authenticity" of the cabinet will survive the copying process, the amp of the receiving Studio PROFILE cannot gain "authenticity" this way. If, however, you copy an "authentic" cabinet into a Merged PROFILE both amp and cabinet will be "authentic".

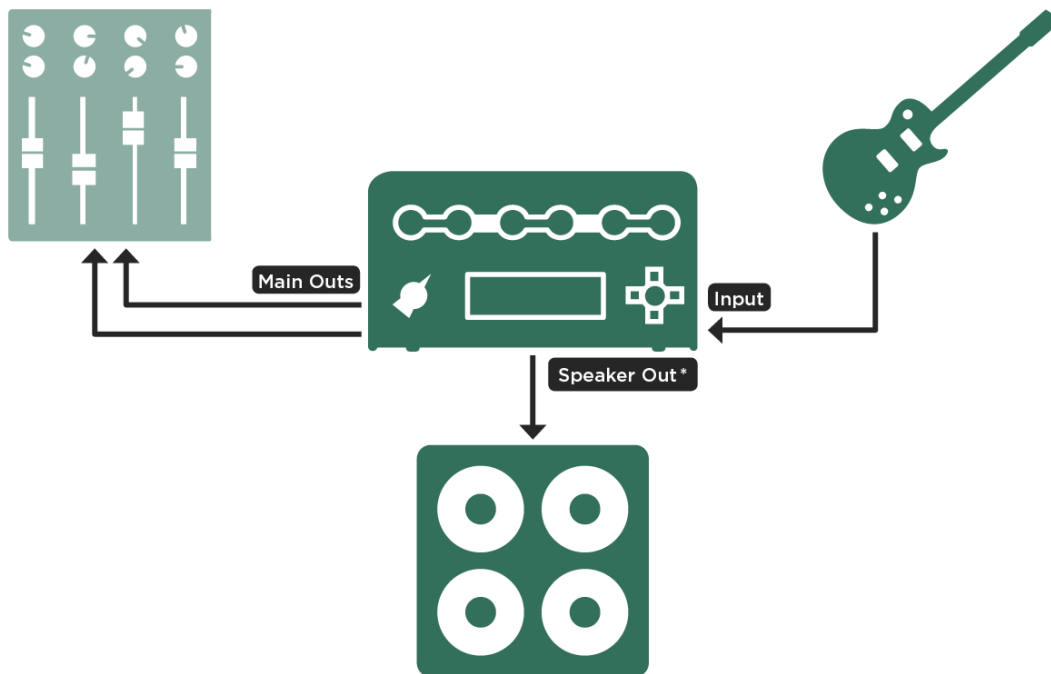
- ✓ The soft button "Merge Cabinet" always appears if the cabinet of a Studio PROFILE is copied into a Direct Amp PROFILE. It will not appear otherwise.
- ✓ When you have created both Direct Amp and a Studio PROFILES of the same amp with settings unchanged, you might find that the values for "Gain" and "[Definition](#)" differ a bit. Don't worry - this has no impact on the sound.

Running a Guitar Speaker Cabinet from a Power Amplifier, “Monitor Cab Off”

For the perfect on-stage setup, the PROFILER allows you to run a guitar cabinet through a power amp, and - at the same time - send a complete studio sound (amplifier plus cabinet and microphone) from the [MAIN OUTPUTS](#) to the front-of-house mixing desk. Since your guitar cabinet doesn't need to be picked up via microphone any more, it becomes your personal monitor on stage. The [MONITOR OUTPUT](#) features an independent volume control, as well as a dedicated [Monitor Output Equalizer](#) in the Output Section. These allow you to tailor the sound to your guitar cabinet, while the sound on the other outputs remains unaffected.

For this setup, you need to bypass the Cabinet PROFILE for the MONITOR OUTPUT, to avoid running a guitar cabinet simulation through a physical guitar cabinet. The soft button labeled "Monitor Cab Off" in the Output Section will bypass the Cabinet PROFILE for the MONITOR OUTPUT, as well as for the built-in power amp of PowerHead and PowerRack. The Cabinet PROFILE stays active for the other outputs, including the MAIN OUTPUTS. This is a global setting and is therefore applied to all Rigs. However, the signal from the MONITOR OUTPUT is processed according to the kind of PROFILE included in the Rig: for regular Studio PROFILES, the CabDriver algorithm is activated, whereas Merged PROFILES feed the direct amp sound to the MONITOR OUTPUT and built-in power amp.

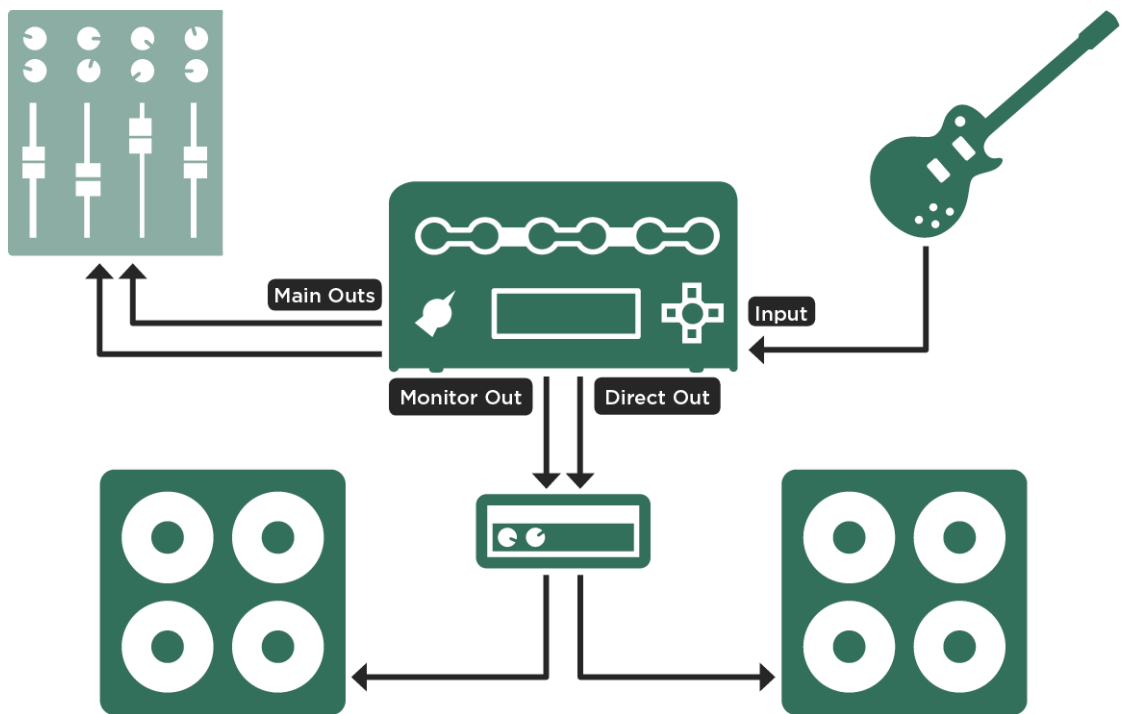
Use the optional [built-in class D power amp](#) of PowerHead/PowerRack or a separate solid-state power amp to drive your guitar cabinet. If the PROFILE you play is a Direct Amp PROFILE, the sound will be identical to the reference tube-amplifier! It is not necessary, and would be somewhat contradictory, to use a tube power amp, because you would have the effect of a tube power amp twice. This might add some pleasing low and high frequencies to the picture, but it won't be an authentic tone.



*Cabinet simulation deactivated for Monitor Out

PowerHead with guitar cabinet

You can also drive guitar cabinets in stereo via an external solid-state power amp. For this application activate “Monitor Stereo” and pair MONITOR OUTPUT and DIRECT OUTPUT to become one pair of stereo outputs. All settings of the MONITOR OUTPUT like “Monitor Cab. Off” are now automatically applied to both outputs.



Stereo setup with external power amp and guitar cabinets

A little more explanation might be in order. There is an important difference between tube power amps and solid-state power amps, insofar as solid-state amps try to obtain a linear frequency-response, tube power amps often create an “artistic”, non-linear frequency-response. Solid-state amps offer a low output-impedance that dampens the resonances of the speaker. Tube power amps don’t dampen so well, and allow the speaker to resonate more fully, thus creating an individual frequency-response in addition to the tube power amp’s response. This is called “interaction of the amp and the speaker”. In Direct Amp PROFILES, or Merged PROFILES, this interaction is already captured in the PROFILE. In regular Studio PROFILES, the interaction is simulated. Only a solid-state amp can play back your PROFILE in an authentic way, and imprint the original impedance behavior to your speaker, without adding additional, unpredictable interactions and the colorations of another tube power amp.

The Built-in Power Amplifier

The optional built-in power amplifier allows you to connect your PROFILER to 4, 8, and 16-ohm guitar cabinets, as well as unpowered full-range cabinets. It is cabled to the MONITOR OUTPUT internally, so all features of the MONITOR OUTPUT are applied to the internal power amplifier as well. Please refer to the [MONITOR OUTPUT](#) chapter of this manual for more detailed information.

You will find controls for the power amplifier on the dedicated page of the [Output Section](#):

◆ Power Amp Switch

“Power Amp On” activates 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. Nevertheless, you may want to switch it off to reduce energy consumption.

◆ Power Amp Booster

As mentioned, the power amp is internally connected to the MONITOR OUTPUT, which provides enough headroom to support even the 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 Boost" will increase the volume loudness by up to 12 dB, in addition to the other volume controls in the signal flow, such as "Monitor Volume" or "Rig Volume". The "Power Amp Boost" has no further impact to the sound or dynamics of the power amp. When the power amp is switched off, the "Power Amp Boost" is deactivated, thus returning the full signal headroom to the MONITOR OUTPUT.

The internal power amp is mono and delivers 600 watts at 8 ohms; however, the wattage will be lowered to 300 watts when used at 16 ohms. The power amplifier provides sufficient headroom to avoid clipping, even with dynamic clean sounds. Very loud signals and transients will then be compressed by a nice, organic-sounding soft-clipping circuit. You should, however, use these 600 watts of power with caution - if you are running at high volumes and notice any indications of speaker distress, turn down "Monitor Volume" or "Power Amp Boost".

At 4 ohms, the wattage is electronically limited to 600 watts. If these 600 watts are exceeded the power amp is deactivated for a short moment, which causes a short dropout. It would require insane volumes to experience such dropouts. However, if you are connecting a 4-ohm cabinet, you should test it carefully to ensure that your loudest signals stay below that critical level.

◆ **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 circuit.

Only passive speaker systems should be connected to the SPEAKER OUTPUT.

Please refrain from connecting devices with impedances lower than 4 ohms, as the power amp could be damaged.

Always ensure adequate ventilation - especially if mounting your PROFILER into a rack. Failure to do so may cause the power amp to shut down to prevent overheating.

The Sound of Guitar Cabinets versus Mic'ed Speakers

This chapter is dedicated to guitar players who usually listen to their amps through a guitar cabinet and are not familiar with the studio sound of a guitar cabinet captured by a microphone.

The guitar speaker is different from most other speaker types, as it is only capable of transmitting a limited frequency response. Therefore, listening to music through one is not a good idea at all. For guitar playing, however, they are essential - especially for distorted sounds, as they damp the harsh, high frequencies of the distortion. Their heavy coloration of the lower frequency components is also hugely beneficial to the tone of an electric guitar.

To record the guitar sound through a guitar cabinet, or further amplify it for a live concert, you have no option but to place one or more microphones in front of the speaker to capture the complete sound of the rig. The choice of microphones, and also their positioning, will add even more flavor to the sound - this is certainly an art in itself, but fortunately it is easy to learn.

The Studio PROFILES in your browse pool are captured by the same way. Achieving an authentic sound is as easy as connecting the MAIN OUTPUTS to your mixing desk, whether it be in a studio, or in a live venue. This is one major advantage of digital guitar amps - they capture the entire sound of the guitar cabinet and microphone in their digital heart. No need to carry heavy guitar cabinets any more, or struggle to reproduce a certain microphone position.

There is another drawback that can be avoided on stage or in the rehearsal room: guitar cabinets have a focused sound, meaning the high frequencies are loudest when you listen on the axis of the speakers. Conversely, they are damped when you listen off-axis. Every speaker suffers from this effect to some degree, but guitar cabinets are particularly bad. The closer you stand to the guitar cabinet, the more off-axis and out-of-focus you get, because your ears are positioned much higher than the axis of the speakers. This means that if you want to sit well in the mix onstage, you will tend to need quite a loud volume. Unfortunately, the victims in all this will be your fellow musicians and your audience in a small venue, who listen much closer to the axis of your speaker. Remember - they don't hear what you hear. This might well be the reason why guitarists are often accused of playing too loud - it's all down to the focus.

The problem here, is that guitar players who don't play regularly in studios or live venues often tend to struggle when listening to the Studio PROFILES of the PROFILER through monitor speakers or headphones. Some say the original sound from the guitar cabinet is the "real" amp sound, while mic'ing the cabinet gives it an artificial flavor. Listening to a mic'ed amp through full-range speakers is a different experience to that of sitting in the room, listening to the

guitar cabinet directly, and the difference is especially obvious when you listen to the amp without being accompanied by a drummer and bass player. Full-range speakers don't tend to have a membrane area as large as the four speakers of a 4x12 cabinet - as a result, they do not move as much air, and the low-end frequency response is not exaggerated. In addition, the mic'ed sound can often have a harsh and "phasey" sound in the high-end frequencies that you don't get when you listen to a guitar cabinet directly, without a microphone.

Now, all of the above might well be true, but the mic'ed sound is also the true sound, in a way! It is the sound that you hear on every record, and at every big concert venue. This is the sound that you will present to your audience. There is no way to get the sound of your amp on a recording, or through a big PA, other than by using microphones, positioned close to the speaker to capture the sound. That's how it has been done since the advent of guitar amps. Have you ever had the chance to listen to the pure amp sound of your guitar heroes? The chances are that you haven't, because to do so, you would have needed an invitation to their home or rehearsal room. What you have actually heard is their signature tone, captured via a perfect microphone setting – the only way they can present their art to you.

So, as you can see, it's a good idea to become familiar with, and learn to care about, the mic'ed sound of your rig, because this is what your audience will actually hear. You will get better results when you run the full PROFILES and Rigs through the monitor system of the live venue, just as the singer and keyboard player will be used to doing. Ultimately, you will gain far better control over your sound in relation to the other instruments - in fact, most professional musicians work like this, listening to the whole-stage sound either by stage monitors or in-ear feeds.

Pure Cabinet

As mentioned in the previous chapter, mic'ed guitar cabinets often have an unpleasant, "phasey" sound in the high-end frequencies – something you don't get if you listen to a guitar cabinet directly, without a microphone. "Pure Cabinet" will gently polish the sound of the virtual (mic'ed) guitar cabinet to bring it closer the sound of the direct guitar cabinet. The fundamental character of the sound will still be maintained.

All applications that use the mic'ed sound (virtual guitar cabinet) of the PROFILER can benefit from Pure Cabinet: recordings, live venues, full-range monitors, in-ear monitors, or just noodling with headphones on. It adapts naturally

to the individual sound of each guitar cabinet - the more unbalanced the original guitar cabinet, the more impact it will have. With amp sounds that are fully clean, "Pure Cabinet" is hardly noticeable.

"Pure Cabinet" is available as a global setting in the Output Section and affects all Rigs that you listen to. However, the original sound of each Rig remains unchanged, and you can switch Pure Cabinet on or off whenever you like. There are two parameters for Pure Cabinet in the Output Section, on the "Output AddOns" page: use the corresponding soft knob to set the desired amount and use the corresponding button to do a quick A/B comparison against the original cabinet sound. To completely disengage the global Pure Cabinet, you must uncheck the switch, as it still has an effect even when the controller is at zero.

If you would rather have individual settings of Pure Cabinet per Rig or cabinet preset, there is a second parameter in the cabinet module. There is no switch for the local parameter - it is disengaged by setting it to zero. Both values of Pure Cabinet interact such that the larger of the two values is always given priority and will be applied as the actual intensity of the "Pure Cabinet" effect.

✓ Check out tutorial videos, which explain and demonstrate Pure Cabinet at: www.kemper-amps.com/video

Output Section

In the Output Section, you can find all settings that control the physical audio outputs of the PROFILER. You can set individual volumes and route different signals individually to several outputs. The settings of the entire Output Section can be stored as an output preset, in the same way you have already learned with the stomps and effects.

Technically, it is possible to lock the Output Section like any other module or section. However, as the settings in the Output Section are never stored as part of a Rig, locking it has no practical value – it is global by design, and therefore nearly always locked.

- ✓ The volume level settings are not stored with the output presets, as switching the presets could result in dangerous volume jumps.
- ✓ The settings of the Output Section are not stored per Rig but stay as global settings. In PROFILER terminology: they are locked and cannot be unlocked.

Output Volumes and Output Volume Link

Within the Output Section you can find individual volumes for different physical outputs. When you press the correspondent "Link" soft button in "Output Volumes" or "Output AddOns", you can link, or unlink, the respective volume to the [MASTER VOLUME knob](#). Any linked volumes will be controlled by the MASTER VOLUME knob, without having to enter the Output Section again. You can link more than one volume to Master Volume – all linked volumes will be adjusted relatively to each other. All output volumes can still be controlled individually by soft knobs in the Output Section. An obvious live application is to unlink the [MAIN OUTPUTS](#) connected to the main mixing desk of the venue – this means you can now change the volume of your monitor signal, or headphones, while the all-important main signal remains unchanged.

- ✓ Linking or unlinking a volume never causes volume jumps. So, it's safe to change the link settings even live on stage.
- ✓ Output Volume and Output Volume Link are also available for the [S/PDIF OUTPUT](#).
- ✓ The S/PDIF Clock can be selected on the same page as S/PDIF Volume. The PROFILER can generate a clock of 44.1, 48, 88.2, or 96 kHz. Your audio interface and DAW will be clocked at the selected rate and your DAW project should be set accordingly.

Output Sources

Within the Output Section you can modify the routing to the physical outputs, or in other words, select the signal sources for the outputs. If you feel that every output delivers the signal that you need, then feel free to skip this chapter. The factory settings for the signal sources cover most of the regular applications.

Each output can tap different points in the signal flow. Here is a description of signal sources, which can be tapped. Note that only a subset of sources is available for each individual output.

Off	The output is muted.
Git Analog	(Default and only available for the DIRECT OUTPUT ; needs to be used in conjunction with the Guitar Input as the guitar input. The pure, clean instrument signal is sent to the DIRECT OUTPUT by an analog splitter, no AD/DA conversion is taking place. The analog signal level is the same as on the instrument input. Useful for reamping or running a second amp in parallel.
Git+Processing	(Not available for S/PDIF OUTPUT). Similar to "Git Analog" but A/D conversion is taking place. Note: the volume control of the respective outputs will have no impact on the "Git ..." source settings, because they are made to reproduce the original instrument volume.

Git Studio	Similar to “Git+Processing”, but here the instrument signal is sent out at studio level, which is much louder than the original level. Thus, no separate DI box is needed to record the pure instrument for reamping purposes. Since the instrument volume is high, the recommended leveling of “ Clean Sens ” in the Input Section is important.
Stack	This signal is tapped directly behind the stack section and does not include any post amp effects.
Mod Stereo	(Not available for DIRECT OUTPUT and MONITOR OUTPUT , except “Monitor Stereo” is activated) This stereo signal is tapped directly behind the MOD module and contains the whole signal, but without delay and reverb.
Mod Mono	Delivers a mono mix of the “Mod Stereo” signal.
Mod Left	(or Right for DIRECT OUTPUT) Delivers only one side of the stereo signal of “Mod Stereo”. This will sound like “Mod Mono” but often less dense, depending what stereo effects are used.
Master Stereo	(Default setting for MAIN OUTPUTS and S/PDIF OUTPUT ; not available for DIRECT OUTPUT and MONITOR OUTPUT , except “Monitor Stereo” is activated) Represents the full signal with all effects in stereo.
Master Mono	(Default setting for MONITOR OUTPUT) Delivers a mono mix of the “Master Stereo” signal.
Master Left	(or Right for DIRECT OUTPUT). Delivers only one side of the stereo signal of “Master Stereo”. This will sound similar to “Master Mono” but often less dense, depending what stereo effects are used.
DLY/REV wet	(only available for stereo outputs) Only the wet stereo effect signal of the delay and reverb located in the modules DLY and REV are sent to the output. If no delay or reverb is active, the output will remain silent.

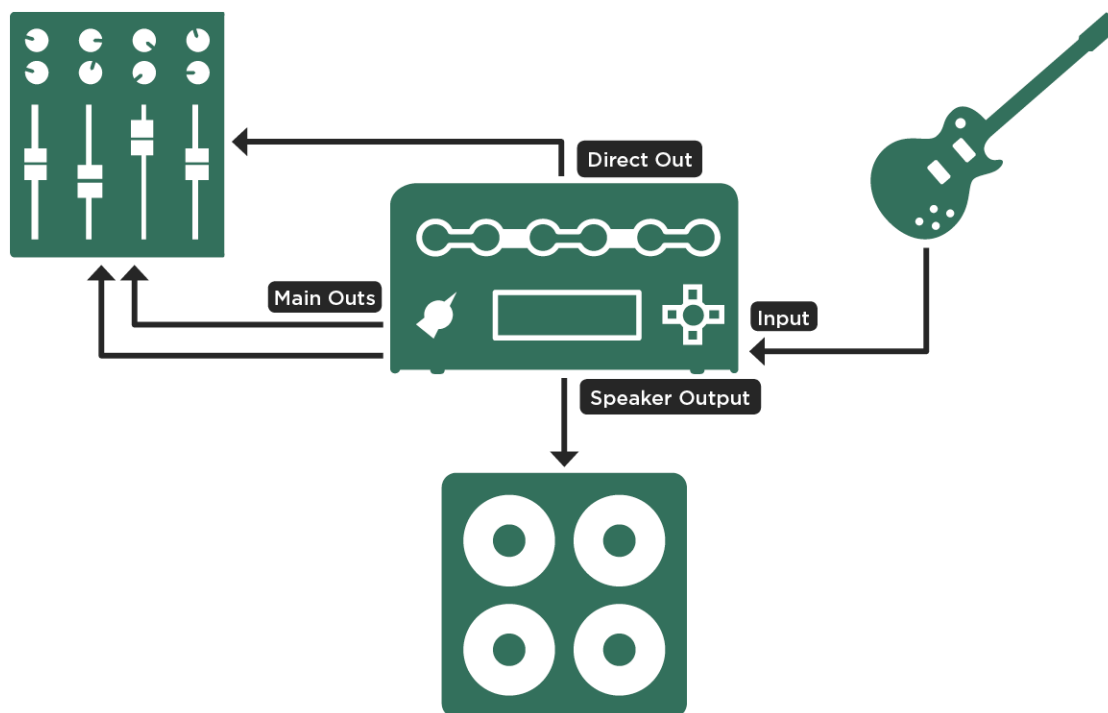
The following settings are only available for the [S/PDIF OUTPUT](#). These allow you to simultaneously record the pure instrument signal for reamping purposes (as described in “Git Studio”) and a mono amplifier signal on your digital audio workstation. The pure instrument signal appears on the left side of the digital S/PDIF signal, the amp signal on the right.

Git / Stack	The left signal is the pure instrument, with Noise Gate and Volume Pedal (if Volume Pedal is set to “Input”). The right channel will carry the stack signal and does not include any post amp effects.
Git / Mod Left	The same as above, but with the right signal taken from the left channel of the MOD module.
Git / Mod Mono	The same as above, but with the right signal taken from the mono mix of the MOD module.
Git / Master Left	The same as above, but with the right signal taken from the left channel of the Output Section.
Git / Master Mono	The same as above, but with the right signal taken from the mono mix of the Output Section.

Now after the straight explanations of the output sources, here are some useful applications and comments for your inspiration:

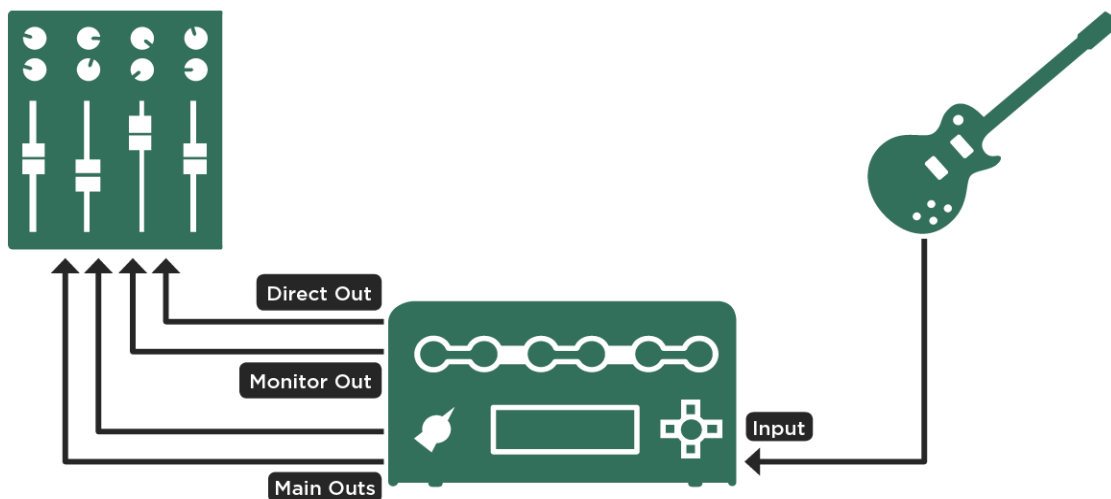
- The [DIRECT OUTPUT](#) acts as an analog buffer amp for the instrument input, when set to “Git Analog” – the default setting. It qualifies well for reamping purposes as it provides a GROUND LIFT button, as well as the other analog outputs. Try different combinations of ground lifts for best hum and noise suppression. At least one GROUND LIFT button must be off at any time (which means “grounded”). Often you get best results if the DIRECT OUTPUT is the one connection with no ground lift.
- The Output Source setting for [DIRECT OUTPUT](#) is only active when not in PROFILER Mode, no analog [Effects Loop](#) (e. g. Loop Stereo) is active, and “Monitor Stereo” isn’t activated.

- You can exploit this when PROFILING amplifiers: When you set "Direct Output Source" to "Off", you can mute the reference amplifier by simply switching from PROFILER Mode to Browser Mode. Back in PROFILER Mode, your reference amp will play again.
- The reference amp can also be muted while you stay in PROFILER Mode. Simply press the [ON/OFF button](#) while you listen to the PROFILE (setting "KEMPER Amp") to mute the reference amp. This way you can listen to the pure PROFILE through your monitor speakers without having your reference amp play along. Be aware, however, that a valid A/B comparison between the original amp and the residual PROFILE is only possible when your reference amp is playing, even when you listen to the PROFILE, because muting the reference amp will change the acoustic environment. Use the [DIRECT OUTPUT](#) or any other output at setting "Git···" for connecting an external instrument tuner.
- If you are going to mix the [DIRECT OUTPUT](#) with the [MAIN OUTPUTS](#), select "Git+Processing" or "Git Studio" as the source for the [DIRECT OUTPUT](#) in the Output Section. This will allow you to avoid different latencies between processed and unprocessed signals. Do not use "Git Analog" in this case.
- The MONITOR OUTPUT allows you to run the amp sound without virtual guitar cabinet, while other outputs still contain the virtual guitar cabinet. Engage "[Monitor Cab Off](#)" to switch off the guitar cabinet. Any Output Source can be applied to the [MONITOR OUTPUT](#) with "Monitor Cab Off". Of course, the "Git···" settings remain unaffected by "Monitor Cab Off". Read more about the monitor features in the chapter [MONITOR OUTPUT](#). Be aware that the signal from the MONITOR OUTPUT is also shared in order to feed the [built-in power amplifier](#) of the PowerHead and PowerRack.
- When Source is set to "DLY/REV wet" for a stereo output, it will deliver only the wet stereo effect signal of delay and reverb effects from the DLY and REV modules. If you set the source of the [DIRECT OUTPUT](#) to "Stack" or "Mod", which is the complementary dry signal, then you can send your amp signal to the front mixing desk through three cables. Your front mixer can now mix the effect signal to the dry signal, according to the actual room ambience of the venue. This method is called the wet/dry/wet setup. Your mixer will love you for that! And, you can still use the [MONITOR OUTPUT](#) separately from all of this for your individual stage sound!



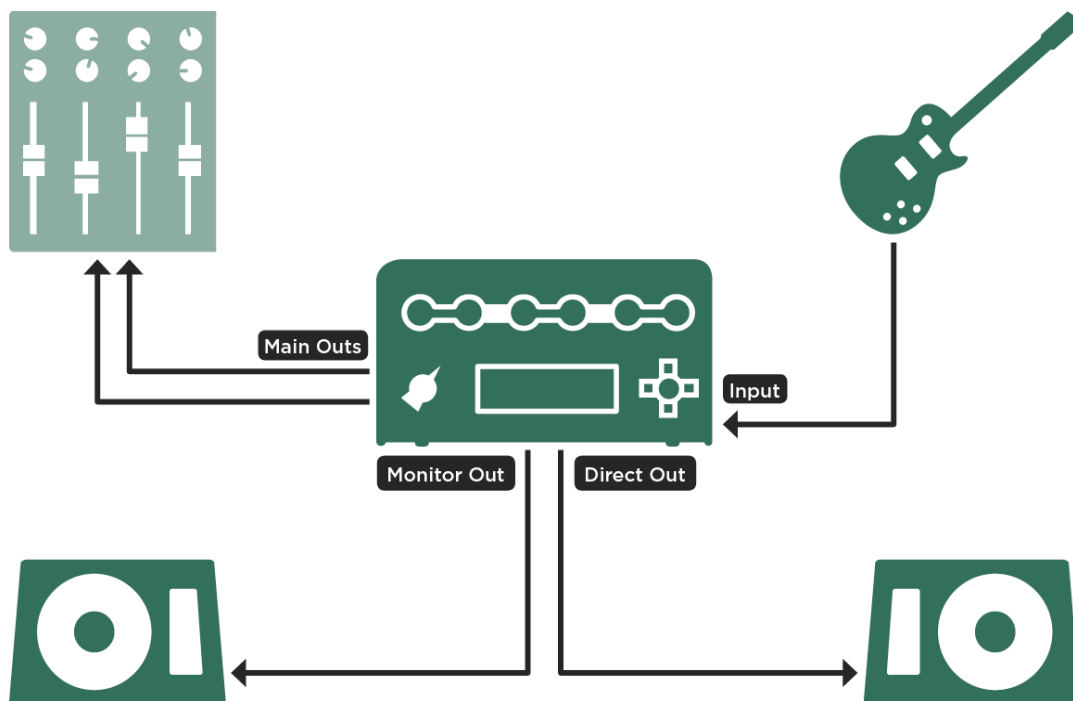
Wet-dry-wet connections with PowerHead or PowerRack

- If you don't need the [MONITOR OUTPUT](#) on stage, you can expand the wet/dry/wet setup to a four-cable wet/dry/dry/wet setup. Activate "Monitor Stereo" and select Output Source "Mod Stereo". MONITOR and DIRECT OUTPUT are combined to form a new stereo sum - this contains everything apart from the effects in the DLY and REV modules. Now, you can send two stereo sums to the front mixing desk, where the delay and reverb signals are separated from the non-reverberant effects (X and MOD).

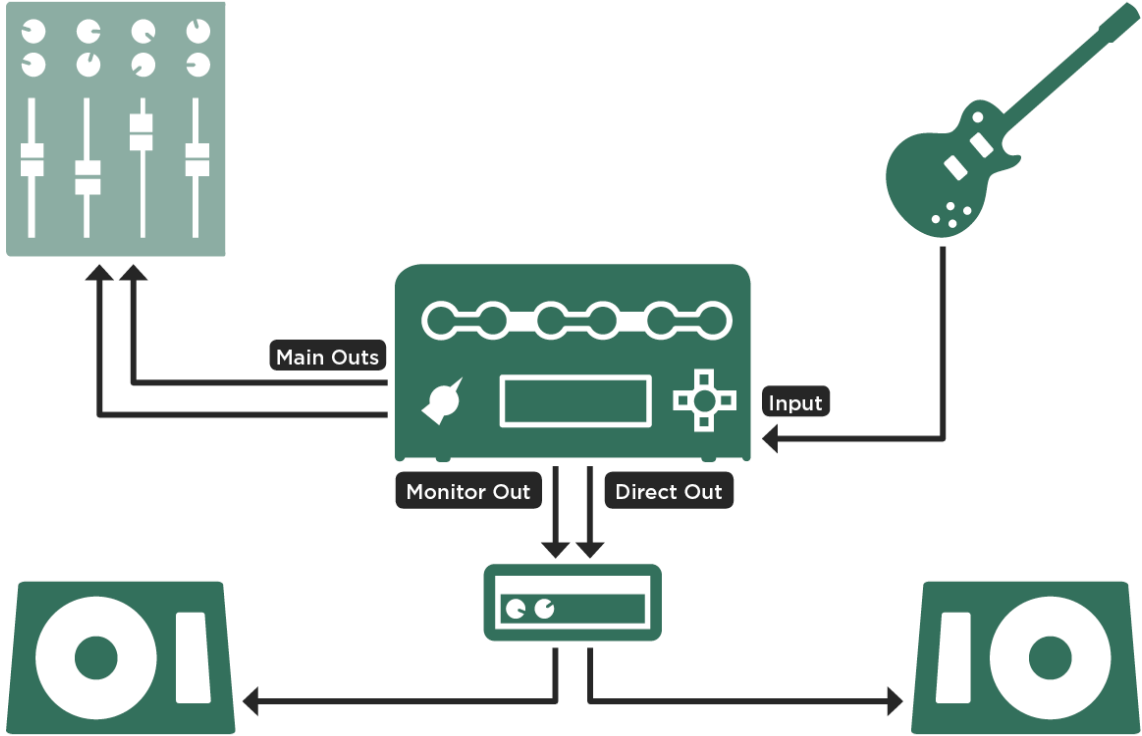


Wet-dry-dry-wet connections with Monitor Stereo

- Please ensure that the virtual guitar cabinet is not switched off ("[Monitor Cab Off](#)" not engaged).
- If you want to control the volume of this setup, then link all participating volumes to the [MASTER VOLUME knob](#) with the "Link" soft buttons described above ("[Output Volume Link](#)").
- You can also set up a stereo output that is separate from the [MAIN OUTPUTS](#), and that can be controlled individually: activate "Monitor Stereo" and set [MONITOR OUTPUT](#) source to "Master Stereo". Link MONITOR OUTPUT to the [MASTER VOLUME knob](#), and unlink Main (Output) Volume. Now you have a stereo monitor signal, controllable by the MASTER VOLUME knob, independent from the [MAIN OUTPUTS](#), which goes to the main mixing desk.



One or two active full range speakers



One or two passive full range speakers via external power amp

MAIN OUTPUTS

Use the [MAIN OUTPUTS](#) to connect to a mixing desk in a recording studio, or to the front-of-house mixer in a live situation. You have a choice of XLR (balanced) or quarter-inch TS-jacks (unbalanced).

◆ Main Out -12 dB

Whenever the device (e.g. mixing desk or audio interface) connected to the MAIN OUTPUTS XLR or TS jacks indicates too much level coming from the PROFILER, or there is the need to set the Main Output Volume to less than -12 dB, then activate the Main Output Pad to reduce the signal level of the Main Output by 12 dB. This increases the range of the Main Output Volume control and preserves the signal-to-noise ratio of the Main Output.

MONITOR OUTPUT

The [MONITOR OUTPUT](#) is specifically designed to deliver a signal to your onstage monitors, assuming it is not already being “abused” for other purposes as described in the chapter [Output Sources](#).

The most common purpose of [the built-in power amp](#) of the models PowerHead and PowerRack is to drive a guitar cabinet, therefore it is cabled internally to the MONITOR OUTPUT. However, the MONITOR OUTPUT jack carries the exact same signal in parallel, so you can still use the MONITOR OUTPUT as if the power amp wasn't there.

Even with PROFILER variants that don't feature the built-in amp, you can still connect the MONITOR OUTPUT to a full range speaker, or a powered side-wedge on stage. Remember - if the speaker has no power amp of its own, you will need to get one to drive it.

The MONITOR OUTPUT features an independent volume control, as well as a dedicated [equalizer in the Output Section](#). These parameters allow you to tailor the sound to your monitor cabinet, while the other outputs remain unaffected.

If you select the option “Monitor Stereo”, MONITOR OUTPUT and DIRECT OUTPUT become one logical pair of stereo outputs. Functions like Monitor Output Source, Monitor Output Volume, Monitor Volume Pedal, Monitor Output Link, Monitor Cab. Off, Monitor Output EQ and, Aux In > Monitor will be automatically applied to both.

Output Equalizers

Both, [MAIN OUTPUTS](#) and [MONITOR OUTPUT](#) have dedicated 4-band equalizers. You can apply these globally to adapt your sound to different speaker types and environments, without affecting the sound of any Rigs. The Main Output EQ affects the HEADPHONE output and the S/PDIF OUTPUT, too. The equalizers take effect regardless of the selected [Output Sources](#), except for “Git+Processing” and “Git Studio”.

Space

The “Space” parameter adds a small room simulation to the master signal. This makes listening through headphones far more enjoyable.

A brief explanation: whenever you listen to a sound coming from loudspeakers, you are also hearing the reflections from the floor, the walls and objects around you. Even when you listen to a mono signal, these additional reflections will still result in a stereo image once they reach your ears. There is only one common situation where no natural reflections happen, and that is when you listen through headphones; as your ears are, biologically speaking, not suited to this, it can quickly lead to listener fatigue. This effect is called “in-the-head localization”, and becomes particularly noticeable when you listen to a mono signal.

By using the Space effect, you can add virtual reflections, to create a sense of room and natural space. A mono signal will be converted to a subtle stereo image, which should be far more pleasing to your ears. Even though this effect is designed for headphones, you may also find it appropriate for listening through regular speakers, or for

recording. By selecting the option “Space>HeadphOnly”, you can select whether it is applied to the [HEADPHONE output](#) only, or to the MAIN OUTPUTS as well.

You can also apply the [Space effect](#) to individual Rigs, rather than activating it globally in the Output Section. In this case, simply use the [TYPE knob](#) to select it in either the X or MOD effect.

The Space effect is also very useful for improving the sound of in-ear monitors on stage. Unfortunately, in most situations, both stage-monitoring and FOH are derived from the [MAIN OUTPUTS](#) - as a result, the effect will appear on the main PA as well. As long as you use Space at a suitably low Intensity setting, it will not be noticeable on the PA sound, but will still create a reasonable effect on your in-ear monitors. Needless to say, the monitor signal must be supplied in stereo for Space to have the desired effect.

Auxiliary Input

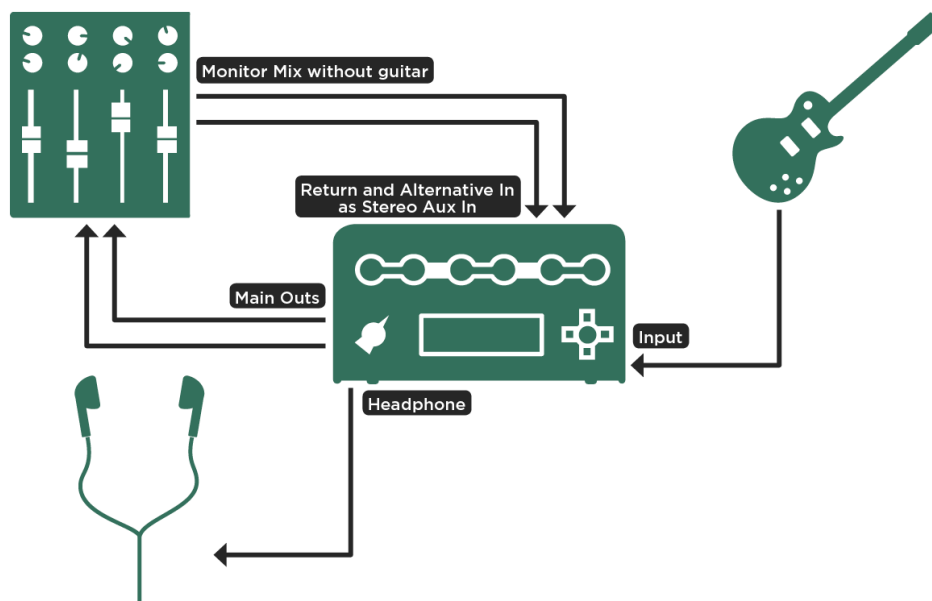
The Auxiliary Input function allows you to feed a stereo signal, such as an mp3-player, into your PROFILER to play along with it. In the Output Section, the Auxiliary Input function is equipped with three mix controls: one to feed the aux signal to the [MAIN OUTPUTS](#) as well as [S/PDIF OUTPUT](#), and two others to feed it to the [MONITOR OUTPUT](#) and [HEADPHONE output](#). This allows you, for instance, to add an additional monitor signal to your HEADPHONE output, while the MAIN OUTPUTS stay unaffected. With the activation of “Monitor Stereo” MONITOR OUTPUT and DIRECT OUTPUT get paired as one logical stereo monitor output. The Aux In signal will also appear on both and its mix gets controlled via “Aux In >Monitor”. The auxiliary signal will not be affected by any internal effects.

You will need to purchase a special cable which provides the stereo signal via two separate TS jacks. Plug the left jack into the [RETURN](#) and the right jack into the [ALTERNATIVE INPUT](#). Use the “Aux In >...” soft knobs to adjust the level.

While you have an [Effect Loop](#) active in your Rig, or you are in PROFILER Mode, the Auxiliary Input cannot be used, since the physical inputs are needed for a different purpose.

- ✓ To prevent unwanted hum and noise, please remember to turn down the Auxiliary Input volume when you are not using it.

The Aux In function can also be used to feed in a band monitor mix from a mixing desk, mix it locally with your guitar signal and, monitor the sum for example via in-ear monitors connected to the Headphone Out.



Mixing guitar signal with monitor mix locally

- ✓ In this case make sure, that the band monitor mix doesn't include your guitar signal to avoid phasing issues with the guitar signal you mix in locally.

- ✓ Also, make sure that “Aux In > Main” is completely turned down to prevent a feedback loop.

If you intend to just feed a mono signal in, activate “Aux > Mono”. The signal will now be merged into both sides of all stereo outputs.

- ✓ A tutorial video about the Auxiliary Input function can be found on: www.kemper-amps.com/video

Constant Latency

Normally, latency is optimized dynamically be as low as possible. However, in some specific configurations e. g. playing through multiple PROFILER units simultaneously and mixing their output signals this dynamic optimization could cause phasing issues. “Constant Latency” avoids such issues by keeping latency at a fixed, defined level.

Instrument Input and Reamping

Input Source Select

You have the choice of four different physical inputs: [front INPUT](#), [ALTERNATIVE INPUT](#), [RETURN](#) and [S/PDIF INPUT](#).

Unlike the other parameters of the Input Section, the Input Source is set globally, rather than by Rig. It will therefore not be saved in an input preset.

All four inputs have different applications, with two being dedicated to reamping purposes.

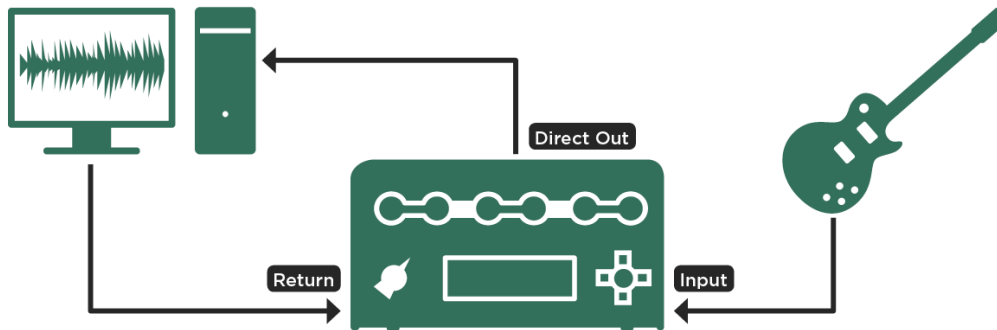
Front INPUT	The standard instrument input with high impedance and low noise.
ALTERNATIVE INPUT	The high-impedance ALTERNATIVE INPUT is located on the back panel . You may find it useful in rack setups, either for connecting the instrument directly, or through a wireless receiver. It is a bit noisier than the front INPUT , but this is only an issue for guitars with a soft output level, applied to heavy distortion. Even when Input Source is set to “Alternative Input”, it won’t work when a cable is still connected to the front INPUT. You can still use Loop Mono when using the ALTERNATIVE INPUT but avoid using Loop Stereo; it uses the ALTERNATIVE INPUT as the right return input for the loop, and the PROFILER does not automatically compensate for this situation.
RETURN (Reamp)	The RETURN can be chosen as an analog, studio-level input for reamping purposes. Either the TRS input or the symmetrical XLR input are available as the RETURN. Read the next chapter carefully to learn more about the dedicated reamping features .
S/PDIF INPUT	The S/PDIF INPUT is typically used for reamping from an audio interface. S/PDIF signals are stereo by definition, however only the left side is taken for reamping. Read the next chapter to learn more about the dedicated reamping features . If no S/PDIF cable is connected, or no S/PDIF sync signal is detected, the front INPUT is still active.

- ✓ Neither [RETURN](#) and [S/PDIF INPUT](#) will respond to the settings of "[Clean Sens](#)". They have their dedicated control "Reamp Sens", as described in the chapter [Reamping](#).
- ✓ A tutorial video explaining Input Source, as well as how to adjust of [Clean Sens](#) and [Distortion Sens](#) appropriately, can be found at: www.kemper-amps.com/video

Reamping

Reamping involves recording the unprocessed instrument signal, often while recording the amp signal at the same time; the idea being that you can process this signal again, but with different amp settings, or even using a completely different amp. A special DI-box (direct injection) is usually required to convert the high impedance guitar signal into an appropriate, studio-level signal for recording. The opposite “reamping” path from the recording to the tube amp needs appropriate processing as well.

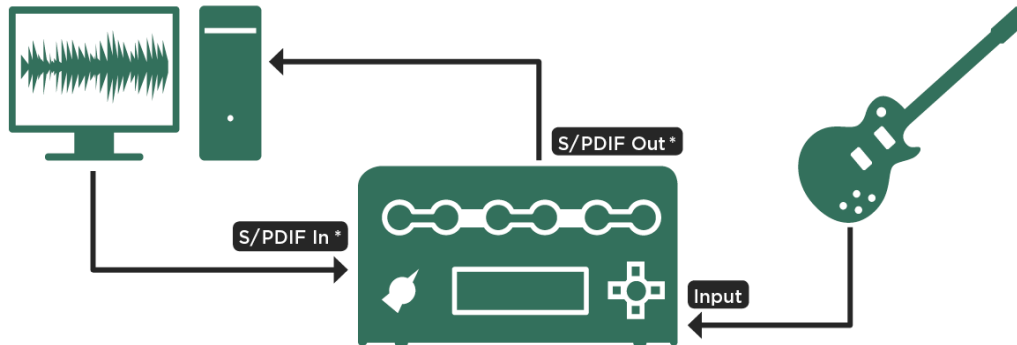
For reamping with the PROFILER, no additional hardware is required as the internal circuitry is designed to enable your instrument to communicate with a studio environment. However, you can still use classic reamping hardware and treat the PROFILER like a regular tube amp. Whether you are recording the pure instrument signal, or you are reamping, you are free to use either the analog ins and outs, or the [S/PDIF](#) connections.



Reamping with analog connections

To use [S/PDIF](#) for reamping, the following must be considered:

- Your audio interface must be set as a clock slave to S/PDIF, since the PROFILER itself is not able to act as slave of an incoming S/PDIF clock.
- The PROFILER can generate a clock of 44.1, 48, 88.2, or 96 kHz. Your audio interface and DAW will be clocked at the selected rate and your DAW project should also be set accordingly.
- For the DI recording, only one cable is required from the S/PDIF OUTPUT of the PROFILER to the input of your audio interface.
- For reamping, you will need to connect a cable from the S/PDIF OUTPUT of the audio interface to the S/PDIF INPUT of the PROFILER. The connection from the S/PDIF OUTPUT of the PROFILER is still required to feed the S/PDIF clock to your audio interface.



Reamping with S/PDIF

- ✓ The level adjustments described in the following section are performed in the same way for both analog and digital connections. There are four steps required to perform recording and reamping of your pure guitar signal:

◆ Step one: DI output connections

To convert your instrument signal into a studio signal: enter the [Output Section](#) and find the [Output Source](#) page. Choose “Git Studio” for the [DIRECT OUTPUT](#), or for any other output that you want to use for recording. The output you have chosen will now carry the pure instrument signal, with a hot studio level, this is the “DI” signal. If you want to record through [S/PDIF](#), choose “Git Studio” for the S/PDIF OUTPUT.

The subsequent choices - “Git / Stack”, “Git / Mod...”, “Git / Master ...” for the S/PDIF OUTPUT - have the same application; additionally, they carry the amp'd signal on the right S/PDIF channel, while the left S/PDIF channel delivers the pure instrument. This allows you to record both the pure and processed signal through S/PDIF - however, only a mono version of the processed signal is available.

Connect the output to the respective input of your recording device and check the incoming signals there.

- ✓ The choice “Git+Processing” for the analog outputs delivers a DI signal as well, but at the original instrument level, lower than the studio level. Read more about Output Source selection in the chapter [Output Sources](#) in this manual.

◆ Step two: DI output leveling

To adjust the DI output level, enter the Input menu and select the “[Clean Sens](#)” parameter. You might have used this control already, as it is used to adapt the individual level of your guitar to the overall volume level of the Rigs and PROFILEs as described in the chapter [INPUT button](#). Adjust the “Clean Sens” parameter to a level where clean sounds have the same perceived loudness as distorted sounds; in doing so, you will have adjusted the dynamics of your instrument to match the digital headroom of the PROFILER perfectly. The output assigned to “Git Studio” is perfectly leveled at the same time.

While the ability to adjust the level of the amp is a convenient feature, it becomes critical when recording the DI signal, as it helps to keep the noise floor down. When you later reamp this signal with a high gain setting, the noise floor of the recording will be significantly amplified. The INPUT LED provides a further gauge for correct leveling: the LED should flash yellow when you hit the strings hard - try to avoid deep orange or red color.

Now, record the pure guitar. You can still monitor the processed (amp'd) guitar sound via the [MAIN OUTPUTS](#), which will be unaffected by a possible latency of your recording device (digital audio workstation).

◆ Step three: reamping input connections

Connect the analog or S/PDIF OUTPUT of your recording device to the [RETURN](#) or [S/PDIF INPUT](#) of the PROFILER. Go to the input menu and set “Input Source” to either “Return Input Reamp” or “S/PDIF Input Reamp”. If you have already recorded the DI signal, play it back now and feed it to the PROFILER.

You don’t have to unplug your guitar from the [front INPUT](#). It will no longer be routed to the signal flow of the PROFILER, due to the “Reamp” Input Source settings - however, it still feeds the selected DI output and thus the input of your recording device.

As soon as you arm a track on your recording device, you will hear your guitar being fed through the device and back into the reamp input. This routing might introduce some latency from your recording device; to avoid this, set “Input Source” back to “Front Input” for as long as you are recording.

Both the balanced TRS input and the XLR input are available as the analog [RETURN](#).

◆ Step four: reamping input leveling

For an optimum signal-to-noise ratio, leveling the reamping input is just as critical as leveling the pure instrument output. The leveling is done by the output level of the recording device; it cannot be adjusted in the PROFILER. The [S/PDIF](#) signal can only be adjusted in the sending device by definition.

Play your guitar through the armed track or play back a previously recorded track. Watch the INPUT LED while you adjust the output volume on the recording device. The LED should turn to yellow when the strings are struck hard, but no further. This is all you need to do, so long as the Rig you are reamping has no distorting amp or effect in the signal flow.

If you reamp a distorting Rig, you might notice that the amount of distortion still differs from the original, despite following the above procedure. This is a natural consequence of the correct leveling of input and output: the leveling is made to achieve an optimum signal-to-noise ratio but does not deal with the preservation of the original instrument level. This is what the parameter “Reamp Sens” is for - simply dial the desired amount of distortion via “Reamp Sens” - and you’re all set!

◆ Summary

For correct leveling and reproduction of a distorted Rig with a reamped instrument, two level settings must be performed: the absolute reamp level at the recording device and the amount of distortion by "Reamp Sens". For clean sounding Rigs, only the absolute reamp level is necessary.

- ✓ Two tutorial videos explaining configuration of [Output Sources](http://www.kemper-amps.com/video) for recording and reamping can be found at: www.kemper-amps.com/video

Alternative Procedure for Input Leveling

The original "[Clean Sens](#)" leveling from step two, and the final leveling of "Reamp Sens" have a kind of opposite relationship that can be used for easier and safer leveling, under two conditions:

- The Rig in question is a distorting one.
- You have memorized the original "Clean Sens" setting used to record the pure instrument.

First, set "Reamp Sens" to the opposite value of the original "Clean Sens" setting (e.g. 2.0 dB, when "Clean Sens" was -2.0 dB). Now, level the desired amount of distortion by adjusting the output volume on the recording device. Once this is done, you will have found the correct input level by default. There is no need to watch the INPUT LED with this procedure.

Expression Pedals and Foot Switches

Both PROFILER and PROFILER Remote allow you to connect multiple, independent expression pedals, mono switches or dual switches for different purposes. Each of the PEDAL inputs on the PROFILER ([two inputs](#)) and PROFILER Remote ([four inputs](#)) can hold one expression pedal, one mono switch or one dual switch. So, theoretically, you could connect up to six expression pedals, or six dual switches with twelve switching functions, or any combination of these.

Alternatively, continuous controllers (CC), as well as switching functions can be controlled via a MIDI foot controller or sequencer. More information on this subject can be found in the [MIDI](#) chapter.

Pedal Controllers

Four important continuous controllers can be driven by expression pedals connected directly, or by [MIDI control changes](#). Each of these can be controlled via dedicated pedals or MIDI control changes, but there is also the possibility to combine and share a pedal, or MIDI control change, to control multiple functions. But before we describe how best to organize your pedals, let's look at those four important pedal controllers:

◆ Morph Pedal (MIDI control change #11)

This pedal controls simultaneous morphing of multiple, continuous Rig parameters.

While assigning Morphing to an expression pedal is a global function, found in system settings, the suite of parameters, and their morph ranges, are configured within each Rig. So, in one Rig, the Morph Pedal could just control Delay Mix, while in another it could control Gain, together with Treble, Volume, Amplifier Definition, and many more. So, as you can see, this one pedal is incredibly versatile. Please find details in the [Morphing](#) paragraph, below. Examples can be found in the Morphing Demo Rig Pack available in [Rig Manager](#) and on our web page: www.kemper-amps.com/downloads

◆ Wah Pedal (MIDI control change #1)

Besides the classic wah wah, the PROFILER offers numerous other effects that can be controlled by the Wah Pedal, such as Wah Vowel Filter or Wah Pedal Booster. These are all referred to as “wah” effects, and are shown in orange.

Again, the assignment of the wah controller to an expression pedal is global. In addition, you need a Rig with one of these wah effects, and the settings of Pedal Mode and Pedal Range within these Stomps must be set up for pedal control. As a quick start, you might choose a preset from the list of factory presets. Open, for example, C module, turn the [BROWSE knob](#), and select preset “WWAH Cry” – your Wah Pedal should simulate a Cry Baby* now.

You are free to use as many wah effects as you like - they will all respond simultaneously. Please refer to the [Wah Stomps](#) chapter in this manual for more information.

◆ Volume Pedal (MIDI control change #7)

The Volume Pedal is also assigned globally. However, its location in the signal flow (e.g. “Input”) and its consequent impact on amplifier gain or delay spillover, can be customized by Rig. It’s also possible to limit its minimum range by Rig, or even transform it into a booster pedal in specific Rigs. For more detailed information please refer to the [Volume Pedal](#) paragraph below.

◆ Pitch Pedal (MIDI control change #4)

The Pitch Pedal is dedicated to the pitch shifter effects [Pedal Pitch](#) and [Pedal Vinyl Stop](#), ideal for creating the classic Whammy* effect. Please refer to the corresponding chapter for details.

Expression Pedal Recommendation

An expression pedal works just like any analog wah or volume pedal but is made for digital devices. It only needs one cable with a stereo jack (TRS jack). In principle, all kinds and makes of expression pedals can be used with the PROFILER, although many users prefer the following two models:

Dunlop DVP 3* is a hybrid that includes analog volume as well as expression functionality. Because of its wide mechanical range, it is preferred by many users for sensitive volume control or morphing.

Mission EP-1 and EP-1 KP* are both available in green and black. The EP-1 has the look and feel of a classical wah pedal. That's why it's the preferred choice of many users for wah applications. The EP-1 KP offers an additional toe switch, which can be connected to the PROFILER, like any other external switch, via an additional TS-cable. This switch can then be used to activate/deactivate wah effects in a similar way to how classical wah pedals work. This toe switch can be very practical if the pedal is used as a dedicated wah pedal, or as a wah in combination with volume. Generally speaking, a toe switch is not required as the PROFILER offers intelligent ways to activate wah effects, for instance by simply moving the pedal.

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Connecting Pedals to the PROFILER Remote

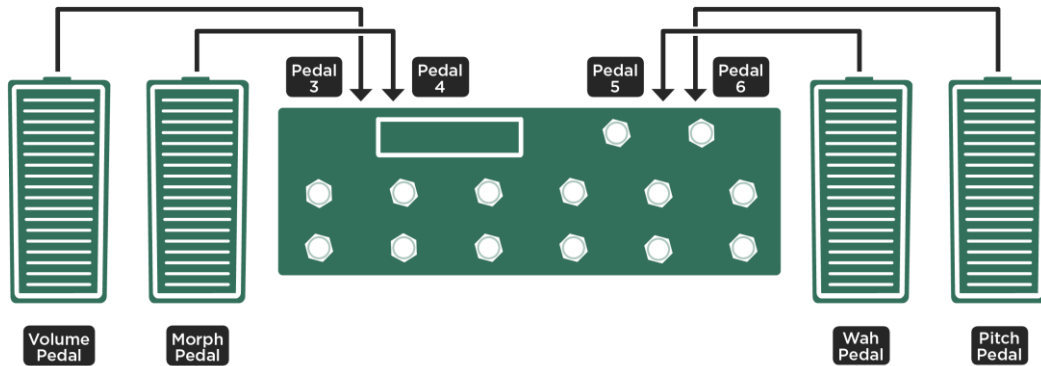
The PROFILER Remote features four inputs for the direct connection of expression pedals or switches, which can be configured in System Settings on the "[Pedal 3-6](#)" pages.

The [four PEDAL inputs of the PROFILER Remote](#) are already preassigned to the following functions:

- PEDAL 3: Volume
- PEDAL 4: Morph
- PEDAL 5: Wah
- PEDAL 6: Pitch

Pedal Type 1” is also preselected, which fits nearly all regular expression pedals. If you are using an expression pedal with reversed polarity (e.g. Yamaha™), please select “Pedal Type 2”. Wrong polarity could cause a sub-optimal response curve.

Four Pedals: Luxury

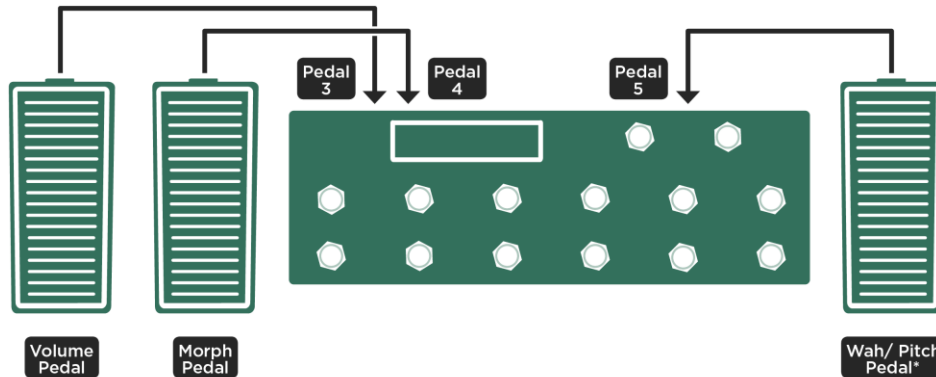


Four dedicated pedals connected to PROFILER Remote

If you stick to these default assignments, you just need to plug in the TRS-cable, press “Calibrate” and perform a full swell on the pedal to calibrate it. You can see the changing swell value of the pedal in the display, directly under the soft button. You should then repeat that process on each of the four pages Pedal 3-6 (Remote) in [System Settings](#).

In this case, all pedals are completely independent. You could leave Volume, Morph, Wah, or Pitch at any in-between position, while working another pedal.

Three Pedals: Comfortable



* Wah Pedal also controlling Pitch („WahPedal to Pitch“)

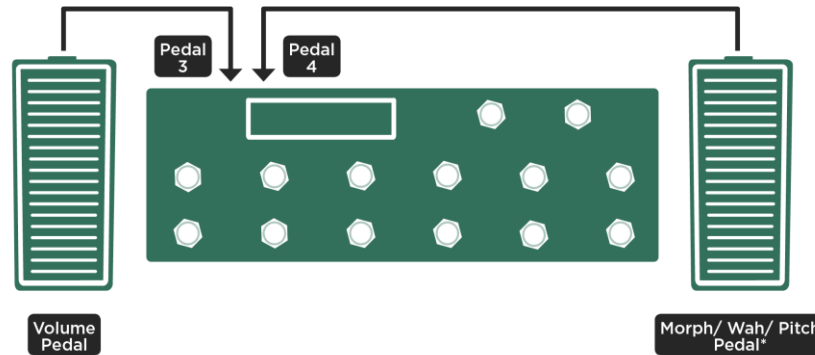
Two dedicated pedals for volume and Morphing plus one shared pedal for wah and pedal pitch effects

Please follow the instructions under [Four Pedals: Luxury](#) to connect and calibrate your Volume, Morph and Wah Pedals. The only difference is that there is no dedicated Pitch Pedal this time

Afterwards, move to the ["Pedal Links"](#) page in System Settings and select the "WahPedal >Pitch" option. Now your Wah Pedal is ready to control Pedal Pitch, or Pedal Vinyl Stop, as soon as one of those effects is activated. Practically speaking, the pedal will control all active wah and pedal pitch effects simultaneously. This is why it's a good idea to organize your Rigs with useful effect combinations. You could also use the Remote's [Effect Buttons I-III](#) on the Remote to switch individual effects, or combinations of effects, on/off, to ensure the pedal action always produces enjoyable results.

In most circumstances, you will use either a wah or a pitch pedal effect in your Rigs, and rarely both, so them sharing one pedal is not really a limitation.

Two Pedals: Mainstream



* Morph Pedal also controlling Wah and Pitch („MorphPedal to Wah“ and „MorphPedal to Pitch“); Morphing triggered via buttons

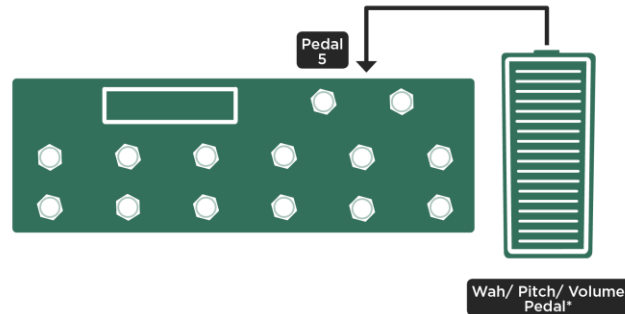
One dedicated pedal for volume and the Morph Pedal to be shared for wah and pedal pitch effects

Please follow the above instructions to connect and calibrate your Volume and Morph Pedals. You have neither a dedicated Wah nor dedicated Pitch Pedal.

Then, go to the ["Pedal Links"](#) Now, your Morph Pedal is the master for Morphing, wah and pedal pitch effects, and controls them all simultaneously. Most of the time, you might want to control just one of these effects. So, if you want to control just Morphing, make sure that no wah or pedal pitch effects are activated. To control just wah, switch off all pedal pitch effects and make sure there are no parameters set up for Morphing. If you want to use Pedal Pitch only, make sure that no wah effect is active, and that the current Rig includes no morphed parameters. In order to avoid accidental pitch jumps, the Morph Pedal needs to be moved through the heel position and will therefore always start shifting from the original pitch.

There is another possible setup with two pedals: you could decide to control [Morphing](#) via the [Remote's Rig Buttons 1-5](#) and skip the Morph Pedal controller altogether. In this case, you would end up with a dedicated volume pedal, plus a wah pedal reassigned to pedal pitch effects. The wah pedal would be set up with "WahPedal >Pitch", like in the example [Three Pedals: Comfortable](#) above.

One Pedal: Purist



* Wah Pedal also controlling Pitch and Volume („WahPedal to Pitch“ and „WahPedal to Volume“); Morphing triggered via buttons

One wah pedal to be shared for volume and pedal pitch effects

There is no way to combine Morph and Volume Pedal as this would imply logical conflicts. Therefore, in this setup Morphing can only be triggered via the Remote's buttons - either [Rig Buttons 1-5](#), or via customization of one of the [LOOPER](#), [TUNER](#) or [TAP](#) buttons. Alternatively, you could connect an additional external switch and assign the Morph function to it. We will cover the subject of external switches soon.

The one pedal then needs to be set-up as a wah pedal. The PEDAL 5 input is already prepared for it by default. How to connect and calibrate has been already explained in the example [Four Pedals: Luxury](#). Then select “WahPedal >Volume” and “WahPedal >Pitch” on the Pedal Links page in System Settings.

- ✓ If “WahPedal >Volume” is selected, those two functions are mutually exclusive. As soon as a wah effect is active, the Wah Pedal controls this wah effect, while volume stays flat. As soon as there is no wah effect in the current Rig, or the wah effect is switched off, the Wah Pedal controls volume. All other pedal links allow you to control their effects simultaneously. So, a Morph Pedal could morph and control wah, as well as pedal pitch effects at the same time, if those links are selected. A Wah Pedal could control wah and pedal pitch effects together, if “WahPedal >Pitch” is checked.

- ✓ A tutorial video demonstrating setting up of expression pedals can be found at: www.kemper-amps.com/video

Additional Switches Required?

Switches can be connected to both the PROFILER and the PROFILER Remote. Switching functions can be assigned globally. These functions include Rig up/down, activating/deactivating stomps and effects, engaging the [Tuner Mode](#), [tapping the tempo](#), or triggering [Beat Scanner](#) temporarily.

The PROFILER Remote has several built-in switches: Each of the [four Effect Buttons](#) can assume multiple switching functions that can be assigned and stored by Rig. In addition, the [LOOPER](#), [TAP](#), and [TUNER](#) buttons can be reassigned to other switching functions, globally. If you still feel the need for even more switches, you could connect single or dual switches to each of the [four PEDAL inputs](#).

Connecting a PROFILER Switch

Connect the KEMPER PROFILER Switch using a TRS cable to one of the PEDAL inputs and select the “PROFILER Switch” mode on the corresponding “[Pedal 1-6](#)” page in System Settings. Assign your preferred switching functions to the A and B switches. Then hold “Calibrate” and trigger each switch once. Release “Calibrate”. Done!

Single and Dual Switches of Other Brands

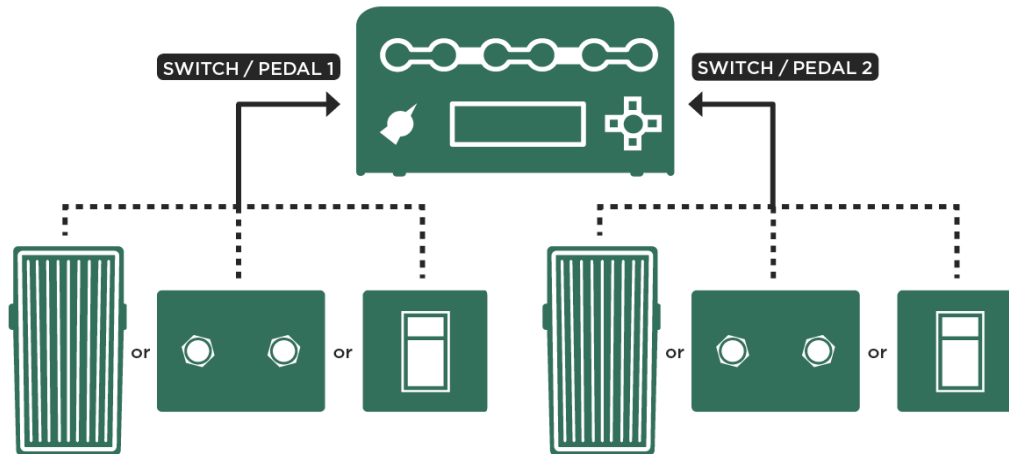
The PROFILER requires so-called “momentary” switches. Channel switches for tube amplifiers are not compatible with the PROFILER, as they use a latching mechanism that would only trigger their assigned switching function every other hit. Single switches are connected via a TS cable, and dual switches via a TRS cable.

Select “Mono Switch” or “Dual Switch” Mode on the corresponding “[Pedal 1-6](#)” page in System Settings and assign a switching function with the soft knob labeled “Switch Tip”. If “Dual Switch” is selected, another switching function can

be assigned with soft knob labeled “Switch Ring”. Please set polarity according to the kind of the switches used: select “Normal” for a switch that is closed in idle state, and “Inverse” for a switch which is open in idle state. Don't forget to hold “Calibrate” and trigger each switch once.

- ✓ You can find a tutorial video focused on technical conditions, and all other aspects of connecting expression pedals and switches to PROFILER or Remote at: www.kemper-amps.com/video

Connecting Pedals and Switches to the PROFILER



Connecting pedals and switches to PROFILER directly

The PROFILER features two jacks for the direct connection of expression pedals or switches, which can be configured in System Settings on the [“Pedal 1-2”](#) pages

While it would be possible to connect two expression pedals like described in the [Mainstream](#) example above, the most practical approach in this case is to connect one expression pedal to control wah, volume and pedal pitch effects, and then a dual switch to step up/down through the Rigs.

If that's what you want to do, connect your expression pedal to the [PEDAL 1 input](#), and assign the Wah Pedal function in System Settings on the page "[Pedal 1](#)". Then, press and hold the soft button "Calibrate" while sweeping the pedal all the way from heel through to toe position. The bar below "Calibrate" should reflect that move. Now, you can release "Calibrate". Next, navigate to the "[Pedal Links](#)" page and activate "WahPedal >Volume" and "WahPedal >Pitch". Now, the Wah Pedal will also control volume, as well as pedal pitch effects.

- ✓ If "WahPedal >Volume" is selected, those two functions are mutually exclusive. As soon as a wah effect is active, the Wah Pedal controls this Wah effect, while volume stays flat. As soon as there is no wah effect in the current Rig, or the wah effect is switched off, the Wah Pedal controls volume.

Then, plug the TRS-cable of the dual switch into the [PEDAL 2 input](#). If this is a KEMPER PROFILER Switch, please follow the instructions at [Connecting a PROFILER Switch](#). If you are using a switch of any other brand, please follow instructions at [Single and Dual Switches of Other Brands](#). Don't forget to press and hold "Calibrate" and trigger each of the two switches once. Then, navigate to the "Pedal Links" page in System Settings and assign "Rig up" and "Rig down" to your two switches. In Browser Mode, you can step through the Rigs according to the option selected for "View" and "Sort Order". In [Performance Mode](#), you can step through Slots and Performances, while disabled Slots will be skipped automatically. In [PROFILER Mode](#), it switches between "KEMPER Amp" and "Reference Amp".

- ✓ A tutorial video demonstrating how to set-up switches connected to the PROFILER is available at: www.kemper-amps.com/video

Volume Pedal Function

In difference to the [Wah](#) and [Pitch Pedal](#) functions, the [Volume Pedal](#) function does not have its own effect type, as this would allocate a Stomp or effect module every time you wanted to use the pedal. Instead, you will find two parameters for the [Volume Pedal in Rig Settings](#).

◆ Volume Pedal Location

Selects the location of the Volume Pedal in the signal flow:

Off	The Volume Pedal has no effect.
Input	Directly before the A module
Pre Stack	Right after the D module. At this position, you control the gain of the amplifier.
Post Stack	Right before the X module. At this position, you control the overall volume of the sound, but delay and reverb tails will still decay naturally, when you swell down the pedal.
Output	Right after the REV module. At this position, you control the overall volume of the sound, including reverb and delay tails that can instantly be attenuated.

◆ Volume Pedal Range

This is a bipolar parameter. In the middle position, the Volume Pedal has no effect. When you set the Range more to the left, you determine the minimum volume at heel-position, while the maximum volume at toe-position stays the same. At the minimum position, the pedal performs the swell from zero level, just as you would expect from an analog volume pedal. As you turn “Volume Pedal Range” towards the right half, the Volume Pedal turns from an attenuation pedal into a booster pedal. Now, the heel stays at standard volume, and the toe-swell will give you a volume or gain boost. The maximum boost, at the top position of “Volume Pedal Range”, is +24 dB.

The settings for the Volume Pedal are stored per Rig. However, if you have a favorite setting that you want to use in general, press “Lock Volume Pedal” to protect your settings from Rig changes.

The Volume Pedal can be controlled by an expression pedal connected to PROFILER or Remote, as well as by [MIDI using control change number 7](#).

The Volume Pedal is a dedicated volume, separate from Rig volume, [Master Volume](#), or any other output volume. All these volumes are working on top of each other

When you turn the volume all the way to zero with the Volume Pedal, [Tuner Mode](#) will appear in the display. This means you can now tune your guitar on stage, without the need for a dedicated TUNER button! If you should accidentally unplug the pedal when volume is still at zero, Tuner Mode provides a [soft button](#) to reset the volume to maximum.

- ✓ If you prefer to activate Tuner Mode via a dedicated TUNER button (e. g. the [Remote's TUNER button](#)), or via [MIDI control change # 31](#) only, you can deselect "Tuner@Volume 0" in Tuner Mode. Now, the Volume Pedal in heel position will no longer activate Tuner Mode. Check out details regarding [Tuner Mode](#).

Morphing

Morphing is an extremely powerful tool that allows you to shift numerous parameters within a Rig simultaneously. This can be used for a continuous morphing of one sound into a very different sound, controlled via expression pedal or triggered via a button. You could, for example, morph a basic rhythm sound into a boosted solo sound. Morphing works in both Performance Mode and Browser Mode and can include all continuous parameters within a Rig.

Despite the power of this feature, setting up Morphing is rather simple. If you own a PROFILER Remote, Morphing is just a few tweaks away. If you don't own a PROFILER Remote, you can still trigger Morphing via connected momentary foot switch or expression pedal.

First, let's look at how to set up Morphing with PROFILER Remote:

If you load a Rig not yet prepared for Morphing – either in Browser Mode or Performance Mode - the lower LED of the [Rig Button 1-5 on PROFILER Remote](#) will light up as usual. This state represents the "Base Sound" of the Rig. If you press this Rig Button again, you will see that the upper LED of this knob lights up, while the lower LED is dimmed. Additionally, a tiny horizontal bar graph on the display will move from left to right. This state represents the "Morph Sound" of the Rig. Subsequent presses of the Rig Button will toggle the LED status and move the bar graph.

Let's try setting up a very basic Morphing: With the upper LED activated as described, turn the GAIN knob by a significant amount. Now, press the Rig Button again. You should find that Gain has automatically returned to its previous level. Further presses of the Rig Button will now alternate Gain between these two levels.

So far, you are morphing just the one parameter. You can repeat the above process with as many parameters as you like, and then alternate their values, together with Gain, by pressing the [Rig Button](#). While the Base Sound is active, any edits of continuous parameters are associated with the Base Sound. While Morph Sound is active, any edits of continuous parameters only affect the Morph Sound. When you store the Rig, both the base and morph scenarios are automatically stored with the Rig. That's Morphing!

You may have noticed that the change from Base Sound to Morph Sound (and vice versa) is not instantaneous by default, but performs a smooth transition. Both Rise Time and Fall Time of Morphing can be set individually in [Rig Settings](#). Both time values can be set from zero (for an instantaneous morph switching) to 64 seconds. When you enable the [Tempo](#) for this Rig by tapping the [TAP button](#) or choosing a specific tempo, the Morphing time will be displayed in specific note values and sync to the current tempo. A neat application of this might be to set the Rise Time to, say, four bars. Now, just hit the Rig Button four bars before your solo starts and enjoy a nice, leisurely stroll to the front of stage while the PROFILER slowly morphs your rhythm sound into a boosted solo sound in the background. The two LEDs will continuously brighten and dim to reflect the rate of the change in sound.

If no PROFILER Remote is available, you could use an external momentary switch connected to one of the [SWITCH/PEDAL inputs of the PROFILER](#) and set this up as Morph Button.

Regardless of whether you own a PROFILER Remote or not, an [expression pedal set up as a parallel controller for Morphing](#) is an absolute must. Connect your expression pedal to one of the SWITCH/PEDAL inputs of the PROFILER or PROFILER Remote. Assign the Morph Pedal function. Now, you can control Morphing with the expression pedal at any speed, and even rest at intermediate levels. The Rise and Fall Time parameters are only relevant to the [Remote's Rig Buttons](#) or external switches, not the Morph Pedal.

Morph Pedal can also be controlled via [MIDI on control change #11](#). A button is not even required to operate Morphing - you could use an expression pedal exclusively if you like.

Morph Button and Morph Pedal are not just performance tools for Morphing - they are also the devices that determine whether you are editing the Base Sound or the Morph Sound. For this reason, please remember the following facts to avoid confusion:

- ✓ If you are using a Morph pedal while you are editing parameters, make sure the pedal is in full heel or full toe position. If you are using the Morph button with long values for Rise Time or Fall Time, wait until the transition has finished before editing parameters - the PROFILER will not allow parameter changes at intermediate positions, since it would not be possible to determine whether the edit was intended for the Base or Morph Sound.
- ✓ When you edit parameters without intending to morph them, please make sure that Base Sound is currently selected. This way the new parameter setting will stay unaffected by Morphing.

Please be aware:

- Every single continuous parameter of a Rig can be morphed. This includes all continuous parameters of effect modules and amplifier.
- Generally, only continuous parameters can be morphed. Switches and selections cannot be morphed, as they would cause noticeable jumps in the sound.
- Exception 1: [Cabinet parameters](#) cannot be morphed as this might cause artefacts.
- Exception 2: [Delay note values](#) can be morphed, even though it is a selection.
- Even [distortion effects](#) allow the Mix parameter to be morphed continuously.
- Cabinet parameters cannot be morphed as this might cause artefacts.
- Morph settings are stored individually per Rig.
- Morph settings are also stored individually per module or section presets.
- Morph settings of any locked module or section will also be locked.
- Global parameters cannot be morphed. This includes parameters in the [Output Section](#).
- Morphed values of parameters can be set above or below their base value, to create either positive or negative progressions.
- You can erase Morphing of any parameter by turning the morphed value back to the base value.
- A safer way to erase a Morphing is to first activate the Base Sound, and then sweep the base value of any parameter past the morphed value.
- If no device is connected to the PROFILER to activate Morphing, all Rigs will load with their Base Sound.
- The [Morph Pedal](#) can be configured to control [Wah Pedal](#) and/or [Pitch Pedal](#) as well. Refer to the chapter [Pedal Links](#) chapter for setting this up.

Using the [Rig Buttons](#) (or external switches), or using the Morph Pedal, may be different approaches to Morphing, but they are not mutually exclusive. If you hit the button (or external switch) while the pedal (or [MIDI controller](#)) has

been set to an intermediate value, Morphing will progress from that value. When you move the expression pedal afterwards, it would obviously start from a wrong position. To eventually sync the morph level to the pedal position, the morph process is accelerated or decelerated accordingly to ensure Morphing never results in undesirable jumps. You are always free to choose either the button/switch or the expression pedal to control the Morphing, so you can tailor its use to your specific needs.

When you use the PROFILER Remote in [Performance Mode](#), the LEDs in the lower row above the five [Rig Buttons](#) indicate the availability of Performance Slots with a dimmed light. Similarly, the LEDs in the uppermost row indicate the availability of a Morph Sound in this specific Slot with a dimmed light.

The default functionality of the [Remote's Rig Buttons](#) is to trigger Morphing; however, you may prefer to use them for reloading the current Rig/Slot in its original state. To select this behavior, disengage the global "Rig Button Morph" option, located in the [System Settings](#). This option also affects MIDI controllers that send [MIDI CC#50-54](#) to load Rigs or Slots, such as the Uno4Kemper*, for example. Instead of using the Rig Buttons, you could assign one of the Remote's [LOOPER](#), [TAP](#) or [TUNER](#) buttons, or even an external switch in order to trigger Morphing alongside the Morph Pedal.

A "Morph" page has been added to [Rig Settings](#). You can review, test and manage your Morphing on this page. The page includes:

- a complete signal chain reflecting which module is currently setup for Morphing
- a bar indicating the current state of Morphing
- soft knob to simulate the Morph Pedal
- soft button to simulate a button-triggered Morphing (this function can also be assigned to the [QUICK button](#))
- the parameters "Rise Time" and "Fall Time", which are applied if Morphing is triggered via Remote's [Rig Buttons 1-5](#) or another button
- "Momentary" option to select whether Morph Buttons are latched (default) or momentary
- soft buttons to clear Morphing either for the whole Rig or selectively by module. Please press and hold "Clear Module" followed by the module button, e.g. Module D, that you want to clear

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Monitor Volume Pedal (MIDI Control Change #73)

“Monitor Volume” is a special additional pedal option to control the volume of the MONITOR OUTPUT as well the internal power amplifier of PowerHead and PowerRack. It allows you to generate controlled feedback through your monitor cabinet.

Stack Section

The stack section is the heart of the PROFILER. It represents the raw virtual guitar amplifier and guitar cabinet as defined by the PROFILE. Every PROFILE is represented by the three modules that make up the stack section.

Amplifier

The AMPLIFIER button calls up a list of parameters that allow you to change the character of the Amplifier PROFILE in numerous ways using the soft knobs.

- ✓ A dedicated tutorial video explaining the amplifier module in the stack section can be found at: www.kemper-amps.com/video

◆ Definition

The “Definition” parameter controls the characteristic fingerprint of the preamp. The PROFILING process automatically sets “Definition” to a value that represents the reference amp. You could, for example, use it 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 into distortion. 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 keep experimenting until you get the balance that sounds best to you.

Vintage amps distort the lower harmonics in the guitar signal which gives them their *bluesy* sound. These amps were originally designed to deliver a clean sound, so if you want a creamy distortion, these amps need to be driven by a typical transistor-based device like a treble booster. Modern tube amps use a different approach, in which the higher overtones of the guitar strings are the driving force for the distorted sound. The expensive *boutique* amps take this concept one step further, by providing an extreme level of top-end frequencies and a large dynamic range. The

distortion has a sparkling quality to it, and preserves every nuance of the strings and pickups. Together with the characteristics of the actual speaker, the individual distortion behavior creates the fingerprint that identifies the amplifier.

◆ Power Sagging

“Power Sagging” models the interaction between the guitar signal and the distortion stage. 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 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, so you can use it to expand the dynamic range of the original sound. With “Power Sagging” set to 0%, the original dynamic range of the PROFILE is maintained.

Power sagging is a phenomenon that occurs when the tubes draw a lot of electric power at high distortion rates, thereby weakening the supply voltage. Under such load, the tubes will change their distortion characteristics and sort of shut down; then as soon as the load lessens, the tubes *catch their breath* again. What might at first seem like a technical limitation of the tube amp design has turned out to be a real benefit for the musical expressivity of the guitarist. The PROFILER masters this technical behavior without degrading or changing the basic character of the amp model whatsoever.

- The amplifier interacts with the guitarist and reacts to the plectrum and fingers with the highest possible sensitivity.
- The guitar sound gains extra energy and presence, without raising the perceived volume of the distorted signal.
- Muted picking gives better results than usual, as the plectrum will not be suppressed.
- The realms of clean and distorted sounds move closer together, causing the velocity and energy of the crunch sounds to grow. The amp doesn't just distort everything mercilessly - all the nuances are represented faithfully. The overall sound becomes much more alive, with more punch and juice. It almost sounds as if a compressor has been switched off, thereby allowing the guitar to establish itself more easily among the other instruments on stage, such as the drums or bass.

As the dynamic range of an analog tube amp is limited by the laws of physics, power sagging can only go to a certain level before the breakdown of supply voltage destroys the beauty of the distortion characteristics. The PROFILER allows for a much wider dynamic range, while preserving the character of the tubes at the same time.

Turning down the volume knob on the guitar results in a very natural, clean sound with full dynamics and lots of energy.

Power sagging cannot be reproduced using a conventional compressor, but it can be further enhanced with the dedicated compressor circuit. The breathing of the tubes becomes most apparent with dynamically played, semi-distorted or so-called *crunch* sounds. With fully distorted sounds, the tubes are always under full load, while clean sounds don't put any load on the tubes at all - the "Power Sagging" parameter will only have a minor effect with these types of sounds.

◆ Pick

The "Pick" parameter allows you to control the level and sharpness of the pick attack independently from the sustained portion of the sound. The result is also independent from the amount of distortion. You can use this parameter to make clean sounds even more percussive without having to use a compressor. With fully distorted sounds, you can revive the attack phase of any notes that get drowned in the natural compression caused by distortion. If you set "Pick" to a negative value, it will soften the attack, resulting in a more fluid sound.

◆ Compressor

This "Compressor" parameter is different from the stomp compressor, as 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 module. Distorted signals are not affected by compression; so only clean signals will be boosted. The dynamics of your playing are fully retained, allowing you to go from a crunchy sound to a compressed, clean sound, purely by the strength of your picking. 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.

◆ Clarity

“Clarity” changes the sound of the distortion in a new and unique way. Turning the “Clarity” soft knob to the right will bring the clean character of the sound into focus without lowering the amount of distortion. The distortion itself will become less forward in the mid frequencies and sound far more transparent.

◆ Tube Shape

“Tube Shape” controls the distortion characteristics of the tubes, ranging from very soft to very hard. All kinds of crunch sounds can be dialed up - from warm blues, to singing metallic, to harsh. Depending on the gain setting or the playing style, the resulting effect can be rather subtle; completely distorted sounds are mostly unaffected by this parameter, as are clean sounds. Set the value to 3 to simulate the typical sound of preamp tubes. To achieve a power amp tube character, try setting “Tube Shape” to around 9. Power amp tubes produce a much harder distortion, because the negative feedback in the power amp circuit linearizes the tube amplification, making the distortion curve edgier.

◆ Tube Bias

“Tube Bias” influences the overtone structure of the distortion. While the effect on the character of the sound is fairly subtle, you should feel a quite a difference in the distortion dynamics: as you increase the amount of “Tube Bias” the guitar will go into distortion much earlier in the dynamic range, yet still retain a lot of dynamic headroom. At maximum value, the distortion characteristics mimic those of a Tube Screamer™.

◆ Direct Mix

With “Direct Mix” you can open up a parallel path to the amplifier distortion and mix a clean portion of the guitar to the distorted sound. This will add some dynamics and attack to the sound, as well as adding some of the frequency content of the clean guitar. Traditionally, similar results were achieved by running the guitar through a clean and a distorted amplifier in parallel (“dual amping”) - now, it can be done with a twist of a knob. “Direct Mix” controls the volume of the clean portion.

◆ Volume

This parameter can be used to balance volume gaps between different PROFILES. The Rig named “Crunch”, which is default in all Slots in Performance Mode, could be used as a volume reference.

EQ

The EQ (equalizer, often called “tone stack”) is an integral part of the stack section. It features four controls for the different frequency bands: “Bass”, “Middle”, “Treble” and “Presence”. These controls are always present in Browse and Performance Mode. Holding the EQ button will bring the EQ into focus.

Basically, the equalizer in the PROFILER is a recreation of a generic, passive tone stack, but it is designed to have more impact on the frequency bands. When all soft knobs are in the middle position, it does not change the sound, so what you hear is the unaltered sound of the PROFILE.

A soft button allows you to set the position of the equalizer to either “Post” (after) or “Pre” (before) the amp module. The EQ has a different impact on the sound of a distorting amp, depending on its position. In tube amps, it is positioned between the preamp and the power amp. Most modern guitar amps with a master volume control perform the distortion in the preamp; thus, the equalizer is positioned after the distorting circuit. Classic amps without master volume control (such as Vox AC-30*), produce the distortion in their power amp. In this case, the equalizer is positioned before the distorting circuit. However, setting the position according to the original amp is not mandatory, since the authentic sound of the reference amp has already been captured, and therefore includes the original equalizer setting.

- ✓ A dedicated tutorial video explaining the EQ in the stack section can be found at: www.kemper-amps.com/video

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Cabinet

The CABINET button brings the cabinet module into focus. You can freely combine guitar cabinets and guitar amps from different PROFILES to create new stacks. The cabinet has three parameters to tweak its character in an artificial way:

◆ High Shift, Low Shift

Both parameters influence the characteristic formants of a Cabinet PROFILE, thereby simulating a change in size. “High Shift” will make the higher formants more prominent, whereas “Low Shift” does the same for the lower frequencies.

◆ Character

Use this parameter to change the overall character of the cab. Turning the soft knob to the right of center will enlarge the peaks and notches in the frequency response curve. This will emphasize the character of the cabinet and may sound too penetrating at extreme values. Turning it to left of center will smooth the differences between the peaks and notches in the frequency response curve and flatten the character of the cabinet. Towards the leftmost position, the sound will resemble that of analog cabinet simulations (which often have a very simple frequency response and little character).

◆ Pure Cabinet

The Pure Cabinet parameter is available in the cabinet module and in the Output Section. Please refer to the description of [Pure Cabinet](#) in the chapter [Output Section](#).

Effects

The four modules named A, B, C and D, placed in the signal flow before the stack, are the ideal place for stomp box type effects - like distortion, for instance. These modules are mono, because the amplifier will only accept a mono signal. By contrast, the four modules X, MOD, DLY and REV work in stereo, if desired.

These eight effect modules offer you all kinds of effects which are easily identifiable by ten different colors:

Delay/Reverb	Green
Pitch Shifter Delay	Light Green
Wah	Orange
Distortion/Shaper/Booster	Red
EQ	Yellow
Compressor/Noise Gate	Cyan
Chorus	Blue
Phaser/Flanger	Purple
Pitch Shifter	White
Effect Loop	Pink

Press and hold any Effect Button to bring it into focus. If the effect module is active the display will change its color to match the effect. The soft knobs will display the parameters available to edit.

There are two ways to choose a new effect: either turn the [BROWSE knob](#) to select a new local effect preset, or turn the [TYPE knob](#), to change the basic algorithm of the module.

Many parameters are common to several different effects, such as “Mix”, “Volume”, “Rate” – just to name a few. When you change the algorithm of an effect using the TYPE knob, the values of these mutual parameters will not be changed. This allows effect types that share a mutual parameter set to keep these values. For example, you can create a great flanger effect with your desired rate and depth setting. Then select the [Phaser](#) by turning the TYPE knob to check the same settings with the phaser algorithm that is somewhat relative to the [Flanger](#). Some generic parameters, common to most of the effects, are:

◆ Mix

Controls the amount of effect in the signal. At the default setting of 100% you get the most intense effect. With some effects, such as wah or compressor - only the effect signal is audible at the 100% position to give the strongest effect. With other effects, typically modulation effects like flanger or phaser, the dry signal is still in the mix for maximum interference with the effect signal.

When “Mix” is at 0% you will hear no effect. The “Mix” control is scaled perfectly for each effect type, so there is no volume drop or boost at the 50% position. Some effects, such as the Air Chorus, don’t offer a “Mix” control, as this would contradict the character of the effect.

◆ Volume

The “Volume” control allows you to change the gain for driving the next distortion stage. The output volume of the effect can be boosted, or attenuated, by +/-24 dB, which is much more than usual. This will reduce the need to switch to a different Rig. If all you need to do is boost a solo sound; just dial the effect type that you need for the solo and boost the “Volume”. By activating this effect module, you engage the effect and the boost at the same time.

◆ Stereo

The “Stereo” parameter is only available in the effect modules placed after the stack. It controls the stereo intensity of these effects. With modulation effects this is done by offsetting the LFO modulation phases of the left and right channels. For other effect types, such as filters, frequencies are shifted in opposite directions for the left and right channels. This way, even the wah wah can create a stereo effect, so long as it's placed after the stack!

The recommended value for most effects is +50% (or +90°), which will often produce the nicest stereo image. At the middle (zero) position the effect will be fully mono. With negative values, you will get the same stereo effects as with positive values, but the left and right channels are reversed. With extreme settings of the stereo parameter, you can exaggerate the stereo width.

◆ Ducking

The “Ducking” control allows you to intensify or suppress (“duck”) an effect just by the dynamics of your playing. You might know this from the “Ducking Delay” that can be found in many effects processors. In the PROFILER, ducking is available for many effect types, both individually and simultaneously.

The “Ducking” parameter is bipolar and sets the input level threshold for the dynamic control. Ducking is inactive when the parameter is set to the middle position (default). Turn it to the right for the typical ducking behavior whereby the effect will be attenuated when you play your instrument strongly. Careful adjustment of “Ducking” will allow you to control the intensity of the effect by your playing dynamics; the softer you play, the more effect you get.

By turning the “Ducking” parameter to the left half, you will reverse this behavior: now, as you play stronger, the effect will become more prominent.

When you set one effect to the positive ducking range, and a second effect to the negative ducking range, both will crossfade in correlation to your playing dynamics.

The threshold of the “Ducking” control is naturally dependent of the output level of your guitar. This level is also influenced and compensated by the [“Clean Sens”](#) parameter in the Input Section.

Delay (Green)

Without doubt, the delay effect types are some of the most advanced and comprehensive effects collections in the PROFILER. However, the approach we have taken might be a bit different from what you've seen before. You will not find a dedicated reverse delay, tape delay or ducking delay, as we realized there is no sense in splitting such crucial features into separate delay types. Instead, we have equipped every single delay type with most of these features. Why not have a dual reverse delay? Or a serial delay with analog tape character? Or a melody delay with ducking? All these are possible with the delays in the PROFILER.

The character of the tape delay can be continuously controlled by two crucial parameters: [Low Cut and High Cut](#). As well as these, two controls for adjusting wow and flutter are available in every single delay type. Many of the delays also feature a [Grit](#) control to add typical tape saturation and distortion to the delay signal. With less intensity of these controls, the delays will move toward the flavor of an analog bucket-brigade delay or a digital delay. The reverse delay signal is always available in addition to the regular delay signal, and both can be mixed to your liking.

Many delay types feature the parameters "[Input Swell](#)", "[Smear](#)" and "[Cross Feedback](#)". Each of these parameters will make the delay sound smoother and can turn a rhythmical delay into a more ambient, or reverb-like, effect. Together, they work even better!

The result of all this is that every delay type features many parameters; but don't worry - they are very easy to handle, as except for wow and flutter, they all consist of a single control for each. If you bring the control to zero, the feature will be inactive, and out of the way.

If you don't want to dive into the details right away, just choose a nice setup from our dozens of delay presets by turning [BROWSE](#), having chosen an effect module.

As with all other effects, you can change the delay type by turning [TYPE](#). In contrast to the [BROWSE knob](#), this will change just the algorithm of the effect while keeping all parameters unchanged. This way you can check different types of effects while maintaining precious settings, such as [Delay Time](#), which are applied automatically to the new delay type.

The delays can be placed in the DLY module on the right-hand side of the panel, or in any of the effect modules except the REV module. This allows multiple delay effects to coexist, or to be switched within the same Rig.

Despite all the flexibility of the new delays, there are good reasons to choose the DLY module for the delay effect:

- delay sound (as well as the reverb tail) won't be cut off when you switch Rigs ("spillover") if placed in the DLY module
- delay sound (as well as the reverb) will be directed to separate outputs if [Output Source](#) is set to "Del/Rev Wet" in the Output Section
- DELAY FEEDBACK and MIX knobs are exclusively linked to the DLY module.

Before we describe the delay types in detail, here are the parameters that most delay types have in common:

◆ Delay Mix

Controls the level of the delay signal. At the middle position, the delay is as loud as the direct signal; beyond this point it will start to attenuate the dry signal. With "Mix" turned all the way to the right, you will hear only the pure, delayed signal.

- ✓ Delay Mix is accessible via the row of knobs in the upper half of the panel, if the effect is placed in the DLY module.

◆ Mix Location Pre/Post

Determines whether the Mix control is positioned at the input (Pre) or the output (Post) of the delay. This option does not change the signal immediately, but it becomes relevant when the Mix control is morphed by a switch or pedal.

In the "Post" position, a change of the Mix control changes the output level of the delay, and thus will have an immediate impact to the delay tail when modified. In the "Pre" position, the delay tail will be unaffected by fast changes to Mix, which will control only the delay input level.

- ✓ Mix Location is also relevant if you use the Grit parameter or the Infinity Feedback, as we'll see further below.

◆ Low Cut & High Cut

These two controls determine changes to the frequency response of progressive delay repeats. When Low Cut is set to minimum, and High Cut to maximum, then the delay will not undergo any sound degradation.

As you reduce High Cut from its maximum position, the high frequencies will attenuate with every delay repetition, creating a warm, lush sound.

As you increase Low Cut from its minimum position, the low frequencies will attenuate with every delay repetition, resulting in a thin, brittle sound. In the lowest quarter of its range the Low Cut controls the resonance character of the High Cut.

Both controls can be combined to simulate the sound degradation of a tape delay or analog delay:

Set High Cut to a desired value, e.g. 2000 Hz. Now, gradually increase Low Cut from its minimum position. You will notice a flavor and "peakiness" typical of a tape delay, even at low values of Low Cut. The closer you set Low Cut to the value of the High Cut, the more the sound will change toward a bandpass sound. Internally, the Low Cut frequency will never exceed the High Cut frequency.

◆ Cut More

You might find that the sound degradation of Low Cut and High Cut is not drastic enough, or that the build-up of the degradation is too slow at long delay times. In this case, press the "Cut More" soft button to double the impact of Low Cut and High Cut.

◆ To Tempo

The delay times can be set either as absolute values (milliseconds) or as [Note Values](#), where the absolute times depend on the current [Tempo](#). Use the soft button labelled "To Tempo" to switch between those two approaches.

◆ Delay Time & Delay Ratio

If “To Tempo” is not engaged, then Delay Time controls the absolute delay time in milliseconds. The maximum delay time is 2000 ms. As you dial through the delay times, you will notice the change in pitch, typical of tape-speed changes in a tape delay.

In several delay types, you will also find a setting for “Delay Ratio”. This soft knob sets the time (in percentage) of the respective delay taps relative to the sole Delay Time found in this delay type. Thus, when the Delay Time is changed, all the dependent delay taps will change their times as well, according to this ratio. This means that if you change the pattern length using the Delay Time parameter, the rhythm pattern created by the multiple taps is always maintained.

◆ Note Value

If you activate the “To Tempo” option, then the controls for Delay Time or Delay Ratio change their identifiers to Note Value. Now, the delay times are set in note values, and will therefore depend on the actual tempo.

The tempo can either be tapped with the [TAP button](#) or determined automatically by the [Beat Scanner](#), activated when you press and hold the TAP button instead. Please learn more about the tempo capabilities in the chapter [Tempo](#).

When you change Note Values, the transition to the new values will happen seamlessly without pitch changes or other side-effects.

◆ Feedback

The Feedback parameter determines the amount of delayed signal that is thrown back to the input of the delay, resulting in an “echo of the echo”. When Feedback is at zero, there will only be one audible repeat. As you increase the Feedback, the number of repeats increases until, at “100%” (center position), the delayed signal will continue to repeat indefinitely.

- ✓ Delay Feedback can be controlled with the dedicated knob in the upper half of the panel, so long as the effect is placed in the DLY module.

Above the "Feedback" soft knob you will find the "[Freeze](#)" soft button and, on several delay types, an "[Infinity](#)" soft button. Both buttons are so-called "Action & Freeze" functions. These can be assigned to the Effect Buttons of the PROFILER Remote for performance applications. To assign them, hold the desired [Effect Button on the Remote](#) with your foot, while you press the respective soft button above the display on your PROFILER. To undo the assignment, repeat the same action.

◆ Freeze

"Freeze" is an Action & Freeze function, which turns the delay into an endless loop. The delay track will be repeated without losing or gaining level, and without sound degradation. The input of the delay is cut, so no further signal is added to the delay, allowing you to play along to the loop.

◆ Infinity

When you activate "Infinity", another Action & Freeze function, Feedback will be switched from the regular value (between 0 and 100%) to the Infinity feedback value that spans from 100% to 200% and is separately controllable. This feedback lets the delay repeats build up instead of decaying – this pushes them deeper into tape saturation, where they will repeat indefinitely, as the sound degrades over time. To ensure a pleasing, lush result, you should adjust the sound of the tape saturation with the High Cut and Low Cut parameters. Set Mix Location to "Post" if you wish to control the signal level of the saturated delay by the Mix control.

In contrast to the Freeze function, Infinity Feedback still lets you add more signal to the delay, creating intermodulation with the repeated signal.

- ✓ The "Freeze" and "Infinity" soft buttons can both be assigned to one of the Effects Buttons of the PROFILER Remote. Step and hold the desired [Effects Button \(I to VIII\)](#) while you press the "Freeze" soft button or the "Infinity" soft button.

- ✓ Both the “Freeze” and “Infinity” soft buttons can also be assigned to a foot switch that you plug into one of the [PEDAL inputs of your PROFILER](#) or [Remote](#).

◆ Cross Feedback

A small number of delay types - namely the [Dual Delay](#) and the [Quad Delay](#) - feature a "Cross Feedback" control. Increasing the value beyond zero causes each delay to not only feed its output signal back to its own input, but also to the other participating delay lines. This creates a more diffuse delay rhythm pattern, adding a reverb-like character to the delay. To ensure the perceived overall feedback will stay the same, Cross Feedback will automatically reduce the regular feedback. For this reason, Cross Feedback only works when the regular Feedback is set to a reasonable amount. To achieve the smoothest diffusion, set the delay times to odd ratios. In contrast, 1:1 or 2:1 ratios will only have a mediocre effect on the Cross Feedback.

◆ Reverse Mix

When set fully to the right, the delay is turned into a reverse delay. With intermediate values, you will get a mixture of the forward and reverse delay, which is quite unique.

◆ Input Swell

The Input Swell parameter engages an auto-swell effect at the input of the delay that lets the volume rise slowly with every new strike of the strings. At low values, only the pick attack is dampened, creating a smoother delay signal. With larger values, the onset of the notes is blurred, creating a pad-like delay.

◆ Smear

The Smear parameter adds a small reverberation unit to the delay, the intensity of which strengthens with every feedback repetition. Pick attacks become increasingly diffused, or smeared, giving the delay a reverb-like quality. In combination, Input Swell and Smear are a perfect recipe for ambient and ethereal delays.

◆ Stereo

This is like the bipolar Stereo parameter included in many effects of the PROFILER. In the delays, this parameter controls the stereo spread of all delay taps.

However, it introduces a novel "super-stereo" effect that lets the delay reflections appear well outside the regular stereo image. This effect works best if you are well positioned in the correct stereo triangle of your speakers. To get the most prominent effect, set the delay taps to different delay times. The super-stereo effect does not work with headphones.

- At 100% the delay taps are fully panned to left and right.
- At 0% all delay taps are panned to the middle position, resulting in a mono signal.
- At -100% the delays are fully panned, but the sides get reversed.
- When you move the "Stereo" soft knob beyond the +/-100% setting, the super-stereo effect comes into place, reaching its maximum impact at +/-200%.

As with all other effects, the Stereo parameter is not available, when the effect is placed in front of the stack, because the modules A, B, C, and D are strictly mono.

◆ Grit

The Grit parameter adds a typical tape distortion to the delay signal. At lower values, the tape bias is reduced, creating a brittle sound. At higher values, the signal becomes noticeably compressed by the limited headroom of the tape. In the upper quarter of the Grit control, the input level is boosted to push the distortion even more. You can further control and tame the sound of the distortion by using the [High Cut and Low Cut](#) parameters. Use the "[Cut More](#)" switch to cut the edges of the sound further.

As with every distortion, the amount of Grit in the delay is dependent of the input level. Therefore, Grit is sensitive to the "Mix Location" parameter. When Mix Location is set to "Pre", the distortion is lowered by lowering the [Delay Mix](#) control. For this reason, you might prefer setting it to "Post", as this will not change the amount of Grit when changing the delay mix.

◆ Stereo Modulation

Induces a delay time modulation to create a lush and chorus-like sound. The delay taps are modulated in different phases to produce a wide stereo image like the [Air Chorus](#), even when the delay times are set to equal values.

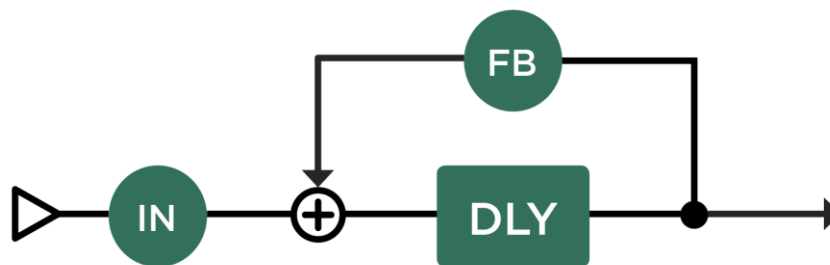
- ✓ If you want to create a delay modulation, without creating a stereo effect, use the [Flutter](#) parameters instead.

◆ Flutter Intensity & Flutter Rate

These parameters control the typical wow & flutter effect of a tape delay. The speed of the tape passing the recording and playback heads, of a tape delay varies randomly due to several mechanical reasons such as tape wearing. This results in both slow and fast pitch deviations of the delayed signal. Flutter Rate varies the overall speed of these random deviations. Lower values produce more "wow", while higher values pronounce the "flutter". Use the Flutter Intensity to adjust the strength of the deviations to your liking.

Single Delay

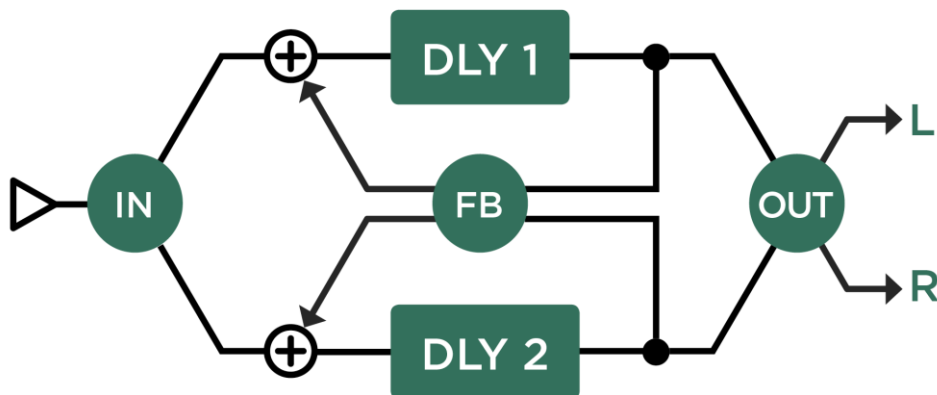
The Single Delay consists of one delay line, with one delay time setting only. This makes the Single Delay ideally suited to the mono effect modules in front of the amp. However, you can still place it after the amp and achieve a decent stereo effect by increasing the Stereo parameter. This stereo effect is created by phase shifts, but is fully mono compatible. This means the effect disappears naturally, without side effects, when the signal is mixed down to mono at playback.



Single Delay

Dual Delay

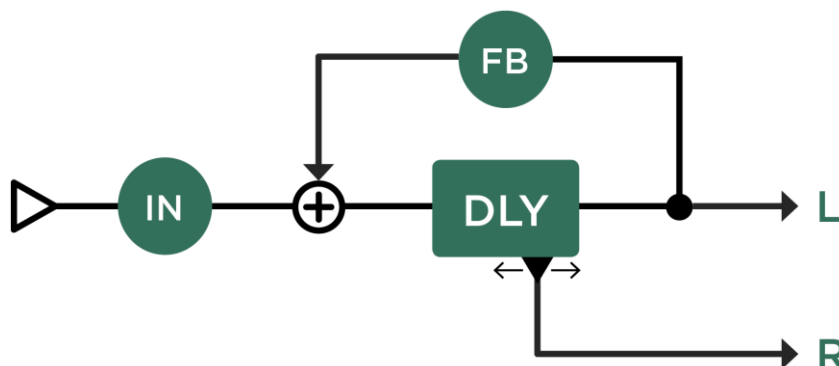
The Dual Delay features two fully independent delays - one for each stereo side - with independent feedback controls. Both feedbacks can be sync'ed with the "Feedback Sync" soft button, so that both are controlled by the Feedback 1 control only. The sync'ed feedbacks don't just have the same feedback level, but are adjusted automatically depending on the respective delay times, such that both delays will decay to silence at the same point in time, thus preserving the stereo image. Use the [Cross Feedback](#) parameter to increase the density of the delay reflections.



Dual Delay

Two Tap Delay

The Two Tap Delay is based on a single delay, but with two signal taps for the left and right sides. This allows for dedicated ping-pong delay patterns, that are quite different to those of the [Dual Delay](#), for example.



Two Tap Delay

When the “[To Tempo](#)” soft button is activated, you can set the delay time of the left and right delay taps individually, in musical values. Setting both taps to the same value will produce a mono delay, while different values will create a ping-pong effect. Only the left delay will feed its signal back to the delay input, which means the length of the left delay will define the overall pattern length. When you set the length of the right tap to half that of the left, for instance, you will create a classic ping-pong delay. However, swapping the values will not only result in a swap of the stereo sides, but also in a different delay pattern. You can choose note values from arbitrary multiples of 16th notes, up to one bar (whole note). This also includes odd values such as 5/16 or 7/16, that are definitely worth trying. To create more complex and interesting rhythm patterns, try using a mix of odd and even values.

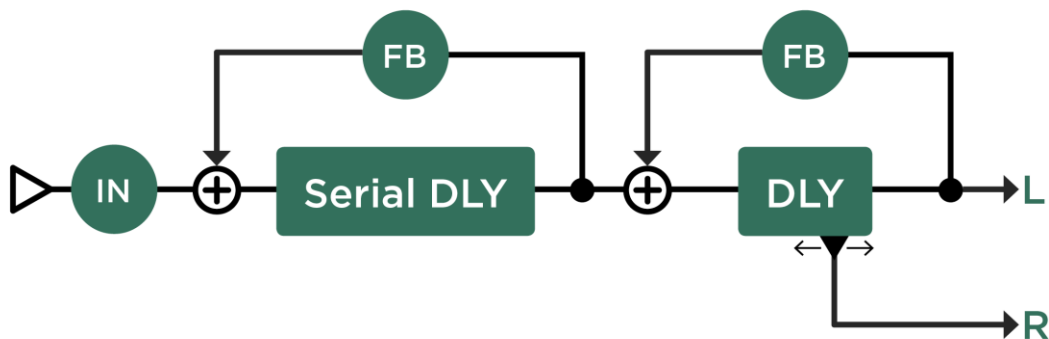
When “[To Tempo](#)” is not activated, the left delay time is set in milliseconds, while the right delay time ([Ratio](#)) is set as a percentage of the left delay time.

Serial Two Tap Delay

The Serial Two Tap Delay is a [Two Tap Delay](#) with an additional delay placed in front. This additional delay features separate "Mix Serial" and "Feedback Serial" controls, as well as a third delay time setting. The delay time appears as "Note Val. Serial", when To Tempo is activated, or as "Delay Ratio Serial" (as a percentage of Delay 1 Time), when To Tempo is deactivated.

- ✓ As an alternative to the Serial Delay, you can place any two delays into two adjacent effect modules.

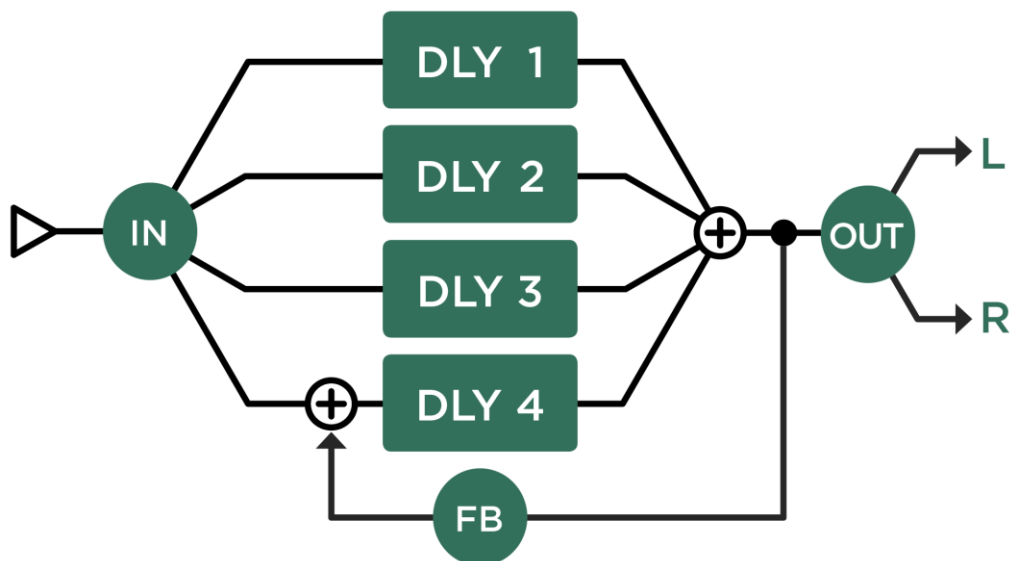
Tra



Serial Two Tap Delay

Rhythm Delay

The Rhythm Delay is quite a beast. It allows you to arrange up to four delay taps to create a rhythmic sequence. Each delay tap can be set individually by time, volume and panorama position. The sound degradation from the high pass and low pass filters increases from tap to tap, giving the delay a natural flavor, even within a pattern.

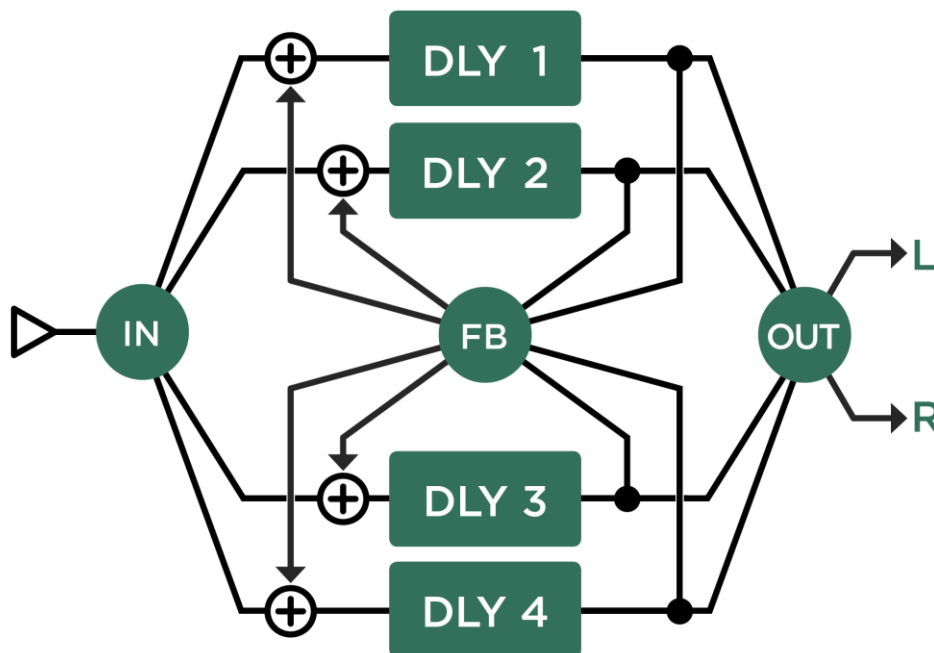


When you set Feedback to above zero, the whole delay pattern is repeated. The repetition time (and thus pattern length) is defined by the time of the fourth delay tap (Delay 4). For that reason, the fourth delay tap is always the first tap of the next repetition.

When "To Tempo" is activated, the time of each tap is adjusted independently in multiples of 16th notes. When To Tempo is not enabled, then Delay 4 Time is set in absolute milliseconds, again defining the pattern length or repetition time. Delays 1, 2 and 3 have Ratio settings as a percentage of the milliseconds of Delay 4 Time. Thus, if you change the setting of Delay 4 Time, then all four delay times are changed accordingly while maintaining their ratio. This way, the rhythm pattern stays intact, but changes tempo.

Quad Delay

The Quad Delay features four delay lines in parallel. The parameter set looks like the [Rhythm Delay](#), but the structure is completely different. The four delays share a common [Feedback](#) control, as well as a common [Cross Feedback](#). When Cross Feedback is set to zero, all four delays will feedback individually. When Cross Feedback is set to 100%, each delay will feed its signal back to all four delays at the same time, creating a diffuse and reverberant effect.



Quad Delay

Legacy Delay

The Legacy Delay is based on the first delay algorithm made for the PROFILER. The main purpose is to maintain full backward compatibility to rigs that have been created before the advent of PROFILER operating system 5.0. The architecture of the Legacy Delay is like that of the [Two Tap Delay](#). However, it features a bandpass filter with the parameters Center Frequency and Bandwidth – this is in contrast to the other delays, that all utilize the more intuitive low cut and high cut filter. If you are going for deeper edits of an already existing Legacy Delay, we recommend changing the type to Two Tap Delay, or any other type, by using the [TYPE knob](#). This way, you will benefit from their improved parameter set.

If you are going to build a new delay from scratch, you should avoid the Legacy Delay for the same reasons.

Reverb (Green)

The reverb offers studio-quality algorithms and works closely with the delay effect. It comes with five different types that allow you to determine the room size, ranging from Matchbox to Hall. These five reverb types are exclusively available in the REV module.

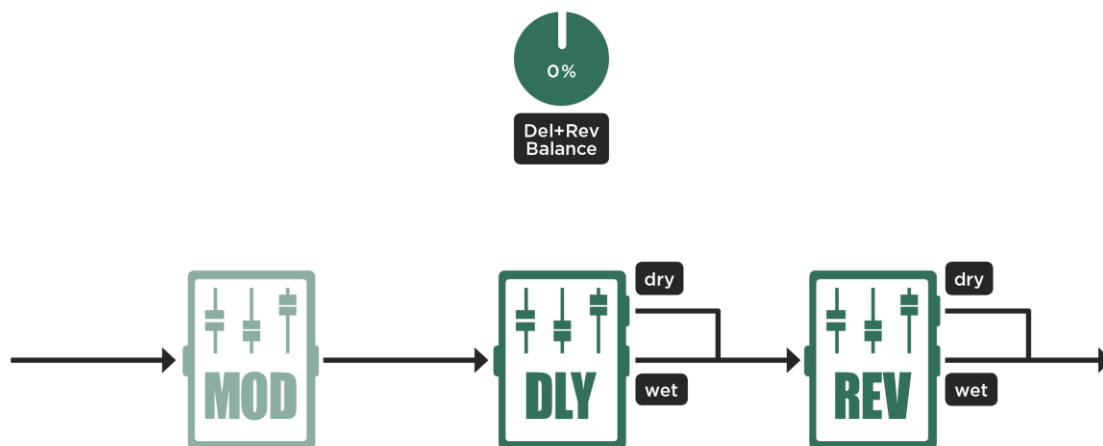
◆ Mix

Reverb “Mix” works exactly like the delay “Mix” parameter, and can be controlled with the dedicated knob in the upper half of the panel.

◆ Delay+Reverb Balance

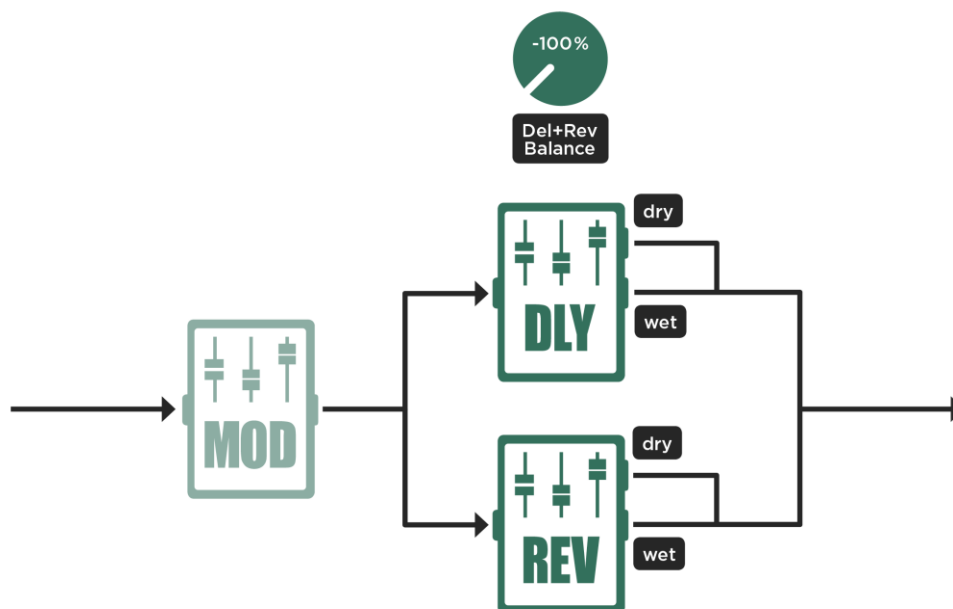
“Delay+Reverb Balance” (“Del+Rev Balance”) is a unique parameter that allows continuous control over the routing of the effects located in the DLY and REV modules. For this parameter to work as expected, you will need to have “Mix” in both Modules set to a value other than zero. As the DLY module is the preferred location for delay effects, let’s focus on that first:

At the center position, the delay and reverb are simply set in a serial configuration - this means the reverb comes after the delay, and both the dry and delay signals are fed in equal amounts to the reverb. This is pretty much what you would expect in the first place.



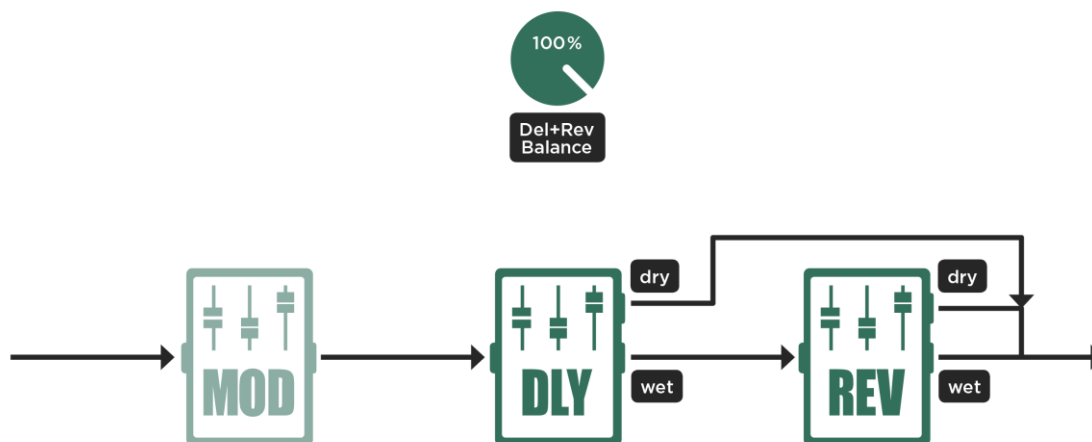
Pure serial signal flow

Now, when you turn “Delay+Reverb Balance” more to the left, you will notice that the delay reflections will vanish from the reverb - at fully left position, only the dry portion of the delay gets reverberated. Now, the delay and reverb are working in a parallel configuration. You will hear delay reflections and a reverb tail, but the delay signal doesn't feed the reverb.



Pure parallel signal flow

As you turn the “Delay+Reverb Balance” more to the right, the opposite happens: the delay reflections keep their reverb tail, but the dry signal loses its reverberation and becomes completely dry. This will emphasize your instrument, as the reverb will not appear until after the first delay reflection.



Only delay tails getting reverberated

With “Delay+Reverb Balance” set all the way to the right, you can also get an interesting fourth configuration: set reverb “Mix” to maximum, and instead of hearing a repeating delay reflection, you hear a repeating reverb tail. These reverb repeats can then be controlled by delay “Feedback” and “Time”. So, in this configuration, the DLY module becomes a predelay to the reverb, offering all the features of the delay such as feedback or [Tap Tempo](#).

- ✓ Please note: Since the reverb offers a predelay parameter of its own, it is a good idea to set it to zero in this configuration, so it won't offset the timing of the reverb tails.

Finally, let's have a look at what happens if the effect located in the DLY module has no "wet" portion. Let's assume a distortion stomp is selected in the DLY module. With Del+Rev Balance at center position, you just experience the normal serial behavior: distortion into reverb.

When you turn Del+Rev Balance to the left, the distorted signal will vanish from the reverb - at full left position only the pre-distortion signal gets reverberated.

As you turn Del+Rev Balance more to the right, the impact of the distortion shifts more and more to the reverberated signal - at full right position you end up with an undistorted dry signal plus a distorted reverberation.

◆ Time

Determines the decay time of the reverb, from very short to infinite. While the different room sizes of the reverb types determine the density of the reverb reflections, reverb "Time" is a sort of feedback parameter for them. Unlike other digital reverbs, this reverb time does not change with the room size. This makes it easier to choose the appropriate room size by character alone.

◆ Predelay

In a natural reverb, there is a silent time-period between the dry signal and the first reverb reflection. You can adjust the length of that period using the "Predelay" parameter. You should use a short predelay for small rooms and a longer one for large rooms. Increasing the predelay on short reverbs can give the impression of a bigger room. Also, a long predelay will separate the dry signal from the wet, thus making it sound more direct, but without losing the room character.

The PROFILER offers an unusually long predelay. You can even try to match it to a rhythmic value, such as a 1/8th note. If you like this idea, you should set "Predelay" back to zero and use the delay effect for that purpose. The way this works is described in the [Delay+Reverb Balance](#) parameter paragraph above.

◆ Damping

The reverb tail of a natural room gets darker over time because the high frequencies decay faster than the lower frequencies. As sound waves travel through the air, the oscillation of the air causes friction that attenuates the sound as it travels - because high frequencies oscillate faster, they cause more friction per time, resulting in a faster attenuation. This effect is simulated by the “Damping” parameter. With zero damping, the reverb sounds somewhat artificial, so you should consider this parameter to be as important as [“Reverb Time”](#).

◆ Bandwidth & Frequency

You may have seen this before: that’s because this is the same, special bandpass filter as found in the delay. In this case, however, the filter will not change the color of the sound over time (this is the job of the “Damping” parameter), but instead create a constant coloration for the reverb. Use “Bandwidth” to narrow the frequency response of the reverb from soft to artificial. Adjusting “Frequency” will change the center of the coloration from low to high frequencies. Again, you can set the frequency to a specific musical pitch. The reverb will resonate around this note when you set “Bandwidth” to higher values.

Wah Stomps (Orange)

The Wah Stomps are a versatile collection of different effects that can all be controlled by an expression pedal set up as [Wah Pedal](#). Alternatively, you can switch to “Pedal Mode” option “Touch”, and control the effect using your picking strength.

Wah Wah	This is the classic wah pedal effect. By modifying the “Peak” parameter you can achieve different wah characteristics. Turning BROWSE while an effect module is in focus you can find wah wah presets including settings of some prominent wah pedals.
Wah Low Pass	An alternative wah pedal effect derived from the Access Virus synthesizer. It’s a 4-pole low pass filter, with the “Peak” parameter emphasizing the filter resonance.

Wah High Pass	Like the Wah Low Pass, but it will cut the low end of your guitar sound when you move the pedal up
Wah Vowel	A vowel filter that simulates a talk box effect. The vowels are extended to a broader range compared to existing vowel filters, as it includes some European vowels as well. The range is: U O Â A Ä E I IÜ Ü Ö OE O U - Choose the desired range using the “Manual” and “Range” parameters.
Wah Phaser	A huge phaser effect that you can control using the Wah Pedal . The Wah Phaser is derived from the regular Phaser effect that is described in detail later. In addition to the common parameters, it has inherited two additional parameters from the regular phaser: “Stages” and “Spread” .
Wah Flanger	The Wah Flanger is a special version of the Flanger , based on a delay with feedback, that creates a pitched resonance or ringing effect. Use the “Manual” parameter, or the Wah Pedal , to control the delay time, or pitch. Use the “Peak Range” parameter to control the intensity of the resonance.
Wah Rate Reducer	This effect reduces the sampling rate of the audio signal passing through. The sampling frequency is controlled with the “Manual” parameter. Lowering the sample rate results in a raspy, scratchy quality as well as aliasing. Use the “Peak” parameter to continuously control the quality of the sample rate interpolation, which will alter the harmonic content drastically.
Wah Ring Modulator	<p>Here, the signal is modulated by a sine oscillator. The pitch of the oscillator is controlled with the “Manual” parameter - note that the “Manual” parameter is bipolar, therefore a setting of “0” will have no effect. Lower settings produce a tremolo-like effect, whereas higher settings bend the complete harmonic structure of the instrument into a bell-like character by shifting every frequency component either upwards (sum frequency) or downwards (difference frequency).</p> <p>The “Stereo” parameter divides the sum and difference frequencies between the left and right channels. The bipolar nature of the “Manual” parameter can now be used to reverse the stereo panorama. As usual, the “Mix” parameter adds the direct signal. With “Mix” in the middle position, the ring modulation becomes amplitude modulation.</p>

<p>Wah Frequency Shifter</p>	<p>The frequency shifter is a rarely seen effect and can be thought of as a “deluxe” ring modulator. Even today, only a handful of frequency shifters exist in the digital domain.</p> <p>It is as useful in creating beautiful, subtle harmonic deviations as it is in producing high-pitched, clangorous noise. Like the ring modulator, it uses a sine wave to modulate the signal, but in such a way as to produce only the “sum” or “difference” frequencies of the two signals. In contrast to a pitch shifter, which preserves the dependencies of the harmonics, the frequency shifter bends these dependencies, resulting in a bell-like spectrum. It’s not unlike a shortwave radio that has not been tuned correctly.</p> <p>Use the “Manual” parameter to determine the pitch of the sine wave. This is a bipolar parameter where the center position (0) will result in no audible frequency shifting.</p> <p>Turning “Manual” clockwise results in a linear frequency shift upwards, while turning it counter-clockwise results in a downwards shift. Note how the shifted signal loses its harmonic structure.</p> <p>When “Manual” is adjusted to the far left, you will notice that the pitch starts to rise again. This is the result of frequencies being shifted past zero Hz, which causes them to be mirrored upwards.</p> <p>The “Stereo” parameter allows continuous adjustment of the phase of the left and right channels, thereby creating a subtle, or blatant, stereo-widening effect.</p>
<p>Wah Formant Shifter</p>	<p>The Wah Formant Shifter shifts the harmonic content of the sound. However, in contrast to the Wah Frequency Shifter, it preserves the dependencies of the harmonics, as well as the fundamental frequency. As a result, you can play single lines in a regular fashion, while the formant shifting affects the character of your instrument. When “Manual” is positioned to the center, no formant shifting is applied. Move “Manual” up or down to shift the character from the original. Please note that the Wah Formant Shifter only works with single notes. Chords will sound odd in most cases.</p> <p>Since the Wah Formant Shifter is based on a pitch shifter algorithm, you will also find the parameter “Pitch Shift”. This gives you the option to shift the fundamental frequency up or down in semitones. At the lowest pitch, or longest delay, it will resonate on an E major chord.</p>

Wah Parameters

◆ Manual

This is the base value for the wah effect. It determines the zero or heel position of the pedal. When [“Pedal Mode”](#) is set to “Off”, “Manual” controls the static pedal position.

◆ Peak

This parameter controls the intensity of the effect. The actual choice of the physical parameter depends on the effect type: for wah wah, and other filter effects, the “Peak” control varies the Q-factor (resonance) of the filters. On other effects, it controls the feedback of the effect, which is somewhat similar to Q-factor or resonance.

◆ Pedal Range

This parameter determines the maximum impact of the pedal, as an offset to the value selected for the “Manual” parameter. Negative values of “Pedal Range” will reverse the swell direction of the pedal or touch effect, so the effect will go down when you push the pedal forward.

◆ Peak Range

Determines to what extent the position of the pedal influences the peak intensity. Many original wah pedals have a dependency between the pedal position and the Q-Factor of the wah filter. This can be controlled by “Peak Range”.

◆ Pedal Mode

Selects how the wah effect responds to the [Wah Pedal](#), or to touch response.

Off	Wah Pedal has no effect. The effect will be static and can still be controlled by the “Manual” soft knob.
Touch	Uses the picking strength to control the effect, as described below.
On	Wah Pedal is active. Control the impact of the pedal by the “Range” parameter.
Bypass @ Stop	Wah Pedal is active. The effect will be smoothly faded in when you start moving the pedal, and smoothly faded out when you stop moving it.
Bypass @ Heel	Wah Pedal is active. The effect will smoothly fade out when you park the pedal at the heel position
Bypass @ Toe	Wah Pedal is active. The effect will smoothly fade out when you park the pedal at the toe position

◆ Touch

This mode resembles the classic touch wah behavior, where the depth of modulation is controlled by the picking strength and is available for all wah effects. As with the regular wah pedal, the [“Range”](#) parameter controls the intensity of the touch effect.

When “Touch” is engaged, three more parameters are added to the effect, that you can access by pressing the right [PAGE button](#):

Touch Attack	Controls the speed of reaction to the guitar attack.
Touch Release	Determines the rate at which the effect falls back to its rest position.
Touch Boost	Use this to extend the scale of the “Peak Range” parameter. You will also notice, when “Peak Range” is low, but “Touch Boost” is high, you can push the intensity up to a ceiling - useful for certain effects.

Compressor (Cyan)

A compressor for guitar is mostly used for clean sounds, as the strings of the guitar decay quickly. On distorted sounds, the distortion itself adds compression as a side-effect; this means the compressor could even be a nuisance, as additional compression will kill the dynamics and touch-sensitivity of the distortion. Still, there is always the nice trick of compressing the guitar to the max, then gently driving it just into the distortion of the amplifier, so that every tone of the guitar gets the same decent amount of distortion.

Clean sounds benefit from compression, as it helps to lengthen sustain of the strings. Another typical application is to emphasize the attack of the picked strings with the Attack parameter. In the PROFILER, you should use the [Pick](#) parameter in the amplifier module to achieve this effect. It has been optimized for controlling the energy of your pick and does this job much better than a regular compressor.

The stomp Compressor is a faithful recreation of a vintage stomp compressor. We also added a new parameter, called “Squash”, to make this compressor even more versatile.

There is no immediate need to readjust the compressor’s volume on clean sounds, as its volume is automatically adjusted to the unity volume of the Rig.

◆ Intensity

Controls the amount of compression applied to your instrument. At zero position, there is no compression. In the first half of the Intensity range the effect will be fairly subtle, as the compressor will only cut the loud attacks of your instrument. Then, as you increase “Intensity” past halfway, you will start to hear the soft notes getting boosted as well.

◆ Attack

Adjusts the reaction time of the compressor. The higher the “Attack” value, the longer it takes for the compressor to kick in. This will let the first peak of the signal pass unaffected when you hit a string, thus increasing the percussiveness of your pick.

◆ Squash

This gives you control over the dynamic behavior of the compression. At the center position the compressor will work as you expect. When you turn “Squash” towards zero, the compressor will emphasize the first phase of the strings’ decay, resulting in less squash. When you turn it more to the right, the first phase of the strings’ decay gets squashed, and the volume sags. You will notice that the compressor recovers from squashing when you let the strings decay further - even boosting the sound a little, compared to when you hit the strings. Now, the compressor becomes noticeable!

“Squash” does not change the compression ratio, as this is always infinite on vintage stomp compressors.

Noise Gate Stomps (Cyan)

In addition to the noise gate in the Input Section, there are two additional noise gates available as stomp effects, developed specifically with the hi-gain player in mind.

Whereas the noise gate in the Input Section is designed to preserve the guitar’s dynamics exactly, the stomp noise-gates behave like classic downward expanders. Downward expanders attenuate a signal once it has fallen below a certain threshold and are often used to tighten complex metal-riffing. This is because a palm mute will still retain all of its “chunk”, but will also become more percussive, thereby preventing the dreaded “mud”. The two noise-gate stomps feature different expansion ratios, chosen for their musicality.

Noise Gate 2:1

This noise gate is a soft expander, with an expansion ratio of 2:1. If the level of the input signal lies below the threshold it will be attenuated by a factor of 2. In other words, each dB below the threshold leads to 2dB attenuation of the signal.

Noise Gate 4:1

This noise gate is a more aggressive expander, with an expansion ratio of 4:1. If the level of the input signal lies below the threshold it will be attenuated by a factor of 4. In other words, each dB below threshold leads to 4dB attenuation of the signal.

As with the Input Noise Gate, there are no attack or release controls, as we have selected the shortest possible times without introducing any signal degradation. The attack time is 0.05 ms (that's 50 microseconds, or one twenty-thousandth of a second), while the decay time is 50 ms. You can use the noise gate stomps in combination with the noise gate in the Input Section to benefit from the different noise gate characters.

Distortion Stomps (Red)

The PROFILER offers a variety of distortion stomps modeled on vintage guitar distortion pedals. Every one of these classic pedals is famous for its distinctive character and has been exploited by some of the greatest guitar heroes of all time. We have carefully modeled the distortion curves and tonal characteristics of these legendary effects, including the original tone controls.

◆ Drive

Use this to boost the gain of the signal as it comes into the distortion stage - the higher the gain, the more distorted the sound.

◆ Tone

Some of the original distortion pedals that inspired this collection are equipped with tone controls.

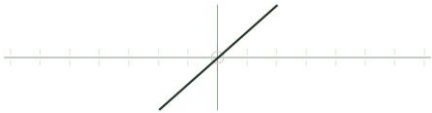
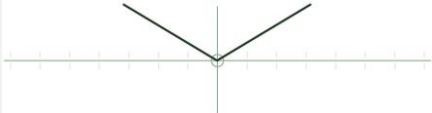

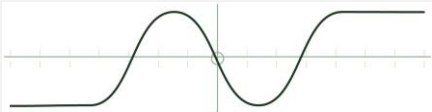
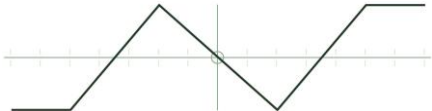
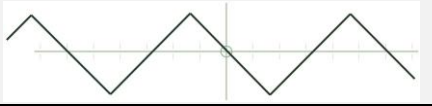
Name	Description	Controls	Historical Reference
Green Scream	The sound of this one just screams “tubes” - a very special kind of overdrive which results in a wonderful, smoky tone. Good for achieving a subtle distortion effect whilst still retaining headroom for dynamics.	Use the “Tone” control to soften the sound with a low pass filter.	Ibanez® Tube Screamer TS-808 and Overdrive OD-808*
Plus DS	A more extreme distortion.	Like in the original, this does not feature a tone control.	MXR® Distortion+*
One DS	The “orange” one. A very harsh distortion, popular with the grunge movement.	The bipolar “Tone” control allows for great versatility by combining both a low pass and a high pass filter - turn it down for a warm, dark tone, and up for a harsh, brittle sound.	Boss® DS-1*
Muffin	A big distortion effect famous for its fuzzy character.	This effect uses a dual filter array, similar to One DS. Use lower values to soften the sound with a low pass filter, and higher values for a brighter, thinner sound.	Electro Harmonix® BigMuff*
Mouse	A clear, powerful distortion that’s perfect for making leads cut right through the mix.	Use the “Tone” control to soften the sound with a low pass filter.	ProCo® Rat*
Fuzz DS	A classic “fuzz box” overdrive.	No tone control, just in-your-face fuzz	Dunlop® Fuzz Face*
Metal DS	A sharp-sounding, high-gain distortion, optimized for metal music.	Use the 3-band EQ to shape the tone.	Boss® Metal Zone*

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Booster Stomps (Red)

Treble Booster	<p>A classic sound-shaping stomp pedal that does not feature a built-in distortion. Instead, the Treble Booster is made to shape the high frequencies of your guitar so that they improve the distortion as well as making it more transparent, especially when being used with old amplifier models that were not originally designed for distortion. Use the “Tone” control to shape your sound.</p> <p>Before you reach for the Treble Booster, please try the Definition parameter in the amplifier module first. This will also modify the distortion result, but directly in the PROFILE, and with fewer changes to the residual frequency response.</p>
Lead Booster	<p>This is a tunable peak filter that can emphasize specific frequencies of your guitar. Set the desired sound by using the “Tone” control. The Lead Booster can neutralize the Treble Booster to a certain extent, when they are used together in front of the stack.</p>
Pure Booster	<p>The Pure Booster features a “Volume” control like all the other effects, but that’s it. The “Volume” control will boost or attenuate the signal without coloring the sound. When you place it in front of the amp or a distortion stomp, the Pure Booster has the same effect as the gain or drive control; placed after the stack section, the Pure Booster becomes a simple volume control, with no further coloration of the signal.</p>
Wah Pedal Booster	<p>With the Wah Pedal Booster, you can use the Wah Pedal to control the volume, instead of having to use a dedicated volume pedal. The parameters are identical to the “Volume Pedal” parameters.</p>

Shaper Stomps (Red)

Type	Diagram
Linear	
Recti Shaper This is the characteristic curve of the Recti Shaper.	
Regular distortion This is the characteristic curve of the regular distortion.	
Soft Shaper This is the characteristic curve of the Soft Shaper.	
Hard Shaper This is the characteristic curve of the Hard Shaper.	
Wave Shaper This is the characteristic curve of the Wave Shaper.	

Bit Shaper

The Bit Shaper continuously reduces the bit depth of a signal, with higher "Drive" settings resulting in fewer available bits. The effect can be described as introducing a fizzy distortion, with a choking of the signal at high settings. The signal can even break off completely at the most extreme settings.

"Peak" controls the shape of the digital steps, which affects the high-end content of the signal.

Recti Shaper

The Recti Shaper is based on an electrical rectifier circuit. It distorts the input signal by forcing all the negative segments of the waveform into a positive signal. This effect is by no means new - it is well known from the famous Octavia* distortion pedal used by Jimi Hendrix on many songs, most notably on "Purple Haze". When applied to a guitar signal, the rectifier will make chords sound significantly different, and strangely distorted. Single notes will sound transparent, but with a slight emphasis on the upper octave.

The original, analog Octavia* consists of a rectifier circuit and an additional distortion. The Recti Shaper provides only the transparent rectifier circuit, without any additional coloring. When used in front of the stack, you get to enjoy the famous effect, while fully maintaining the original sound of the selected stack, or additional distortion stomp. The traditional technique used with this effect is to play above the 7th fret, with the neck pickup engaged, and the treble rolled off.

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Chorus Stomps (Blue)

Vintage Chorus

The Vintage Chorus is an emulation of the 70's chorus technology based on bucket brigades, which can be considered a predecessor of today's digital sampling technology. The Vintage Chorus not only covers the exact sound of the famous Chorus Ensemble* but also many other models of that era which were based on the same basic circuitry.

You may notice the somewhat dull sound of the effect signal; this is due to the limited sample-rate of the bucket brigade. When this signal is mixed to the direct sound, it will result in a very warm chorus sound, because the overall signal gets a low and mid frequency boost. When you place the Vintage Chorus before the stack, you will achieve the well-known mono modulation effect. When placed in one of the effect modules after the stack, the Vintage Chorus will sound lush with less modulation, since it works in stereo. This is because there is a separate chorus for each stereo channel, modulating in opposite ways. If you prefer the original mono sound, set the "Stereo" parameter to the middle position.

- ✓ If you happen to own an original chorus unit from the analog era, you may notice that the choruses don't feature a volume boost when you switch them on. This is because our philosophy is to always maintain the same volume level, no matter whether effects are being used or not. This makes it easier for you to choose the best effect purely by its character, and not to favor one effect over another simply because it sounds louder. Of course, if you still want the volume boost, you can always use the "Volume" parameter for this.

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◆ Rate

Use the "Rate" parameter to adjust the speed of the chorus modulation.

◆ Depth

Use the “Depth” parameter to adjust the intensity of the chorus modulation.

- ✓ Tip: for the original Chorus Ensemble* sound leave the “Depth” parameter at exact middle position and use the “Rate” parameter to create your favorite sound - the original devices did not have a depth control.

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◆ Crossover

Each of the chorus algorithms feature the “Crossover” parameter. By raising the value of “Crossover” you can protect the lower frequencies from being influenced by the chorus modulation, thus giving the sound a stable bottom end. This feature was inspired by specialized bass chorus units; we found, however, that this type of crossover control is not merely an advantage for bass sounds - it is suitable for shaping any sound.

Hyper Chorus

The Hyper Chorus is probably one of the most complex choruses ever made; it is a six-voice chorus with up to three delay lines for both the left and right channels. Despite this, it is staggeringly simple to use, as you only need adjust the “Depth” parameter to achieve a huge, warm sound.

◆ Depth

By adjusting “Depth”, you change the amount of detune and fatness that the chorus adds to the signal - everything else is perfectly adjusted to give you the lushest chorus sound with no further tweaking necessary. You can even

choose very small amounts of detune without the typical comb filter effect of a regular chorus. When you bring “Depth” down to zero, the chorus effect completely goes away, even with the “Mix” parameter at full position.

◆ Amount

If the full sound becomes too complex, you have the option to continuously reduce the amount of delay lines. You can smoothly fade the numbers of delay lines from one to three on each stereo side. So yes, even 1.5 choruses are possible: this simply means one chorus is at full volume, the other is at half.

◆ Crossover

Increase the value of the “Crossover” parameter to prevent the chorus effect from modulating the lower frequencies of the input signal.

Air Chorus

The Air Chorus is a subtle kind of chorus, as it does not mix the direct sound with the processed signal; instead, it modulates the pitch of the left and right sides of the signal independently from each other. The resulting chorus sound happens in the air between the speakers, where both signals are added together - hence the name. This is how the famous Jazz Chorus* amplifier works.

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◆ Depth

In most circumstances, as with the Hyper Chorus, the “Depth” control will be the only control you need for achieving the sound you want. Higher values will give you a noticeable but delicate chorus, whilst lower values will create a subtle stereo-widening of the soundstage, but without the typical *beating* effect you often get with a chorus.

◆ Crossover

The “Crossover” parameter enables you to position the bass and middle frequencies of your signal to a stable mono position between your speakers, while the highs still float around.

Micro Pitch

Micro Pitch is a detune effect, based on pitch shifter technology. The result sounds more stable than a classic chorus, because it avoids the cyclic modulation effect of a low frequency oscillator (LFO).

◆ Detune

Use this to control the pitch deviation between the left and right channels.

◆ Mix

Use this to blend the direct signal with the detuned signals. Set it to middle position for the lushest sound. With “Mix” turned all the way to the left, you will only hear the detuned signals on the left and right; this creates a “special” chorus, similar in sound to the [Air Chorus](#).

Vibrato

The Vibrato effect modulates the pitch of the sound using a sine modulation.

◆ Rate

Use the “Rate” parameter to adjust the speed of the modulation.

◆ Depth

Use the “Depth” parameter to adjust the intensity of the modulation.

◆ Crossover

Use the “Crossover” parameter to blend out the vibrato effect for the lower frequencies of the signal. This will result in an old-school modulation effect, quite like a scanner vibrato of a Hammond™ organ.

Rotary Speaker

The Rotary Speaker chorus type is a faithful recreation of the sound produced by the legendary Leslie®* speaker - best known for the classic effect it has on the sound of the Hammond®* organ. The Leslie®* speaker modulates the sound by rotating both the bass speaker drum and the tweeter horn inside a cabinet - but, crucially, they are rotated at different speeds from each other. The result is a complex example of the Doppler effect, and the way it affects the sound is magical - something rather like combined vibrato, tremolo and chorus.

The Rotary Speaker effect won't color the sound; instead, the coloration will come from the PROFILE. By engaging the Rotary Speaker on an amp and cabinet sound that you like, you turn your cabinet into a rotary cabinet, while maintaining the character of your amp.

Interestingly, you can take a PROFILE of your own rotary cabinet. If you get the chance to have a real rotary speaker in your studio, as long as you can connect line or guitar signals, you can take a PROFILE of it. Please refer to the chapter [Taking a PROFILE](#) for further instructions. Of course, the PROFILER already comes with a Rig “CK Rotary Speaker” which includes a PROFILE of a Leslie® 147* captured with Shure® SM 57*.

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◆ Speed

Use switch “Rotary Speed” to switch between slow and fast rotation. You will notice that the change in rotation speed is not immediate, thus recreating the acceleration and deceleration of the rotating speakers in the original.

◆ Stereo

Use the “Stereo” parameter to adjust the angle of the two virtual microphones relative to the speakers. If you want the effect to be mono, set the angle to “0°” (center position). Negative values will reverse the rotation direction. Only the high rotor is tapped by two microphones, the low rotor is mono with one microphone – a regular practice of recording a rotary speaker, whether live or in a studio.

◆ Low-High Balance

Use the “High-Low Balance” parameter to adjust the balance between the outputs of the bass rotor and the tweeter horn. Lower values result in a sound that is darker and duller, while higher values will result in a brighter, thinner sound. For a faithful emulation of the classic Leslie®* sound, leave the parameter set to the center position.

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◆ Distance

Use the “Distance” parameter to adjust the distance of the microphones from the cabinet from 4 cm up to 50 cm. The closer the microphones, the more intense the amplitude modulation (tremolo) will be. At the maximum setting, there is no noticeable amplitude modulation.

◆ Mix

Use the “Mix” parameter to adjust the balance between the input signal and the output of the Rotary Speaker effect. For an authentic sound, this is best left at “100%”, but it can be very useful if you want to achieve sounds that are less conventional.

Tremolo / Auto Panner

The Tremolo modulates the level of the signal in a periodic manner.

◆ Rate

Use the “Rate” soft knob to adjust the speed of Tremolo modulation; this parameter is almost continuously variable, but stays in sync to the actual tempo of the Rig. The tempo can be dialed in manually or tapped on the [TAP button](#). When “Tempo” is engaged, the rate will be displayed in musical values. Please refer to the [Tempo](#) chapter for more information about the tempo sources and settings.

◆ Depth

Use the “Depth” parameter to adjust the intensity of the modulation.

◆ Crossover

Use the “Crossover” parameter to blend out the tremolo effect for the lower frequencies of the signal.

- ✓ When you place the Tremolo after the stack, where stereo signals can be created, it becomes a stereo panorama effect (“Auto Panner”). The intensity and character of the stereo effect can be controlled by the “Stereo” parameter; this determines the phase offset of the independent level modulations for the left and right sides. When you set “Stereo” to the middle position (zero value), both sides will be in phase, thereby creating a mono tremolo effect.

Phaser and Flanger Stomps (Purple)

Phaser

The Phaser is a huge filter bank comprising up to 12 filter stages for each stereo side.

- ✓ There is a similar phaser in the group of [Wah Stomps](#) that can be controlled by the [Wah Pedal](#).

◆ Rate

Use the “Rate” soft knob to adjust the speed of Phaser modulation; this parameter is almost continuously variable, but stays in sync to the actual tempo of the Rig. The tempo can be dialed in manually or tapped on the [TAP button](#). When “Tempo” is engaged, the rate will be displayed in musical values. Please refer to the [Tempo](#) chapter for more information about the tempo sources and settings.

◆ Depth

Determines the modulation depth of the Phaser in relation to the [“Manual”](#) value.

◆ Manual

This parameter defines the center frequency for the modulation - in other words, it is around this frequency that the Phaser will sweep. With [“Depth”](#) set to zero, you can use “Manual” to create a constant, or static, phaser sound.

◆ Feedback

Intensifies the Phaser effect as peaks get higher and notches get lower.

◆ Peak Spread

You cannot find this parameter in any vintage phaser, because it would have been too expensive to realize in the analog domain. With “Peak Spread” you can control the spread and width of the phaser’s peaks and notches in the frequency domain over a wide range. At a narrow setting (more to the left), you can hear the peaks being focused to a narrow field. As the spread is widened, the phaser becomes increasingly de-coupled, until it dominates the whole sound spectrum.

◆ Stages

You can select the number of phaser stages from “2” to “12”, in steps of two. The more stages you select, the more complex and diffuse the phaser sound becomes.

◆ Stereo

Offsets the phaser modulation of the left and right signals. With extreme left or right settings, the modulation will go in opposite ways. At the middle position (zero), the phaser will be mono. Use small deviations to the left or right of zero to achieve a gentle stereo effect.

Vibe Phaser

The Vibe Phaser is inspired by the famous Univibe* effect. The Univibe* is basically a phaser, but with an asymmetrical modulation curve that stays up for quite a while, then bounces down very quickly; apart from that, it is identical to the regular phaser. For the most authentic results, set the number of Phaser Stages to “4”.

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Flanger

The Flanger effect shares the same heritage as the [Phaser](#), and the resulting sound is somewhat related, too. We therefore we put both in the same effect family, with color code magenta (purple). However, the Flanger is not based on analog filter technology, but on very short bucket-brigade delays.

The parameter set for the flanger is almost the same as that of the phaser; only the parameters “Peak Spread” and “Stages” are not available. Thanks to the overlapping parameter set, you can use [TYPE](#) to switch back and forth between phasers and flangers without altering the basic parameter values.

- ✓ You can find a similar flanger, called Wah Flanger, in the group of [Wah Stomps](#) that can be controlled by the [Wah Pedal](#).

Phaser Oneway & Flanger Oneway

While the regular [Phaser](#) and [Flanger](#) always modulate up and down, their “oneway” counterparts go either up or down in an infinite helix. This behavior necessitates a bipolar “Rate” control: turn it to the right half to make the helix go up, and to the left half to bring it down. At the middle position the motion will stop.

Equalizer Stomps (Yellow)

This group of stomp effects offers you a nice selection of high-quality equalizers. They can be placed either before or after the [stack section](#), as each configuration has a different impact on the sound.

The “Mix” parameter is common to all the equalizers and controls the impact of all the EQ bands combined. Graphic Equalizer, Studio Equalizer, and Metal Equalizer offer “Low Cut” and “High Cut” in addition to their other controls.

Graphic Equalizer

An 8-band, octave equalizer, with fixed frequency bands ranging from 80 Hz to 10 KHz. Very often, this will prove to be the easiest way to control the frequency spectrum of your sound.

Each band can be boosted or attenuated by up to 12 dB. You can control the mix of the original and the equalized sound by using the “Mix” soft knob.

Studio Equalizer

The Studio Equalizer is a full, 4-band parametric equalizer, similar to those found in professional mixing desks or digital workstations. It offers one low shelf, one high shelf and two peak equalizer bands. All four bands have adjustable frequency, and the two peak EQ bands come with adjustable bandwidth or Q-factor.

Metal Equalizer

This can be thought of as the little brother of the [Studio Equalizer](#). It's a 3-band, half-parametric EQ, inspired by the equalizer of the Boss® Metal-Zone* stomp (you can find a model of this among the stomp distortions).

The Metal Equalizer is perfect for creating the mid-scoop that characterizes the typical metal sound, but since it is also a regular equalizer, it is also suitable for many other sounds and genres.

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Stereo Widener

Not an equalizer in the traditional sense, but it does use equalization to work its magic. By emphasizing certain frequencies on one stereo channel, while attenuating them on the other, it creates a subtle stereo effect. This is done symmetrically, so that when the signal is summed to mono, the effect is completely canceled out with no coloration to the sound.

Use “Intensity” to control the impact to the sound. At higher values of “Intensity” you can actually drive the sound out of phase; this is not a problem, however, as the sound still stays mono compatible.

With “Tune”, you can tweak the effect to your taste by shifting the focus towards lower or higher frequencies.

Effect Loops (Pink)

To connect external gear, the PROFILER offers a hardware effects loop, represented by the [Direct Out/Send](#) and the [RETURN](#) on the back side of the amp. These are the same jacks that you use for PROFILING. You can apply the

hardware effect loop in any of the effect modules, except REV. As you might have guessed, you cannot use the hardware effects loop in more than one location of the signal flow at the same time. So, if you try to engage the loop at more than one location within one Rig, the first loop in the signal flow will win.

While Loop Mono works well in any effect module, you can establish a stereo return for your external effects by placing Loop Stereo in the X, MOD or DLY modules. In this case, the RETURN INPUT will work as the left input and the [ALTERNATIVE INPUT](#) as the right input. If Loop Stereo is used in one of the mono effect modules A, B, C, or D, the left and right return signals will be mixed together.

The "Mix: Pre/Post" option is available in both Loop Mono and Loop Stereo modes and determines whether the Mix control affects the signal on the SEND ("Pre") or the RETURN and ALTERNATIVE INPUT ("Post"). Since this makes no difference in most situations, we recommend leaving the button at the "Post" position, to guarantee the lowest noise floor.

However, you can use the "Pre" position to create a spillover effect for your external gear while you switch Rigs on the PROFILER: Load the Rig in which the external effect should be deactivated (but you still want spillover when it's loaded) > Activate Loop Mono or Loop Stereo > set "Mix:" to "Pre" > turn the Mix control to zero > store this Rig. Now whenever you switch to this Rig, no signal will be sent to your external effect devices, but their delay or reverb tail will still be received.

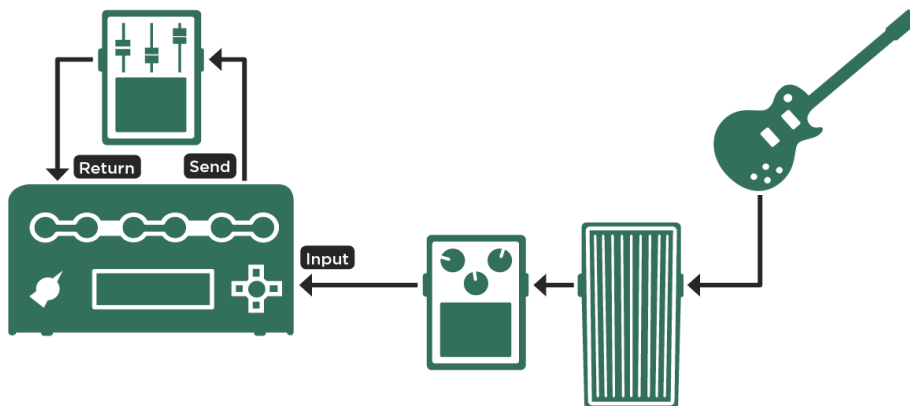
Please ensure that the "Mix" control of the Effects Loop is set to 100%, to avoid coloring the external signal with the blended dry signal. However, if you prefer to derive the dry signal straight from the PROFILER, then use the "Mix" control to balance the external signal and the internal dry signal. To do so, you must check that the dry signal is not passing through the external device. This is usually done by setting the mix control of the external device to maximum or by using a "kill dry" function to mute the dry signal in a global fashion.

The Loop Distortion is made for connecting distortion pedals to the PROFILER and is only in mono. The feature unique to this loop, is that any volume boost of a preceding effect will be applied to the DIRECT OUTPUT/SEND jack, thus driving the external distortion pedal. This is what you would expect, anyway. The regular Loop Mono and Loop Stereo do this differently: here, the volume boost of a preceding effect will be applied after the return of the loop. The send level will be unaffected, so the connected effect will not be overdriven. The regular Loop Mono and Loop Stereo are suitable for all non-distorting effects.

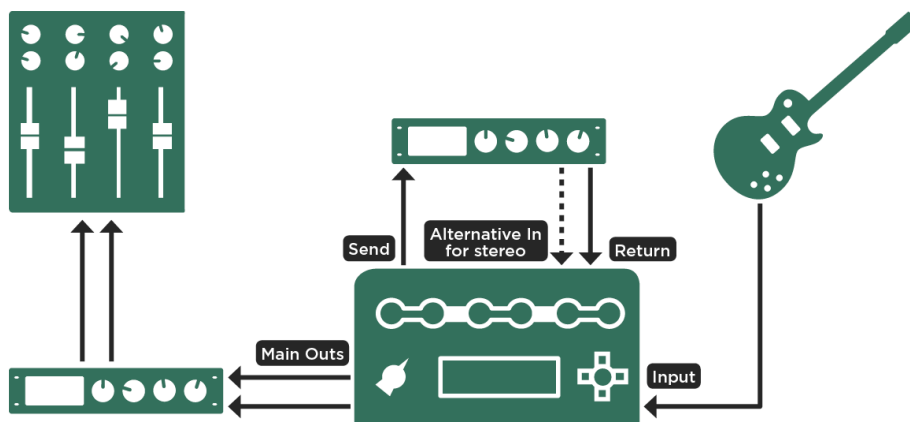


If you want to keep your external effect inserted for all Rigs, just lock the effects loop by pressing [LOCK](#).

External gear can be looped in at instrument as well as line level. The following two graphics illustrate the various possibilities to loop in external gear:



Looping in a stomp box or pedal



Looping in an effect

✓ A tutorial video explaining these effect loops can be found at: www.kemper-amps.com/video

Pitch Shifter (White)

A pitch shifter is an array of alternating delays that first cuts the signal into slices, and then plays them back at a different speed. Any pitch shifter will always introduce a little latency to the signal, simply down to the fact that it uses delays. This latency will become most noticeable when you play chords, since long slices are needed for chords to sound natural.

◆ Smooth Chords

Several pitch shifter types have a “Smooth Chords” option on a soft button. When activated, you will find many chords sound smoother, depending on your playing style. You will also notice an increase in latency, making “Smooth Chords” less appropriate for rhythmical chord playing. Single notes, however, are mostly unaffected by this setting; small pitch offsets of up to +/- 3 (a minor 3rd) should be fine, too.

◆ Formant Shift

Some of the pitch shifter effects described here have the option for treating the formants of the signal in a special way. In addition, you will find a dedicated Wah Formant Shifter in the list of [Wah Stomps](#).

Formant shift and formant correction are often seen in DAWs and some voice processors. However, they haven't been presented to the guitar world as yet.

When you shift your instrument up or down with a pitch shifter, you will shift the characteristic formants of your instrument by the same amount, just as you would if you sped up a recording or slowed it down. The well-known chipmunk effect also applies to your guitar, transforming it to a bass sound when pitched down by an octave (often desired) or a thin mandolin sound when shifted up (less desirable). The onset transient, or pick, is altered the most by pitch shifting.

Formant shifting, and formant correction can prevent the chipmunk effect on pitch-shifted sounds. Alternatively, it can be used to change the character of the instrument while the pitch is kept the same.

The downside of the formant shifting is that it only works with single notes. Chords will sound odd in most cases.

✓ Check out the tutorial video demo of Formant Shift available at: www.kemper-amps.com/video

◆ Pure Tuning

When you press “Pure Tuning”, intervals produced by the pitch shifter will be slightly detuned from the standard tempered scale to create a so-called “natural” or “pure” tuning. This will avoid harmonic beating, especially when distorted afterwards. Read more at the end of this chapter on [Background of Pure Tuning](#).

◆ Detune

Use this to control the pitch deviation between the left and right channels.

◆ Mix

Use this to blend the direct signal with the detuned signals. Set it to middle position for the lushest sound. With Mix turned all the way to the right, you will only hear the detuned signals on the left and right - this creates a special chorus, similar in sound to the [Air Chorus](#).

If you need an even fatter sound, without noticeable LFO modulation, we recommend using the [Hyper Chorus](#), with “Amount” set to a higher value.

Transpose

Think of this as a “digital capo” for your instrument. Simply set Transpose as desired to play in a different key. Set it to -1 or -2 for drop tunings. Transposing by -12 will turn your guitar into a bass. The same effect is also available in the [Rig Settings](#).

Pedal Pitch

With the Pedal Pitch effect, you can use an expression pedal for the famous Whammy* effect, using the KEMPER advanced pitch shifting technology. Set “Heel Pitch” and “Toe Pitch” as the start and end points for your pedal sweep. You might want to keep “Heel Pitch” at the zero setting to ensure your instrument is in the original key when the pedal is in the zero position.

You can also use the Pedal Pitch to create harmonies for advanced soloing. Try setting the pitches to continuously slide from a third to a fifth interval, then use the “Mix” control to balance the original signal with the shifted voice.

The pitch shifter in Pedal Pitch will add no latency, when no pitch shift is applied. Thus, there is no need to switch off the Pedal Pitch at zero position. Also, you won't get any phasing when you mix the direct signal to the pitch-shifted signal at zero position.

The [Pedal Pitch](#) works with a dedicated expression pedal. However, it can be linked to the [Wah Pedal](#) or the [Morph Pedal](#). Please refer to chapter [Expression Pedals and Foot Switches](#) in this manual for more details.

Press the soft button labelled “Freeze Formants” to activate the Formant Shifter, that defeats the chipmunk effect and keeps the original formants independent from the pitch. No matter where you set the “Heel Pitch” or the pedal now, the characteristic formants of your instrument will be preserved. You will notice that the Whammy* effect loses some intensity and sounds gentler. This is because the character of your instrument stays the same, and only the pitch changes.

The “Formant Shift” soft knob becomes available when “Freeze Formants” is active. It shifts the formants up or down from the original level when moved from the middle position, thus changing the character of your instrument, when moved from the middle position. This even works when you don't use the pedal, making “Formant Shift” a powerful creative tool. At the middle position of “Formant Shift” you'll hear the formants at their original frequency.

Please be aware that when “Freeze Formants” is active, the effect only works with single notes. Chords will sound odd in most cases.

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Pedal Vinyl Stop

Pedal Vinyl Stop is a variation of the Pedal Pitch effect. While Pedal Pitch can create a “dive bomb” effect down to three octaves, Pedal Vinyl Stop will turn the pitch of your instrument down to exactly zero, by swelling up the Pitch Pedal; much like you would stop a vinyl record with your hand. No sound will be heard until you swell the Pitch Pedal down again, making your instrument sound as though the motor has turned back on again. No pitch adjustments are available or necessary with this effect - just move the [Pitch Pedal](#).

Chromatic Pitch

This is a dual-voice pitch shifter.

◆ Voice1/2 Pitch

Use this to determine the individual pitch offset of each voice in semitones. Use values of “+12” or “-12” to achieve an octaver effect.

◆ Voice Balance

Use this to balance the volumes of the two pitch shifter voices. Turn it to either extreme to isolate a particular voice.

◆ Mix

Use this to determine the balance between the detuned voices and the direct signal.

◆ Detune

Similar to the “Detune” in the Micro Pitch effect, this parameter creates a beating between the voices and the direct signal. It will work best if at least two of the three signals run at the same pitch. For example: first, set both voices to “+12” to create a 12-string guitar effect, then detune the voices to get a lush sound. Alternatively, try setting one voice to “-12” and the other to “+12”, to create an organ effect.

◆ Stereo

The “Stereo” parameter controls the stereo spread of the original signal and the two pitch-shifted voices in an intelligent, but obvious manner.

If you only use one pitch-shifter voice, and the other voice is muted by turning the “Voice Balance” all to the left or right, the pitch-shifter voice is panned to one stereo channel, while the original signal is panned opposite. However, if both pitch-shifter voices are dialed in by setting “Voice Balance” to the middle position, they are panned to opposite sides, while the original signal stays in the middle of the stereo panorama. In other words: the “Stereo” parameter will pan the position of the pitch-shifter voices in opposite directions, and balance the position of the original signal, depending on the setting of the “Voice Balance” control. The results are likely to be what you would have chosen if there were separate panorama controls for all three signals.

With “Stereo” set fully left or right, you get a full panoramic spread of the signals. However, at middle position the signals are not spread, so the effects output is mono. Be aware that the “Stereo” parameter is not generally available in the effect modules A, B, C, and D, as every effect is considered to be mono.

◆ Formant Shift

Press the soft button labeled “Formant Shift” to activate the formant processing. “Formant Shift” will become available to a soft knob, allowing deep control over the formants of both pitch-shifter voices. In the middle position the formants are not processed, or compensated, whatsoever. Everything sounds like a regular pitch shifter with “Formant Shift” disabled. As you turn the soft knob more to the left, the formants move towards the original level - the formants move down for higher-pitched voices, and up for lower-pitched voices. At the extreme left position, the

formants are fully compensated, and the timbre of the pitch-shifted voices will be like the original tone. It will sound as though you are hitting the same string on the same instruments, just on a different fret.

When you move the “Formant Shift” soft knob from the middle position more to the right, the formants will be shifted upwards, to give the pitch-shifted voices a pronounced timbre and character of your choice.

Please be aware, when “Formant Shift” is active, the effect only works with single notes. Chords will sound odd in most cases.

Harmonic Pitch

This effect is a dual-voice pitch shifter that can be used to create up to two intelligent harmony voices. It detects the pitch of the note being played and creates a harmony voice according to the key and scale that is selected. By nature, this only works when you play single notes.

◆ Voice 1/2 Interval

Use this to determine the interval offset of the two voices. The tonality of the intervals (major/minor) will be determined on-the-fly, depending on the tones you play, and the selected Key. If you feel that you need a more specialized scale than the regular modes, then select “User Scale” 1 or 2 in the desired octave. You will find these settings when you turn “Voice 1/2 Interval” far to the right. You can then define your scales in the next display pages.

◆ Key

Use this to select the tonic, or key, of the scale. The major and relative minor tonics are both displayed. However, you can also realize other modes, such as Dorian or Mixolydian, by dialing the respective key. The major key also represents the tonic for the user scales.

◆ Voice Balance

Use this to balance the two harmony voices. Turn it to either extreme to isolate a voice.

◆ Mix

Use this to determine the balance between the detuned voices and the direct signal.

◆ Stereo

The “Stereo” parameter controls the stereo spread of the original signal and the two pitch-shifter voices in an intelligent, but obvious manner.

If you only use one pitch-shifter voice, and the other voice is muted by turning “Voice Balance” fully left or right, the pitch-shifter voice is panned to one stereo channel, while the original signal is panned opposite. However, if both pitch-shifter voices are dialed in by setting “Voice Balance” to the middle position, the pitch-shifter voices are panned to opposite channels, while the original signal stays in the middle of the stereo panorama.

In other words: the “Stereo” parameter will pan the position of the pitch shifter voices in opposite directions, and balance the position of the original signal, depending on the setting of the “Voice Balance” control. The results are likely to be what you would have chosen if there were separate panorama controls for all three signals.

With “Stereo” set fully left or right, you get a full panoramic spread of the signals. However, at middle position the signals are not spread, so the effects output is mono. Be aware that, in general, the “Stereo” parameter is not available in the effect modules A, B, C, and D, as every effect is considered to be mono.

◆ Formant Shift

Press the soft button labeled “Formant Shift” to activate the formant processing. “Formant Shift” will become available to a soft knob, allowing deep control over the formants of both pitch-shifter voices. In the middle position the formants are not processed, or compensated, whatsoever. Everything sounds like a regular pitch shifter with “Formant Shift” disabled. As you turn the soft knob more to the left, the formants move towards the original level - the

formants move down for higher-pitched voices, and up for lower-pitched voices. At the extreme left position, the formants are fully compensated, and the timbre of the pitch-shifted voices will be like the original tone. It will sound as though you are hitting the same string on the same instruments, just on a different fret.

When you move the “Formant Shift” soft knob from the middle position more to the right, the formants will be shifted upwards, to give the pitch-shifted voices a pronounced timbre and character of your choice.

Please be aware, when “Formant Shift” is active, the effect only works with single notes. Chords will sound odd in most cases.

◆ User Scales

The Harmonic Pitch effect can also be linked to one or two custom User Scales. These allow you to create custom harmonies to fit whatever musical style you require. From harmonic minor, to blues, to Hungarian Gypsy scales - anything is possible by programming the User Scales. As soon as you select “User Scale 1/2” as the interval for one of the two voices with the corresponding soft knob, you will be able to access their configuration pages via soft buttons. Over three display pages, you can select the pitch offset for each of the twelve chromatic steps of both User Scales. Remember to set the “Key” as desired, whenever you use them; the key represents the tonic, or the first step of the scale. User Scales are saved within the Rig, so you can use many different scales by using different Rigs. They are not part of any harmonic pitch preset but are stored as independent user scale presets - to do this, simply push the [STORE button](#) whilst editing one of them. The default User Scales are both blues scales - one major, and the other minor. These can be used to instantly harmonize a blues or rock scale with one or two voices. Since blues is often somewhere between major and minor, try both “Key” settings to find the best fit for the melody, and your playing style.

Default custom User Scales: “Blues Major/Minor”

Step #	0	1	2	3	4	5	6	7	8	9	10	11
Voice 1	-5	-6	-5	-5	-4	-5	-4	-5	-5	-5	-5	-5
Voice 2	4	3	3	3	3	4	3	4	3	3	4	3

◆ Background of Pure Tuning

Instruments with frets or keys are tuned to the “tempered” scale used in western music for the last few centuries. The benefit of tempered tuning is that it allows you to play in any key you like; however, the result is a bit of a compromise, since intervals sound better when tuned according to the natural harmonic scale. Fretless instruments like violins - or even the human voice - can produce arbitrary pitches. Musicians with fretless instruments will instinctively tune their notes to fit better to the musical context.

The PROFILER Pitch Shifter has the same ability, since it has full control over the relative pitch it creates. Apart from octaves, every interval will be slightly detuned to fit the harmonics of the note you play; this will be most perceivable on thirds and sevenths, which are tuned down by several cents.

To make “Pure Tuning” audible, try the following:

- Choose your favorite distorted Rig.
- Turn down “GAIN” to clean.
- Select Chromatic Pitch in one of the effect modules.
- Turn “Mix” all the way to the right, and “Voice Balance” to the middle, so you hear both pitch shifter voices.
- Choose “+16” and “+19” for “Voice 1 / 2 Interval” to get the third and fifth above the octave.

Sounds crazy, right? There was never a need for such thin sound.

Now turn the “GAIN” up for distortion. You will hear a deep growling around the original base note that you are playing on your instrument. Not too nice.

Now press “Pure Tuning”, and you will get a nice, steady fundamental note. Even chords might work. It still sounds like your guitar, but different. It doesn't even sound like a pitch shifter anymore. You can get different colors by choosing different intervals for a solo sound, for example. Be sure to experiment with different interval settings! So, what's going on? Well, you might be aware that the third and fifth above the octave are natural harmonics (overtones) to the note you play - they both blend with the fundamental frequency, especially when driven by a distortion. However, intervals tuned to a tempered scale do not reflect the overtones exactly, as they are slightly detuned to fit into the musical scales. This results in heavy beating when mixed in the distortion. “Pure Tuning” solves this issue immediately, allowing the pitch shifter to create sonic colors rather than additional voices.

- ✓ Check out the tutorial video demo of Pure Tuning available at: www.kemper-amps.com/video

Analog Octaver

Originally intended for bass players, the Analog Octaver is a classic effect that can sound great with any instrument. It works by creating two additional signals: one at an octave below the input pitch, and another at two octaves below. Rather than use pitch shifter technology, it uses an analog detection circuit to manipulate and filter the input signal. The Analog Octaver will only work with single notes; intervals or chords may yield unstable results.

While the original analog octaver suffers from tracking problems, we have made significant improvements to the tracking in the modeled version. And with the addition of a simple “Low Cut” parameter, we have greatly expanded the useful range in comparison to the original effect.

Most parameters work the same way as with the pitch shifter types:

◆ Voice Balance

At the left extreme of “Voice Balance” you hear only the -1oct signal. At the right extreme you hear only the -2oct signal. Intermediate positions result in a mix of both signals.

◆ Mix

Determines the balance between the output of “Voice Balance” and the unprocessed signal.

◆ Low Cut

While the octaver can be very pleasant with higher notes, it can soon turn to a deep growl at lower registers. This is because it can produce frequencies well below 20 Hz. “Low Cut” is an additional parameter that is not found in the original effect; it helps to balance the intensity of the octaver signal relative to the played pitch.

At zero position (fully left), “Low Cut” has no effect. As you turn it up, the octaver signal will be attenuated on deep notes, while being maintained on higher notes. This allows you to play the full range of your instrument with the octaver engaged, even down to the lowest pitches.

Pitch Shifter Delay (Light Green)

The Pitch Shifter Delays are powerful combinations of the [delay types](#) with one of four different [pitch shifter](#) types:

Chromatic Type

The chromatic pitch shifter is positioned at the delay input and can be played polyphonically (chords). The pitch is set in semitones. Please learn more in the chapter [Chromatic Pitch](#).

Harmonic Type

The harmonic pitch shifter is positioned at the delay input and is intended to be fed with single notes only. The pitch is set in musical intervals and will follow the selected key. Please learn more in the chapter [Harmonic Pitch](#).

- ✓ Both chromatic and harmonic type feature the [Formant Shift](#) option, for very natural pitched sounds. However, when Formant Shift is in use, only single notes give pleasant results.

Loop Pitch Type

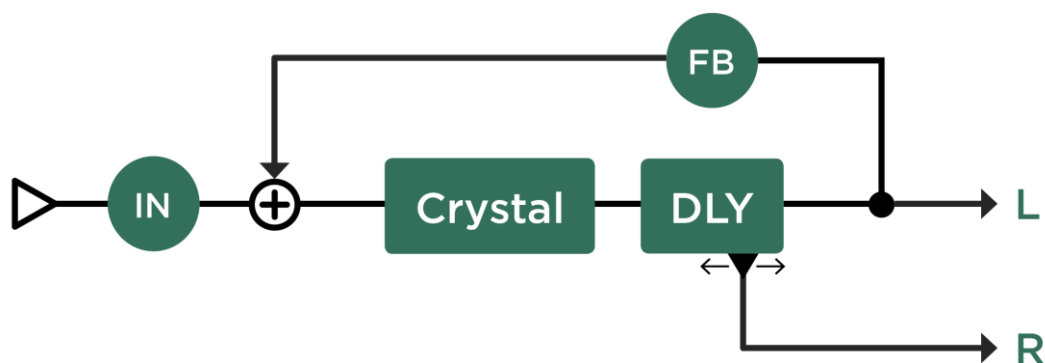
The pitch shifter is chromatic as well, but positioned in the feedback loop of the delay, creating a pitch helix with every repetition.

Crystal Type

Crystal is a reverse delay, in which the pitch is altered by playing back the delayed signal faster or slower. The Crystal is placed in the feedback loop of the delay, creating a pitch helix with every repetition. Setting the pitch to either one octave (+12) or a fifth (+7) will yield the most interesting results. In combination with other delay features such as Smear, Input Swell and Flutter, you can build very ethereal delay or reverb effects.

Crystal Delay

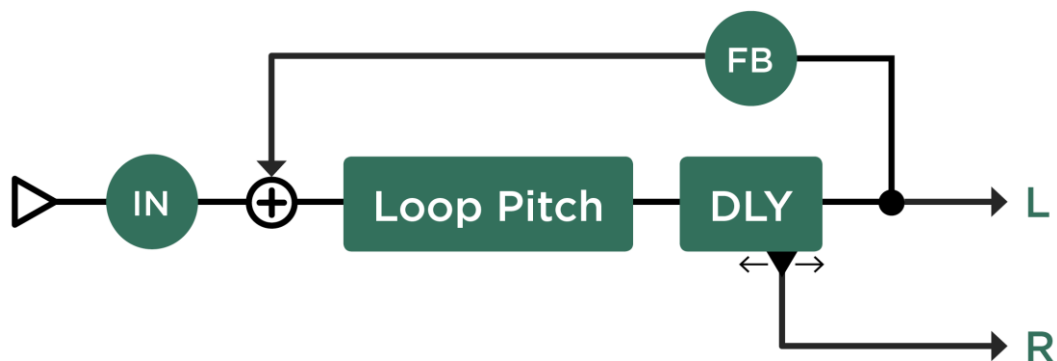
The Crystal Delay is based on the [Two Tap Delay](#), with a Crystal in the feedback loop.



Crystal Delay

Loop Pitch Delay

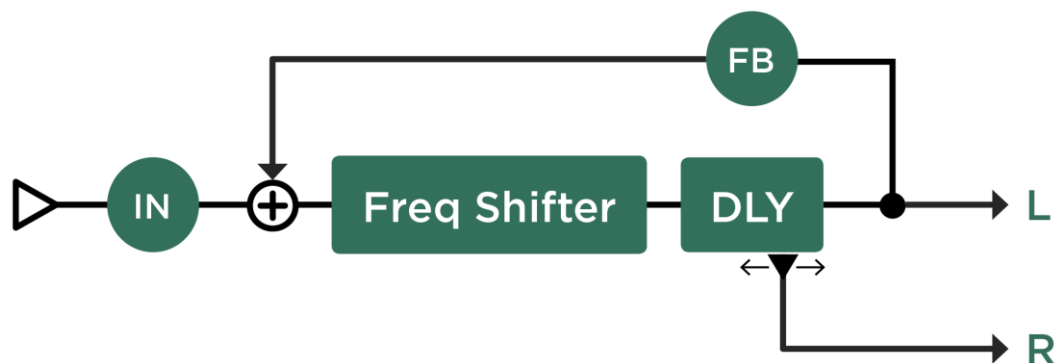
The Loop Pitch Delay is based on the [Two Tap Delay](#) as well, with a [Chromatic Pitch](#) shifter in the feedback loop.



Loop Pitch Delay

Frequency Shifter Delay

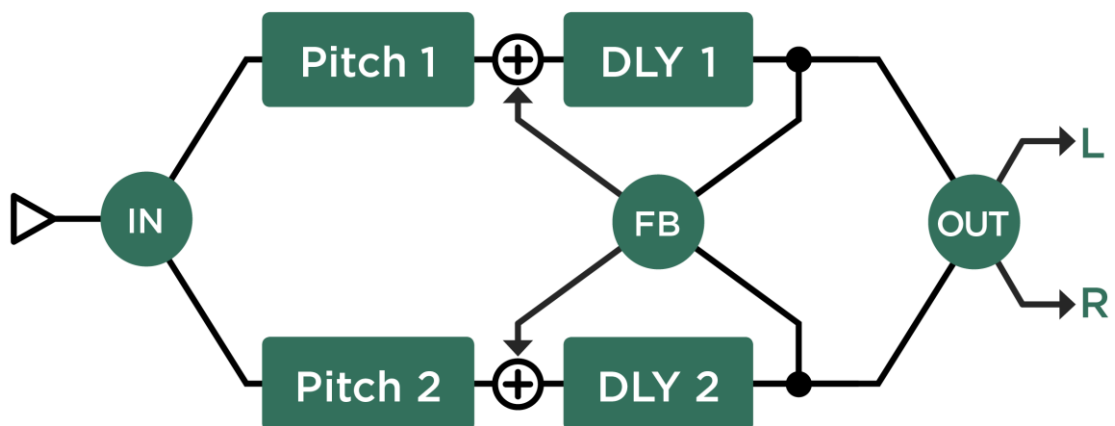
The Frequency Shifter Delay uses a frequency shifter effect in the feedback loop, instead of a regular pitch shifter. This creates a disharmonious pitch helix. A true lo-fi effect.



Frequency Shifter Delay

Dual Chromatic Delay & Dual Harmonic Delay

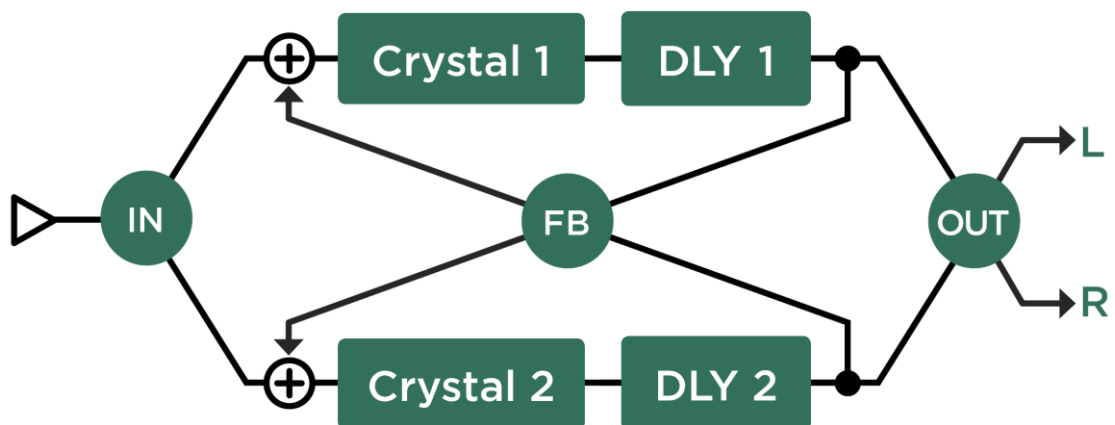
The Dual Chromatic and Harmonic Delays feature the [Dual Delay](#) with two pitch-shifters at the input of each delay channel. This allows for creating two pitch-shifted voices that can be delayed, with feedback tweaked to your liking. If you want to go for a single pitch-shifted delay, then set Pitch parameters to identical values.



Dual Chromatic Delay and Dual Harmonic Delay

Dual Crystal Delay

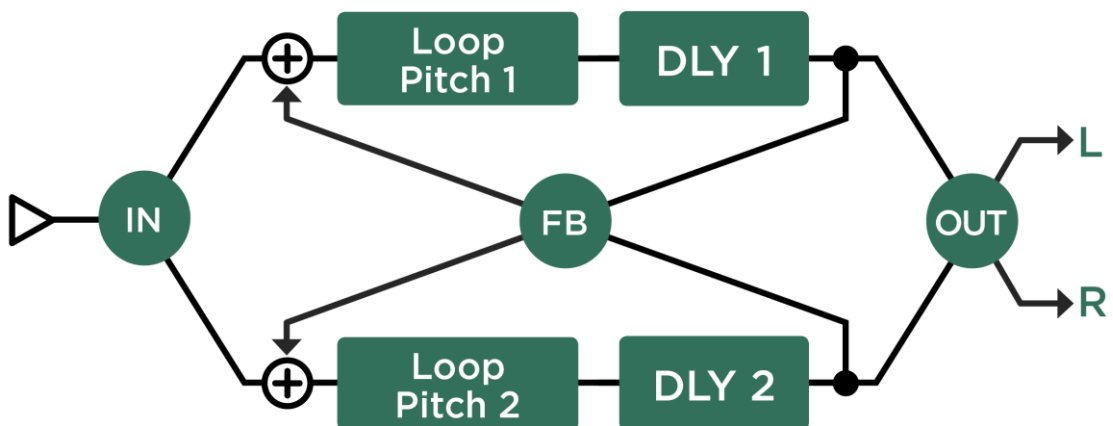
The Dual Crystal Delay is based on the [Dual Delay](#), with two Crystals positioned in each delay's feedback loop. This allows for two different pitches, while each of their signals can be cross-fed by the "Cross Feedback" control.



Dual Crystal Delay

Dual Loop Pitch Delay

The Dual Loop Pitch Delay works like the [Dual Crystal Delay](#), but with two [Chromatic Pitch](#) shifters in the feedback loops. The results are comparable to the Crystal, but more concrete.

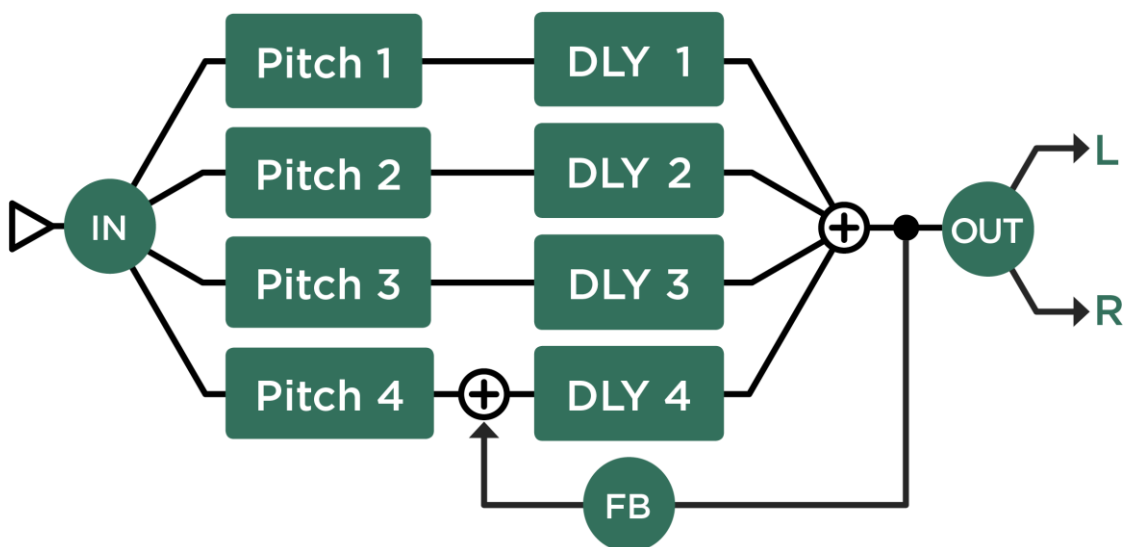


Dual Loop Pitch Delay

Melody Delay

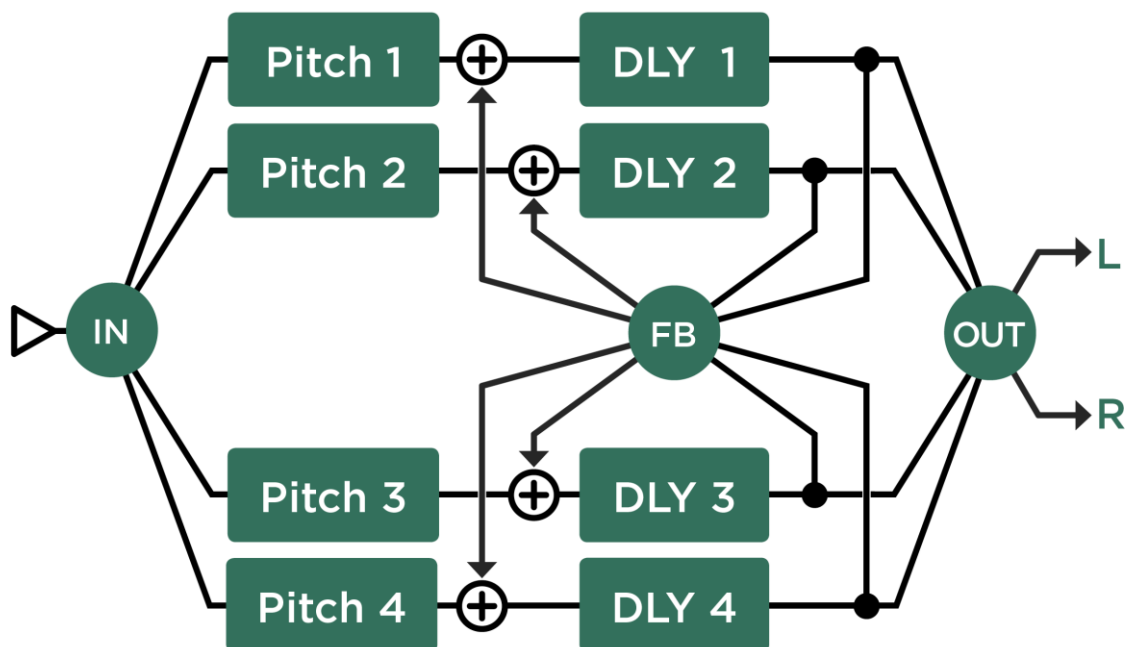
The Melody Delay is a [Rhythm Delay](#) combined with four pitch-shifters that turn the rhythm into a melody. Each note that you play will create an arpeggio of up to four delayed+pitched notes. You will achieve the best results by only playing single notes and letting the Melody Delay play the rest.

The [Formant Shift](#) option in the pitch shifters allows the Melody Delay to create very natural-sounding arpeggios.



Quad Chromatic Delay & Quad Harmonic Delay

The Quad Chromatic/Harmonic Delays can be considered as a double version of the [Dual Chromatic/Harmonic Delays](#). These feature four pitch-shifters, one on each input of the four delays. This allows for pitched reverberated sounds.



Quad Chromatic Delay and Quad Harmonic Delay

Space (Green)

The Space effect is identical to the global version of [Space in the Output Section](#). It produces the natural reflections of a small, neutral-sounding room. The most obvious result of these reflections is that a mono signal is converted to stereo; to soften the transients, a little diffusion is also applied. You can still combine the Space effect with delay or longer reverbs, without creating too much reverberation.

The algorithm is designed to be the shortest possible room effect, and therefore has no deep parameters. Use the Intensity parameter to control the strength of the effect.

System Settings

Press the [SYSTEM button](#) to access the global settings pages. Global settings do not change when you switch to another Rig.

LCD / HW Setup / Brightness / User Interface

On the LCD / HW Setup page you can control the settings for the display and adjust the “Line Frequency” parameter.

The soft button labeled “Factory Rigs” will allow you to reload all the factory Rigs and presets that were installed with the operating system. Please note that this function doesn’t overwrite any Rigs or presets in your browse pool.

Press the soft button labeled “Startup Dialog” to enter the menu where you can enter your name and set current time and date. Whenever you create your own PROFILES, the “Rig Author” tag will default to the Owner Name. The “Startup Dialog” appears automatically when the PROFILER is started for the first time.

Using the soft button labeled “Edit Owner” you can edit the Owner Name, and assign a Device Name to your PROFILER. Assigning unique Device Names is useful if you intend to connect and manage multiple PROFILER units with the [Rig Manager](#) application.

Contrast	The soft knob “Contrast” lets you set the contrast of the display. Adjust this setting if you find the display hard to read under certain circumstances.
Brightness	The soft knob “Brightness” controls the brightness of the display.
White Balance	The soft knob “White Balance” adjusts the white balance of the display.
Line Frequency	The soft knob “Line Frequency” lets you choose between a line frequency of 50 or 60 Hz. The Noise Gate will use this setting to eliminate ground hum, the frequency of which is based

	on the physical location the PROFILER is being used at. “50 Hz (auto)” and “60 Hz (auto)” will detect the line frequency automatically.
Brightness Page	On the next page, you can set the brightness separately for the color LEDs, the buttons, the LED collars and the TAP button .
Quick Function	<p>On this page, you can determine the function of the QUICK button using the soft knob “Quick Function”. This function allows you to use the QUICK button as a shortcut to get to often used pages like “MIDI Settings” or “Browse Snapshots” directly.</p> <p>By default, in the “Quick Edit Page”, the QUICK button returns to the most recently used module or section edit page, and from there you can change edit pages by simply hitting module and section buttons. This is a very effective method to tweak a Rig. You can leave this advanced editing mode via Exit.</p>
Rig Autoload	On the same page, you can use the soft button “Rig Autoload” to activate automatic load of any Rig selected in the browse screen. The “Load” soft button on the Browse Screen will disappear when you activate “Rig Autoload”.
Performance Load	If “Performance Load” (“Perf.Load”) is set to “Slot 1” or “Keep Slot”, the corresponding Slot of a Performance will be loaded automatically as soon as you select another Performance via Remote or MIDI. By default, “Performance Load” is set to “Pending”. This way you can keep playing your current Rig while you are navigating through the Performances via PROFILER Remote or MIDI until you finally select a Slot.
Rig Button Morph	This option determines, if subsequent hits of Remote’s Rig Buttons initiate Morphing, or reload the current Rig/Slot in its stored state. This option is also applied if MIDI control changes # 50-54 are received subsequently.
Signal LEDs Blue	This option allows you to switch the color of the INPUT and OUTPUT LEDs from white to blue.
LCD Color	Here you can select the base color of the display.
Auto Favorite	Enable this option to ensure that each time you store a Rig it will assigned as a favorite automatically and will therefore appear in View Favorites .

Audio Setup

This page includes the following parameters:

◆ Rig Change Crossfade Time (Rig X-Fade Time)

Most digital audio devices create an unpleasant gap in the audio signal when a preset is changed. The PROFILER instead performs a crossfade between the previous and current Rigs, producing a seamless and smooth transition. This crossfade time can be adjusted in a wide range. It affects both Browse and Performance Mode.

◆ FX Loop Level

“FX Loop Level” controls the outgoing signal level of the hardware effects loop for correct leveling of the external device. This helps to prevent noise or distortion. It is a global parameter and affects [Loop Mono as well as Loop Stereo](#). [Loop Distortion](#) is not affected by “FX Loop Level”.

- ✓ Increases of [SEND output](#) level are compensated for corresponding decreases of [RETURN INPUT](#) level and vice versa. Therefore, the level and effect loop mix of the output signal stay unaltered.

Pedal Links

On this page, you can link pedal controllers as well as use soft knobs to simulate pedal behavior. For detailed explanation please refer to chapter [Expression Pedals and Foot Switches](#).

Pedal 1-6

On the first two pages, you can configure the kind of pedals or switches you want to directly connect to the inputs [PEDAL 1 and 2](#) of the PROFILER and assign functions to these. Any combination of expression pedals, mono switches, and dual switches can be connected.

If a PROFILER Remote is connected additional pages “Pedal 3-6 (Remote)” will appear to configure [pedals and switches connected to the Remote](#) in a very similar fashion.

You will find more detailed information regarding pedals in chapter [Expression Pedals and Foot Switches](#).

Remote Settings

You find global settings for the PROFILER Remote on this page. If no PROFILER Remote is connected, this page is greyed out. All these settings are explained the chapter [PROFILER Remote](#).

MIDI Program Change Assignments and Settings

On the next System Settings page, you can assign up to 128 MIDI program change numbers to Rigs in your browse pool. Sending these program change numbers from any MIDI controller will load the assigned Rigs.

To do so, first select the Rig you want to assign a program change number to and then press the [SYSTEM button](#). Navigate to “Browser Mode PrgChg” page using the right PAGE button, select a desired Program Change using the soft knob labeled “MIDI PrgChg#” and then press the soft button labeled “Assign”. Use the soft button labeled “Unassign” to unassign a Rig.

On the following page “MIDI Settings” you find more options and parameters, which are explained in detail in the [MIDI](#) chapter.

- ✓ [Performance Mode](#) offers powerful possibilities to logically organize Rigs for example by song, loading these via [PROFILER Remote](#) or [MIDI](#) and even simultaneously control external devices via MIDI.

Date and Time

On this page, you can set the date and time using the soft buttons “Edit Date” and “Edit Time”. Make sure the correct date and time is entered as this will help you to organize your Rigs and PROFILES.

◆ Clock > Remote

This option will appear, if a PROFILER Remote is connected. Enabling it will activate the display of the current time on the Remote.

Device Information

On this page as well as on page “Details” the operating system version of the PROFILER is displayed. “OS Build Date” is the date this version was released and “DSP Date” is the date the DSP version was released. On “Details” you find the serial number of your PROFILER.

Bass Players: Special Hints and Features

The PROFILER can be used very effectively with bass guitar. Most of its features apply to bass in the exact same way as they do for other guitars. This chapter summarizes the special features and hints that are specific to bass players.

To focus on bass Rigs only, please select the [View](#) “Just Bass”, either by using [TYPE](#), or with [soft button “Views”](#) on the home screen.

You will find numerous bass PROFILEs in the pool of factory Rigs, including excellent [Direct PROFILEs](#) taken from the DI output of the bass amps. You will also like the mildly distorted PROFILEs taken from tube-driven bass amps and speakers and captured by microphone. In addition, we have released special Rig Packs containing excellent Rigs for bass. These are available on the KEMPER download page: www.kemper-amps.com

You should also be sure to check out [Rig Exchange](#), where you can download Rigs by other users, or even share your own. In the [Rig Manager](#) application, you can easily identify the bass Rigs on the Rig Exchange by right-clicking on the top row, selecting the column “Instrument” and then sorting by this column.

You are free to use any kind of bass cabinet for monitoring your PROFILER on stage or in the rehearsal room. Modern bass cabinets typically have a neutral sound character similar to PA cabinets, while classic bass cabinets, like the famous Ampeg* 8*10”, tend to color the sound. If you are monitoring via a bass cabinet which colors the sound, you should always set [Monitor Cab Off](#) in the Output Section, to avoid a double coloration. You can still send the complete simulation (including virtual cabinet) to the mixing desk, so no microphone is required. If you are using a full-range cabinet, you should use the cabinet simulation in your monitoring signal.

The [built-in 600-watt power amplifier](#) of PROFILER PowerHead and PowerRack should provide plenty of power to cut through a band rehearsal, or live situation, with drums. While the power amplifier is specified for 8 to 16 ohm speakers, many bass cabinets only have 4 ohms. This needn't be a show-stopper, unless you play at painfully high volume levels. The power amp has a limiter at 600 watts that could, in theory be exceeded with 4 ohm speakers. In case you hit that limit, the power amp will just mute the signal for a second. To avoid this occurrence, simply choose a lower volume.

The PROFILER has a built-in analog splitter box. The [DIRECT OUTPUT](#) feeds the unprocessed bass signal to a mixing desk or recording device while the MAIN OUTPUTS carry the processed signal in stereo. If you are going to

mix the DIRECT OUTPUT with the [MAIN OUTPUTS](#), select “Git+Processing” or “Git Studio” as the [Output Source](#) for the DIRECT OUTPUT in the Output Section to avoid different latencies between processed and unprocessed signals. Do not use "Git Analog" in this case.

The PROFILER features many stomp and studio effects that are suitable for bass, with some having been specifically tailored for bass players. Below is a brief description of selected features - please refer to the respective chapters for a deeper view.

[Analog Octaver](#)* is a classic effect originally intended for bass. It works by creating two additional signals: one at an octave below the input pitch, and another at two octaves below. Rather than use pitch shifter technology, it uses an analog detection circuit to manipulate and filter the input signal. The Analog Octaver will only work with single notes - intervals or chords may yield unstable results.

Check the [Pitch Shifter](#) effects for different intervals and colors that allow for polyphonic playing, including chords. You should also try the [Formant Shift](#) possibilities in some pitch shifter effects. Although restricted to monophonic playing only, shifting the characteristic formants of your bass will give your instrument a whole new character, while remaining very authentic.

If the passive equalizer in the stack section ([EQ](#)) fails to provide enough flexibility for your needs, please check out the stomp equalizers. The 4-band parametric [Studio Equalizer](#) is extremely flexible and well suited to bass.

Every one of the chorus algorithms features the [Crossover](#) parameter, inspired by specialized bass chorus units. By raising the value of “Crossover” you can shield the lower frequencies from the effect of the chorus modulation, thus giving the sound a stable bottom-end.

[Parallel Path](#) is a feature designed for bass players in particular. When a bass is played through a distorting amplifier or a distortion pedal, the bass can lose some of the fundamental frequencies as well as some dynamic range. To compensate for this, a parallel feed of the undistorted bass signal can be created, and then mixed back to the processed signal path. In his case, modules A and B are moved to the Parallel Path, e.g. for compressing or equalizing the parallel signal.

We have created a specific thread [PROFILER for Bass Players](#) in the KEMPER forum. Don't hesitate to raise your questions, share best practices and discuss suggestions there. Here is the link: www.kemper-amps.com/forum

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Performance Mode

Turn the [chicken head knob](#) into the PERFORM position. Performance Mode is a powerful tool that allows to organize Rigs in “Performances” that can be accessed independently from your browse pool. A total of 125 Performances are available, each of which can hold up to five Rigs in logical locations called “Slots”. You could, for example, use a Performance to store the sounds dedicated to the intro, verse, refrain, bridge, and solo of a song, and switch between them using a foot controller.

Setting up Performances

You can navigate through the 125 Performances using the up and down buttons of the [RIG navigation cross](#) on the front panel. Use the left and right buttons to select a Slot within a Performance. By default, all Slots are pre-loaded with a default Rig, which happens to be based on the ancient Rig “CK 0”. The Performance itself has a default name. Once you have selected the Slot, choose the Rig you want to assign to it via [BROWSE](#). The Rig will be copied and displayed 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.

If you require fewer than five different Rigs in one Performance, you could disable Slots 2 to 5 selectively. This way you can block Slots and prevent accidental loading via foot controller. Only Slot 1 is requisite.

Rigs contained in Slots of Performances are stored in a dedicated memory area, so you can tweak them independently from their parent Rigs in your browse pool. Editing Rigs in Performance Mode is basically the same as it is in Browser Mode. Rigs modified in Performance Mode can be stored into the browse pool using the soft button labeled “Export Rig to Pool” on the “Store Performance” page.

The soft button “Edit” opens another menu where you can rearrange or rename Slots within the selected Performance. You can also copy and paste Slots from within Performances, and from one Performance to another. Under “Performance Tags” you can edit Performance Tags Name, Author, Comment, Key, and Tonality. The “MIDI Settings” soft button opens another screen, where you can select MIDI program changes that can then be sent to up

to two external devices whenever a Slot is loaded. You can find more information related to this feature in the [MIDI](#) chapter.

The soft button labeled “Arrange” opens a screen where you can easily reshuffle Performances according to the set list of your next concert. You can also copy and paste entire Performances on this screen.

It helps to assign meaningful names to Performances and Slots. Depending on how you want to organize your sounds, Performances and Slots could, for example, carry names of songs and musical scenes, or amplifiers and amp channels. Be aware that as long as the Slot Name is identical to that of the loaded Rig, Slot Name will be automatically updated as soon as another Rig is loaded into that Slot. But if you have entered a Slot Name different to the Rig Name (for example “Solo”), it will stay untouched if you load another Rig into that Slot. However, there is a function called “Use Rig Name” on the Rename Slot screen, which allows you to reset Slot Name to Rig Name.

- ✓ While navigating Slots within a Performance via the left and right [RIG navigation cross](#) buttons, any modifications (e.g. loading another Rig, or cranking up Gain) are interpreted as editing, and will be retained until you move to another Performance. Don't forget to store before you load another Performance, if you want to make those modifications permanent.
- ✓ As soon as you load another Slot from your foot controller, any former modifications within that Performance are interpreted as temporary tweaks during a live performance, and will be discarded immediately. If, for example, you had activated a booster in module B, or increased Delay Mix via pedal, any such changes will be lost if you switch Slots remotely. This way, you can always be sure that Slots will be loaded in their original, predictable state during live performances.

Loading Performances

The “[Performance Load](#)” parameter in System Settings determines what happens, as you step or scroll through Performances via [Remote](#) or [MIDI](#). The default setting “Pending” means that the current Rigs stay loaded and the PROFILER keeps waiting a few seconds for your Slot selection. “Slot 1” and “Keep Slot” load these Slots automatically.

Foot Control

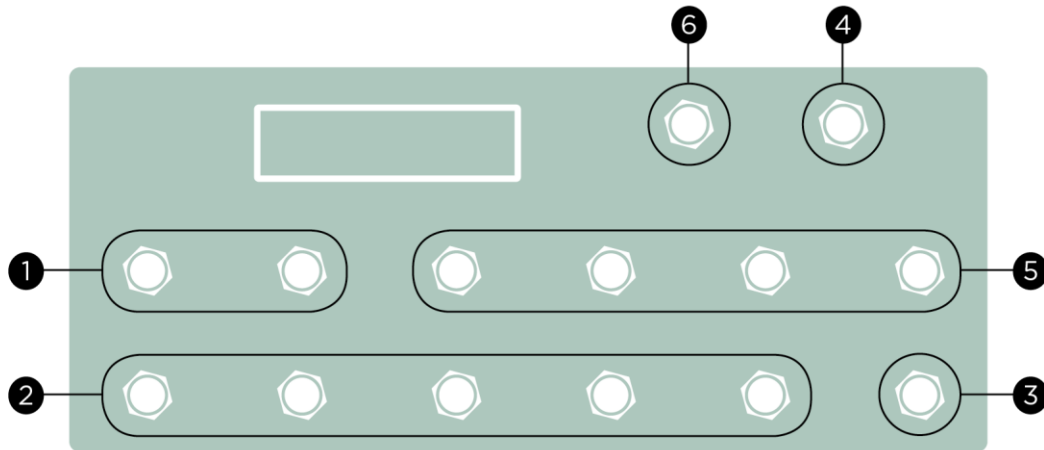
Obviously, our KEMPER [PROFILER Remote](#) is designed to get maximum benefits out of Performance Mode.

However, if you prefer to keep things, very simple a double switch can be connected directly and used to step up and down through the Slots in a simple linear fashion. In addition, there are multiple methods available to navigate via MIDI to accommodate various controller capabilities and requirements. For detailed information please consult the chapter [MIDI](#).

- ✓ Two tutorial videos explaining Performance Mode can be found at: www.kemper-amps.com/video

PROFILER Remote

The PROFILER Remote is the perfect remote controller for your PROFILER. You can think of it as a complementary control panel, fully integrated with the PROFILER hardware and software. This integration includes the power supply, a display to reflect important information about the current mode and any edits you make, and automatic maintenance during operating system upgrades.



PROFILER Remote button functions

Up/Down Buttons (1)

In [Performance Mode](#), use these buttons to navigate through your Performances. A short tap will step up or down to the next Performance. Holding will initiate scrolling. Depending on the status of the parameter "[Performance Load](#)" in the [System Settings](#), the PROFILER will either load Slot 1 or the current Slot of the selected Performance immediately, or wait ("Pending") until you hit one of the five [Rig Buttons](#).

In Browser Mode, you can step or scroll through Rigs in your browse pool according to the selected [View and Sort Order criteria](#). The option "Group of 5/Single Rig" on page [Remote Settings](#) in System Settings determines, if the Up/Down Buttons step through the Rigs individually or by groups of five in Browser Mode.

Rig Buttons 1-5 (2)

These are the buttons for selecting Slots in Performance Mode, and Rigs in Browser Mode. Subsequent hits of these buttons trigger [Morphing](#).

TAP Button (3)

This button triggers the [Tap Tempo](#), just like the [TAP button](#) on the front panel of the PROFILER. Tap in quarter notes to adjust the tempo of delay, phaser, flanger, and tremolo effects. The LED will blink to indicate the current tempo. Holding this button while you play to activate the marvelous [Beat Scanner](#), which calculates the tempo according to the rhythm and pattern of your playing. You can read more about this function in the [Tempo](#) chapter.

TUNER Button (4)

Use this to activate [Tuner Mode](#), instead of moving a volume pedal into heel position. If the option "Mute Signal" is activated, your guitar will be muted while you tune it.

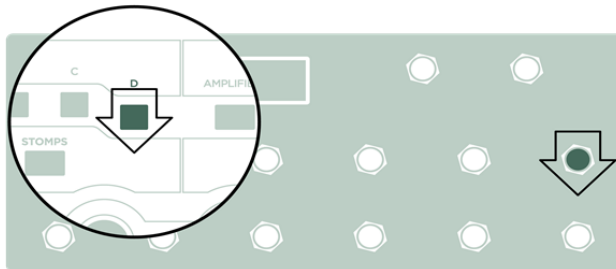
- ✓ If you don't require [TAP](#), TUNER or [LOOPER](#) buttons in their default function you are free to assign other switching functions or completely deactivate these buttons, on the [Remote Settings](#) page in System Settings.

Effect Buttons I-III (5)

These four buttons can be flexibly assigned to switch effect modules on/off. They can also be used to toggle features in certain effects. Their respective assignments are stored per Rig. Each button can be assigned to multiple effect modules at the same time as Action & Freeze functions.

Assigning an Effect Module

Assigning switching functions to the Effect Buttons is simple: just press and hold an Effect Button on the Remote for example Effect Button IIII and press the desired module button, e.g. Module D, on the front panel of the PROFILER at the same time. Done!



It also works the other way around: press and hold the module button on the PROFILER first, then step on the desired Effect Button afterwards. The upper left LED of the Effect Button should now reflect the [category color of the effect](#) you assigned e. g. orange for a wah effect. Now, you can activate or bypass the selected effect module by stepping on the button on your PROFILER Remote. The lower left white LED indicates the on/off status of this effect module.

Unassigning an Effect Module

To undo a current assignment, simply perform the same assignment procedure again. Gone!

The upper LEDs remain unlit if no effect is assigned.

Assigning a Second Effect Module

To add a second assignment to the same Effect Button, just repeat the process with another effect module. You will notice the right LEDs by the Effect Button indicate both the effect category and on/off state of your second assignment. Now, you can activate or bypass both effects by stepping on the button on your PROFILER Remote.

More Assignments

Even more effect modules can be assigned to the same Effect Button this way. However, the LEDs will only show the first two assignments.

Toggling Effects

The Effect Buttons toggle the on/off states of each of their assigned effect modules independently, depending on their current state. So, not only can you activate (or bypass) multiple effects simultaneously - you can also activate some effect modules while bypassing others. The white LEDs will reflect this accordingly.

Example: Currently, effect module D is activated and module X is bypassed. Both effect modules are assigned to the same Effect Button. If you hit this Effect Button, module D will be bypassed, and module X will be activated. This allows you to toggle between different effect scenes.

Storing Assignments

Once you are happy with the assignments and the current on/off states, then simply store the Rig. All assignments that you have created are stored with the individual Rig. Whenever you load this Rig later, the assignments and the on/off states are recalled just as they were when you stored the Rig.

Assignments without Remote

If your PROFILER Remote is not connected, or if your stage is so huge that your PROFILER is miles away from the Remote, you will not be able to reach both at the same time. In this case, enter the Remote Effect Buttons page in [Rig Settings](#), hold one of the four [soft buttons](#), and press one or more effect module buttons to complete the assignment.

Keeping Oversight

To help you maintain an overview, a list of your current assignments will be displayed on the Remote Effect Buttons page in Rig Settings. You can also immediately clear assignments on this page.

Action & Freeze

Besides toggling the status of effect modules, each of the Effect Buttons can also be used to trigger so-called "Action & Freeze" functions like "[Rotary Speaker \(slow/fast\)](#)", "[Delay Feedback Infinity](#)", or the [Freeze](#) function of most delay and reverb effects. To assign, simply navigate to the respective function within the effect e. g. "Rotary Speed Slow/Fast" within the Rotary Speaker effect. Now press the respective soft button above the display of the PROFILER together with and one of the Remote's Effect Buttons. Done! Don't forget to store the Rig to make your assignment permanent.

Latched / Momentary

Every Effect Button on the PROFILER Remote supports an automatic latched / momentary detection: A quick press of the button will latch the assigned function - in other words, the assigned effect modules will change their on/off state permanently, until you press the button again.

However, if you hold the Effect Button for a second or more, it will automatically change to momentary operation. Momentary operation means that as soon as you release this Effect Button, it will immediately revert to the initial state. This behavior applies to on/off switching as well as to "Action & Freeze" functions.

Locking Effect Buttons

Effect Buttons are jointly locked/unlocked as soon as the assigned effect module is locked/unlocked. However, this only applies if no more than one effect module is assigned to the same Effect Button. The Remote's display uses two different icons – one indicates an effect module that is only locked on the PROFILER, while the other indicates that the Effect Button on the Remote is also locked.

Looper (6)





The Looper is a device for recording up to 60 seconds of stereo audio. It allows for an unlimited number of overdubs. That means you can layer unlimited recordings on top of each other. The Looper functions are perfectly integrated into the PROFILER Remote, as they rely heavily on its foot buttons and LEDs. You can use it:


- just for fun, to play along with it,
- to check your skills by listening to your own recording,
- to evaluate and edit rigs, while the Looper plays guitar for you,
- to let the Looper play guitar while you do the A/B comparison after PROFILING an amp.

The Looper is an entity that's totally independent of the rest of the PROFILER sound engine. Thus, you can change Rigs and parameters to your liking, while the Looper continues its playback. The audio content of the Looper cannot be stored to permanent memory; it will be lost when you power down the PROFILER. If you are familiar with other looper devices, you'll find your way around it instantly. However, there are some powerful features available that go beyond the standard looper functionality.

- ✓ A tutorial video explaining the Looper can be found at: www.kemper-amps.com/video

Here's a brief description of all Looper Buttons:

LOOPER	Activates the Looper and toggles the functions of following six buttons between “normal” and “Looper”.
	Record / Playback / Overdub
	Stop / Erase: press 3 time to erase the current loop
	Cancels, or reactivates, most recent overdub
	Trigger: triggers the loop when in stop mode, or retriggers the loop when in play mode

	Reverse: plays the loop in the reverse
$\frac{1}{2}$	Half speed: records and plays back the loop in half speed; doubles the recording time

By setting the Looper Location switch in the respective [System Settings](#) page, you can choose the position of the Looper in the signal flow.

◆ Looper Location Input

The Looper is placed right after the instrument input. It records the pure guitar signal and plays it back before the effect modules. When you change Rigs during the playback of the loop, you'll hear the playback processed by the different Rigs. However, when you perform overdubs, then all overdubs will be run through the same Rig, as if multiple guitars were played through the same amp at the same time.

◆ Looper Location Output

The Looper is placed right after the last effect - the REV module. It records the fully processed stereo signal. When you change Rigs during the playback of the loop, the playback sound will not change! This allows you to play along, or even overdub, with an unlimited number of different Rigs.



- ✓ Consequently, while Looper Location is set to "Output" the playback is inserted after the REV module and can only be monitored on those outputs that have their respective output source set to "Master....".





◆ Looper Volume

Looper Volume attenuates the playback volume of the Looper by up to 12 dB.

Workflow





An example of how you would normally work with the Looper:

Button used	Task performed
<p>LOOPER</p>	<p>Activate the Looper mode for the six Looper Buttons, by pressing the LOOPER button on the PROFILER Remote. The LOOPER LED lights up. When you press Looper again, the six buttons will revert to their primary function for selecting Rigs. Activating the Looper Mode does not necessarily mean activating the Looper itself. The Looper can even stay active while you use the respective buttons for selecting Rigs.</p>
	<p>You start the initial recording by pressing this button. By pressing it the second time, you set the loop end, and the Looper will immediately stop the recording, and start to playback the recorded loop from the beginning, and repeat it indefinitely. The timing of both hits on the button is crucial for the accurate groove of the loop. During the playback, you can play along the loop without recording anything.</p> <p>When you hit the button again at any time, the overdub starts without interrupting the playback. Everything you play will be added to the previous recording. Pressing the button another time will stop the overdub, and continue the pure playback again.</p> <p>Note: the initial recording of a loop and the setting of the loop end is only done once. Changing from playback to overdub, and back to playback, can be done to eternity.</p> <p>Note: this function can also be assigned to external switches or for example the Remote's TUNER button, if you are used to trigger Tuner Mode via Volume Pedal and therefore don't require TUNER button in its default functionality.</p>
	<p>Stops the playback of the loop. To restart the playback, press "Record / Playback / Overdub". To go from stop to overdub, you must press "Record / Playback / Overdub" a second time. To erase the current loop and start a fresh initial recording, press "Stop" three times. Then press "Record / Playback / Overdub" to record.</p> <p>Note: this function can also be assigned to external switches or for example the Remote's TUNER button, if you are used to trigger Tuner Mode via Volume Pedal and therefore don't require TUNER button in its default functionality.</p>

	<p>Press this button to cancel the last overdub. To redo the last overdub, press Undo again. The undo and redo of an overdub can even be done during playback. However, if you have canceled an overdub, and recorded a new overdub after that, the old overdub recording cannot be recovered. If you have accidentally erased a loop by pressing Stop three times, then Undo will recover it.</p>
	<p>When the playback is stopped, you can trigger the loop by this button like a sampler. It will stop playing when you release the button. During playback, pressing Trigger will restart the loop and continue playing. This allows for re-syncing the loop in a live situation, to prevent the loop from running out of time.</p>
	<p>Changes the direction of the playback like a tape recorder put in reverse. Press again to play forward. When set to Reverse, the present recording will still be taken in forward direction but played back in reverse, once the recording is terminated, and the loop end is set. However, subsequent overdubs can be performed in either direction, to create ethereal soundscapes. You can even change the direction in the middle of an overdub!</p>
	<p>When a loop playback is set to Half Speed, it will sound one octave down, and half tempo, as though you had slowed down a tape recorder. Press the Half Speed Button again and you are back to normal speed.</p> <p>But there's more to this than meets the eye: the regular available recording time of the Looper is 30 seconds. When you set Half Speed before an initial recording, the available recording time doubles to 60 seconds. When you record at half speed, you will not notice anything special at playback. However, when you press the Half Speed Button again, playback will revert to regular speed, transposing your recording one octave higher, and doubling the tempo! Thus, by selecting the speed prior to the recording you can effectively chose whether this functions as a Half Speed or a Double Speed Button.</p> <p>As with the Reverse Button, you can change the speed for subsequent overdubs to your liking.</p> <p>The extra recording time you gain with Half Speed comes with a slight loss of high frequencies.</p>

Advanced Looper Functions

The Looper offers several expanded functionalities. All these functions are accessible by holding the respective Looper Button, rather than just pressing it shortly. As before, we will explain the advanced functions by following the buttons on the Remote:

<p>Holding</p> 	<p>There are three different situations where holding this button can make sense.</p> <p>As an alternative to the standard recording method, you can hold this button down to determine the length of the initial recording. The looper will continue recording until you release the button, at which point the loop end is set, and playback of the recorded loop begins.</p> <p>The Record / Playback / Overdub Button has a potential drawback: when the loop end gets set, it automatically turns to playback mode at the same time. A subsequent overdub, immediately after the initial recording, cannot be done by simply pressing the button. However, it is possible by holding it: Start the initial recording by pressing shortly. For loop end, and subsequent overdub, press and hold the button. The loop will instantly be repeated, and your playing will be overdubbed for as long as you hold the button.</p> <p>For subsequent overdubs, rather than pressing "Record / Playback / Overdub" quickly to change modes, hold it for the overdub and release it for playback.</p>
<p>Holding</p> 	<p>For erasing the current loop, instead of pressing the Stop Button three times, you can hold it for two seconds. That's the way many other loopers handle the erase of the loop.</p>
<p>Holding</p> 	<p>When you hold the Reverse Button for a second, the Looper will enter "back & forth" mode. That means it will change the direction automatically at the beginning and end of the loop. By holding it again for a second, it will revert to the regular reverse, or forward, mode.</p>
<p>Holding</p> 	<p>Holding this button will turn Half Speed to a momentary event, lasting only if you hold the button</p>

Connecting Expression Pedals and External Switches

The PROFILER Remote offers four TRS-inputs named PEDAL 3-6 to connect expression pedals. If you should happen to require more switches, you can connect mono and dual switches to these sockets, too. The technical requirements are the same as when connecting expression pedals, or switches, directly to the [PEDAL 1 and 2 inputs](#) on the rear side of the PROFILER. Their functions can be assigned in the System Settings of the PROFILER on pages “[Pedal 3-6 \(Remote\)](#)”. More information and configuration examples can be found in the dedicated chapter about [expression pedals and foot switches](#).

Remote Settings

You can find a dedicated LCD CONTRAST knob on the rear side of the PROFILER Remote. All other LCD and LED settings are edited on page “Remote Settings” within the System Settings of the PROFILER. The physical LCD contrast knob overwrites the corresponding setting in the System Settings during startup.

The display reflects the most relevant information depending on the mode of operation. In Performance Mode you can choose between two display layouts on the “Remote Settings” page in [System Settings](#). On the “Date and Time” page, you can find an option to display the current time on the Remote.

Looper Volume is explained in the paragraph [Looper](#).

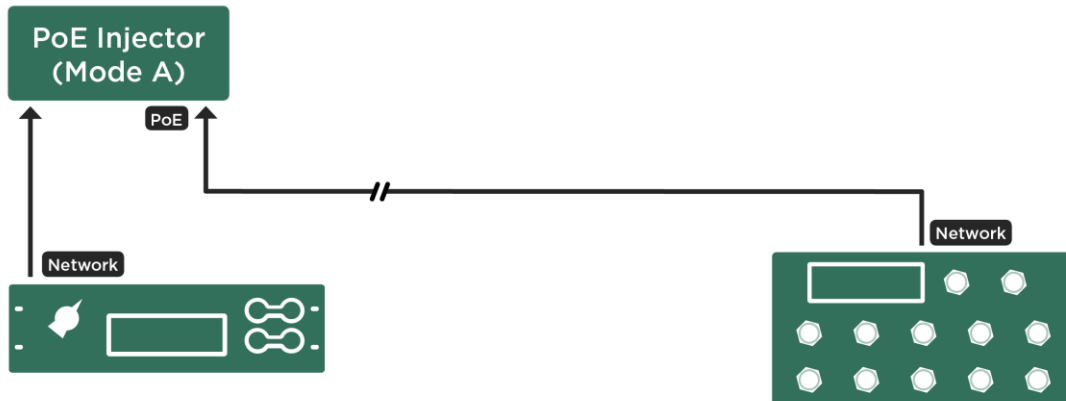
Incidentally, all these settings are also included in PROFILER backups.

Cabling

The PROFILER and PROFILER Remote communicate with each other via an ethernet cable. The cable included in the PROFILER Remote package with its Neutrik® etherCON® cable connector carrier has been carefully selected and is perfectly suited for this purpose. If you decide to use any 3rd party cable, please make sure it meets our quality standards.

The diameter of the wire is the critical factor. The cable delivered with the Remote meets American Wire Gauge 24 (AWG), which can support up to 7.5m (22ft) length. AWG 26 cables have a smaller diameter and can only support up to 5m (15ft). Cables with higher AWG e. g. AWG 28 should not be used with the Remote.

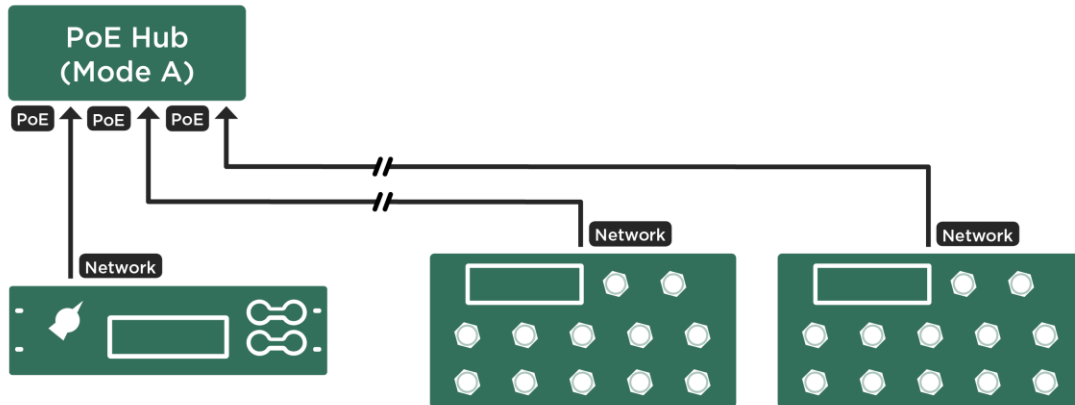
Cables in excess of 10m (30ft) might require a Power over Ethernet Injector (PoE Injector).



Cabling with PoE injector close to PROFILER

This will enable you to bridge distances of more than 100m (300ft). The PoE injector can be located close to the PROFILER e. g. in the same rack and connected via a short ethernet cable.

A PoE switch will even let you connect multiple Remotes to one PROFILER.



Cabling with PoE switch and multiple Remotes

PROFILER and Remotes should be connected to those ethernet sockets that provide PoE power. Supported are IEEE standard 802.3af-2003 as well as 802.3at-2009 mode A.

- ✓ Be aware that only mode A can be used; mode B is not functional!

Here is a list of equipment we have tested successfully:

PoE injectors:

- TP-LINK® TL-POE 150S

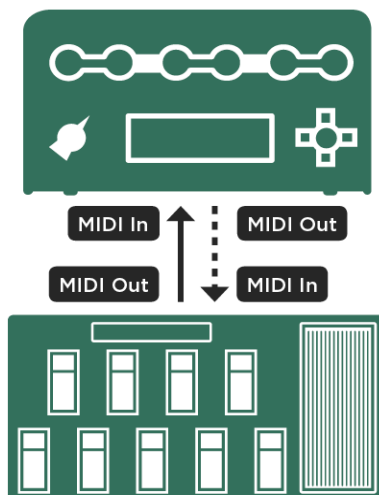
PoE switches:

- TP-LINK® TL-SG1008P (8 port gigabit switch with 4 port PoE)
- Allnet® ALL8085 Switch (8 Port 10/100TX)
- Intellinet 8-Port Fast Ethernet POE+ Switch (available with 19" rackmount)

- ✓ If you are using a POE switch, connect the PROFILER to its PoE ethernet sockets, as well as the Remote(s).

MIDI

The PROFILER connects easily to any universal MIDI controller device. Simply connect your MIDI controller to the MIDI IN socket of the PROFILER. There are several groups of MIDI messages that can be processed, which are outlined in the following sections.



One- and bi-directional MIDI connections

Continuous Controllers

The following MIDI control change numbers can be continuously controlled from a MIDI pedal or sequencer. You will also find the four pedal nodes here for the [Morph](#), [Wah](#), [Volume](#), and [Pitch Pedal](#). The value range is 0-127. Some foot controllers allow you to limit this range by setting a minimum and maximum value. However, this is not necessary for the Wah, Morphing, Pitch and Volume Pedal controllers, since the ranges can be determined in the respective effect, as well as in the [Volume Pedal settings](#).

#1	Wah Pedal
#4	Pitch Pedal
#7	Volume Pedal
#10	Panorama
#11	Morph Pedal
#68	Delay Mix
#69	Delay Feedback
#70	Reverb Mix
#71	Reverb Time
#72	Gain
#73	Monitor (Output) Volume

Effect Switches

MIDI control change numbers can be used to switch effects on or off. The switch for the [Tuner Mode](#) works in a similar way. Non-zero values (1-127) trigger “on”, while zero triggers “off”. Some other switches feature a dedicated hold function, when they are held down:

- The [TAP button](#) triggers the [Beat Scanner](#) when held.
- The Performance up/down switches (described further [below](#)) start scrolling the Performances when held.

For the hold functions to behave correctly, your switch must transmit a MIDI message both when it is pressed (key-on), and when it is released (key-off). Program your remote controller so that it sends a non-zero value (1-127) on key-on, and a zero on key-off. Some remote controllers are not able to send a key-off event and are therefore unable to take advantage of the hold function, unfortunately. In this case, send a value of zero for the key-on event, so that hold does not get triggered accidentally.

#16	All effect modules from A to MOD invert on/off
#17	A module on/off
#18	B module on/off
#19	C module on/off
#20	D module on/off
#22	X module on/off
#24	MOD module on/off
#26	DLY module on/off (without spillover)

#27	DLY module on/off (with spillover)
#28	REV module on/off (without spillover)
#29	REV module on/off (with spillover)
#30	Tap (values 1-127 activate Beat Scanner , value 0 deactivates Beat Scanner, any value triggers tempo)
#31	Tuner Mode select (signal muted, if "Mute Signal" is flagged in Tuner Mode)
#33	Rotary Speaker Speed (any value toggles between slow and fast)
#34	Delay Infinity (any value toggles between on and off)
#35	Delay Freeze (any value toggles between on and off)

- ✓ If you prefer triggering [Tap Tempo](#) without ever activating [Beat Scanner](#), send control change #30 always with value zero.

Rig Change in Performance Mode

[Performance Mode](#) offers 125 Performances, each with five Slots, allowing to store up to 625 Rigs independently from your browse pool. A typical application for a Performance would be to organize all the sounds you need for a song in one place.

All Slots in Performance Mode have fixed MIDI assignments. To accommodate for varying remote controller capabilities there are two methods available to address and load a Rig in any Slot.

With the “relative” method, you can step or scroll through the list of Performances using MIDI control changes #48 and #49. Ideally these two controllers should be assigned to the “Bank” buttons of your remote controller. MIDI control change #50-#54 will load the Rigs stored in Slots 1-5 within the Performance selected. The global parameter “[Performance Load](#)” determines what happens after you have sent control change #48/49 to step or scroll to another Performance. By default, “Performance Load” is set to “Pending” and the PROFILER waits until you send one of the control changes #50-#54; thereby finally selecting your Slot. If “Performance Load” is set to “Slot 1” or “Keep Slot”, the PROFILER will load the corresponding Slot as soon as any Performance is selected.

#47	Values 0-124 preload Performance 1-125, if “ Performance Load ” is set to “Pending”. One of the CCs #50-54 then loads one of the Slots, if this Slot is enabled.
#48	In Performance Mode: Value 1 steps one Performance up and starts scrolling after a while. Value 0 stops scrolling, or steps only one Performance up. In Browser Mode value 0 steps one Rig up, value 1 steps five Rigs up, value 2 steps to first Rig of next higher bank of five.
#49	In Performance Mode: Value 1 steps one Performance up and starts scrolling after a while. Value 0 stops scrolling, or steps only one Performance up. In Browser Mode value 0 steps one Rig up, value 1 steps five Rigs up, value 2 steps to last Rig of next lower bank of five.
#50	Loads Slot 1 of present Performance and in Browser Mode Rig 1 of current bank.
#51	Loads Slot 2 of present Performance and in Browser Mode Rig 2 of current bank.
#52	Loads Slot 3 of present Performance and in Browser Mode Rig 3 of current bank.
#53	Loads Slot 4 of present Performance and in Browser Mode Rig 4 of current bank.
#54	Loads Slot 5 of present Performance and in Browser Mode Rig 5 of current bank.

The second method is to send MIDI program changes from your remote controller. There are 128 program changes available in MIDI and these are assigned to each Slot as they occur within the Performances, in linear fashion:

```
Rig in Performance 1, Slot 1 loaded by program change 0
Rig in Performance 1, Slot 2 loaded by program change 1
...
Rig in Performance 2, Slot 5 loaded by program change 9
...
Rig in Performance 26, Slot 3 loaded by program change 127
```

You could also use the following formula: $(\#Performance * 5) - 5 + (\#Slot - 1)$

Due to the limit of 128 different program change values you can only address about 25 Performances. If you need more, you must use the MIDI bank select controllers which allow you to address multiple pages of 128 program changes each.

Here a few examples expanded by MIDI bank select:

```
Rig in Performance 1, Slot 1 loaded by bank select LSB #32: 0 program change 0
Rig in Performance 1, Slot 2 loaded by bank select LSB #32: 0 program change 1
...
Rig in Performance 2, Slot 5 loaded by bank select LSB #32: 0 program change 9
...
Rig in Performance 26, Slot 3 loaded by bank select LSB #32: 0 program change 127
Rig in Performance 26, Slot 4 loaded by bank select LSB #32: 1 program change 0
...
Rig in Performance 52, Slot 1 loaded by bank select LSB #32: 1 program change 127
Rig in Performance 52, Slot 2 loaded by bank select LSB #32: 2 program change 0
...
Rig in Performance 125, Slot 5 loaded by bank select LSB #32: 4 program change 112
```

Here are the formulas to calculate the MIDI program change numbers within each of the five MIDI banks:

Bank	Range	Bank select LSB #32 value #	Formula to calculate MIDI program change #
1	Performance 1 Slot 1 - Performance 26 Slot 3	0	$(\#Performance - 1) * 5 + (\#Slot - 1)$
2	Performance 26 Slot 4 - Performance 52 Slot 1	1	$(\#Performance - 26) * 5 + (\#Slot - 4)$
3	Performance 52 Slot 2 - Performance 77 Slot 4	2	$(\#Performance - 52) * 5 + (\#Slot - 2)$
4	Performance 77 Slot 5 - Performance 103 Slot 2	3	$(\#Performance - 77) * 5 + (\#Slot - 5)$
5	Performance 103 Slot 3 - Performance 125 Slot 5	4	$(\#Performance - 103) * 5 + (\#Slot - 3)$

While program changes are required to initiate the Rig load, bank select MSB and LSB are redundant. You don't need to send bank select MSB because Performance Mode always assumes value "0". Bank select LSB is not required if you navigate within the same MIDI bank.

These two MIDI control change numbers are associated with MIDI bank select:

#0	Bank select MSB (always value 0)
#32	Bank select LSB (values 0-4)

Rig Change in Browser Mode

You can assign up to 128 MIDI program change numbers to Rigs in your browse pool. These assignments are set in the System Settings on page “Browser Mode PrgChg”.

To assign a program change number to a Rig, first load the Rig in the Browser Mode. Then press the [SYSTEM button](#). Navigate to the page “Browser Mode PrgChg” using the PAGE buttons. Select a desired program change number using soft knob “MIDI PrgChg#” and then press the soft button “Assign”. Use the soft button labeled “Unassign” to erase assignments.

Without leaving this page you can use the [RIG navigation cross](#) to load other Rigs from your browse pool and perform more assignments.

Received MIDI program changes are indicated by a small “#” icon and control changes by a small knob icon on the home screens in both Browser and Performance Mode. If bi-directional MIDI communication is established, this is reflected by a “two arrows” icon.

Instead of using MIDI program changes, you can use control changes (#48-54) to load Slots in Performance Mode and Rigs in Browser Mode. Please refer to the tables in the previous paragraph.

MIDI Global Channel

By default, the PROFILER receives MIDI commands on all sixteen MIDI channels (“Omni”). However, if you want to control multiple devices independently, you can set a specific channel in [System Settings](#) on the “MIDI Settings” page. Now, the PROFILER will only receive messages on that channel.

Transmitting MIDI Commands to Two External Devices in Performance Mode

MIDI commands can be triggered and transmitted to external devices (maximum 2), whenever a Slot is loaded in Performance Mode. You can, for instance, use this to switch presets, or to control parameters, of effects devices by other manufacturers that are connected to the effect loop of the PROFILER.

- In [System Settings](#), navigate to “Perform Mode: MIDI” page, and use soft knobs to assign a MIDI channel to each of the external devices. Please note that this page is only accessible in Performance Mode.
 - Use soft buttons to determine whether the corresponding external devices are connected to [MIDI Out or MIDI Thru](#).
 - For your convenience, you can also assign meaningful names to the two external devices using soft buttons.
 - Press “Edit, “Slot Settings” > “MIDI Settings”, then select the MIDI program change numbers associated with the currently loaded Slot. Repeat this step for every Slot you intend to send MIDI program changes from.
- ✓ As soon as you select MIDI Thru to transmit MIDI commands by Slot the PROFILER will stop forwarding incoming MIDI data to the MIDI THRU.

Transmitting Pedal Controllers for Morphing, Wah, Volume, and Pitch to Two External Devices

The four pedal controllers for [Morphing](#) (control change #11), [Wah](#) (control change #1), [Volume](#) (control change #7), and [Pitch](#) (control change #4) can also be sent via MIDI to those two external devices configured on the “Perform Mode: MIDI” page in [System Settings](#). This works even if the expression pedals are connected to the PROFILER directly, or to the PROFILER Remote. To enable this feature please select the “Pedals to MIDI” option in [System Settings](#).

Transmitting User Interface to MIDI Global Channel

If “UI to MIDI” is selected in [System Settings](#), nearly all parameter changes within the PROFILER user interface, and the connected PROFILER Remote, will be forwarded through the MIDI OUT. You could, for instance, create a daisy chain of PROFILER units, all following whichever commands you enter on the leading PROFILER, or connected Remote, including any Rig or Slot changes.

This stream of MIDI commands will be sent on whichever channel has been selected to be the [MIDI Global Channel](#). If this is set to “Omni”, MIDI channel 1 will be used for “UI to MIDI”.

- ✓ If you intend to transmit other MIDI commands in Performance Mode, or if you want to transmit pedal controllers simultaneously with “UI to MIDI”, make sure that you either select different MIDI channels or different MIDI outputs to avoid logical interferences. For example, if you’re sending “UI to MIDI” via MIDI channel 1, select MIDI channel 2 and 3 for the two external devices.

NRPN

The PROFILER features more than 400 parameters, so you can’t address them all with a standard MIDI control message, which is limited to 128 parameters. However, the PROFILER also supports the NRPN (Non-Registered Parameter Numbers) protocol, which allows the addressing of 16384 parameters, with a resolution of 16384 values (14 bit).

For more detailed information regarding NRPN please consult *MIDI Parameter Documentation*, which is available here: www.kemper-amps.com/downloads

Getting Organized

Whether you are using a handful of Rigs, or hundreds, you might be looking for effective ways to organize your browse pool. The PROFILER offers various features to keep an overview, find Rigs quickly, or do some housekeeping.

Views

In Browser Mode, you can use either [TYPE](#) or [soft button "Views"](#) to select a specific View. This will restrict the list of Rigs in the browse pool to a specific subset of your choosing.

All Rigs	You can see all Rigs in your browse pool.
Current Author	Only Rigs by the author of the Rig currently selected will be displayed.
Favorites	You will see only those Rigs that you have marked as your "Favorites". See below for how to create and handle favorite Rigs.
Last Imported	Only shows Rigs that you have imported recently. Immediately after a Restore procedure, all Rigs will be shown in this View until you perform the next import.
My Rigs	Only shows Rigs in which the tag "Author Name" matches the owner's name of the PROFILER. You can verify the owner name, and its exact spelling, by selecting "Startup Dialog" in the System Settings .
Non-Favorites	Only shows the Rigs not marked as "Favorites".
Just Bass Rigs	Only shows the Rigs in which the tag "Instrument" is set to "Bass".

Any View can be combined with a Sort Order criteria, which you can choose using the corresponding soft button. The available Views are: “All Rigs”, “Favorites”, “Non-Favorites”, “My Rigs”, “Current Author” and “Just Bass”. Any Rigs within these Views can be further sorted by Rig Name, Rig Author, Creation Date, Amplifier/Cabinet Name, and Gain.

- ✓ While browsing Rigs, two numbers will be displayed in the format “x of y”, where “x” represents the position of the currently selected Rig and “y” indicates the number of Rigs included in the present view. So, if you choose the view “All Rigs”, “y” will represent the total number of Rigs stored in your browse pool.

Favorite Rigs

Favorite Rigs are indicated by a small asterisk (“*”) on the right side of the home screen. In [System Settings](#) you can set the flag “Auto Favorite”, so that any Rig that you store will automatically be flagged as “Favorite”, and therefore listed in this View. You can manually flag (or unflag) Rigs as “Favorite” in two ways:

- Push the [RIG button](#) for about two seconds on the home screen in Browser Mode.
- Push soft button “Favorite” in [Rig Settings](#).

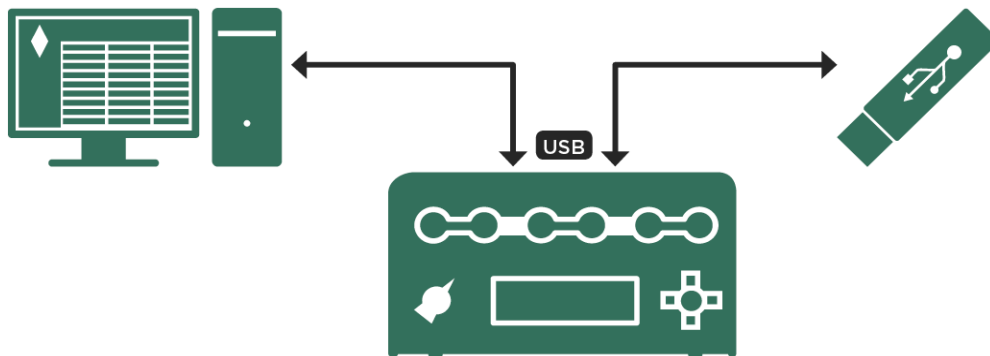
There’s no need to store the Rig again, as the status of “Favorite” is automatically associated with the name of the owner and captured within the Rig file. Consequently, when you share your Favorite Rigs with other users, these don’t become their Favorite Rigs automatically. Should you, by intent or otherwise, change the name of the PROFILER owner in the Startup Dialog, your favorite Rigs will no longer be displayed in the View “Favorites”. But your preference is not lost! You just need to re-enter the original owner name, and your list of Favorite Rigs will reappear. If you would prefer stored Rigs not to be automatically flagged as a “Favorite”, you can modify the parameter “Auto Favorite” in [System Settings](#).

Erase Non-Favorites

If you want to clean up your PROFILER, you can use the “Erase Non-Favorites” soft button in System Settings. All Rigs will be erased, except for “Favorites” and “My Rigs”. We recommend that you create a backup before you use this function.

Rig Manager

Rig Manager is a librarian software designed to help manage your personal amp collection. It also keeps your PROFILER operating system up to date. The software is free of charge and can be downloaded on the KEMPER Amps website: www.kemper-amps.com/downloads



Import and export of Rigs via Rig Manager or USB memory stick

Updates, Backups and Sharing Sounds

The PROFILER operating system should be updated on a regular basis to receive refinements and new features. All you need is an internet connection, a PC or Mac and a USB memory stick.

Operating System Updates

Before we lay out the technical steps to perform an update of the PROFILER operating system, let's explain the concept of how the PROFILER software evolves:

KEMPER is constantly improving the software in terms of new features, enhanced capabilities, and fixes for known issues. Software updates are available on the KEMPER download page, and are free of charge to all users. All you need is an active user account, to which a PROFILER is registered with its serial number. As soon as you log into your account, you will have access to any available upgrade packages.

Each new software revision is first tested internally by the developers, and by our team of experienced beta testers. As soon as it seems to be suitably mature, it will be published as a public beta. A public beta might be followed by another public beta which will include fixes and enhancements based on initial user feedback. Generally speaking, public beta software is not recommended for critical environments and productions. However, if you don't mind taking a bit of a risk and want to check out the latest and greatest innovations, you are invited to test and share your valuable input and feedback, for example in our user forums.

By the way, if you create a backup before you upgrade, you can always downgrade to our latest release version, restore your backup, and be on safe ground for your next job. This way, you can completely avoid occasional downward compatibility issues that can affect data stored under a new operating system. Downgrades follow the same procedure as upgrades.

After a few iterations, the public beta software normally matures into a stable OS. At this point we elevate its status from public beta to release software. Not every revision makes the cut to become a release. So, don't be surprised, if a release 3.3.0 is for example followed by a release 4.0.6.

If you would rather play it safe, give the public beta revisions a miss and just move from one release to the next. It is highly recommended to keep the release software current. As soon as we publish a new release, you should at least plan the next upgrade. Perhaps you want to finish your ongoing tour first, but then you should move on.

There is no reason to be concerned if one release is 3.3.0 and the next is 4.0.6. The step from 3 to 4 indicates major new functionality, e.g. [Morphing](#), while the other numbers indicate smaller enhancements and fixes. 4.0.6 is just the first software revision that was good enough to qualify as a release software.

There are two methods to upgrade your PROFILER: Current [Rig Manager](#) revisions evaluate the operating system installed on your PROFILER as soon as it gets connected and suggest a fully automated upgrade if a more current operating system is available. More information about this convenient feature can be found in the *Rig Manager Manual*. The more traditional method involves an USB memory stick. Here are the steps to update your PROFILER to a newer operating system using an USB stick:

- You will need to use an empty USB stick to transfer the files from your Mac or PC to the PROFILER for the first time. The USB stick should be pre-formatted with file system FAT32. When you connect the USB stick for the first time, the PROFILER will format it to ensure maximum reliability. Please be aware that formatting a USB stick will delete all the data on it! A USB stick that has been formatted by the PROFILER will contain the folders “Backups”, “OS update”, and “Shared”.
- The next step is to download the latest operating system. Updates are free of charge and can be downloaded from the following URL: www.kemper-amps.com/downloads
- You will find the latest release software under download category “Operating System Updates”. The latest public beta software can be found under “Operating System Beta Versions”. Select and download the upgrade package.
- Expand the downloaded .zip archive. Always check out the ReadMe document included in the download package for important hints upfront. The Addendum manual contains useful information related to major new features and organized by operating system revision.
- Search for the update file called “kaos.bin” in the archive. Copy this file into the root directory on the pre-formatted USB stick using your Mac or PC. The root directory is the first, or top-most, directory in the hierarchy.
- Next, unmount the USB stick from your computer and plug it into the up and running PROFILER. Follow the on-screen instructions which will appear after a couple of seconds.

- ✓ Usually, you can update to the latest operating system in one step. However, if the operating system currently installed on your PROFILER should happen to be older than 1.8.2 Release, you need to take an interim step, and upgrade to that operating system version first. Leaving this step out might lead to an error.

Creating Backups

We recommend backing up your Rigs, presets, Performances, and settings on a regular basis. To do so, please plug the prepared USB stick into your PROFILER, switch into Browse or Performance Mode, hit soft button labeled “USB Stick” and chose the “Backup/Restore” option. The backup archive will contain all your Rigs, Performances, module and section presets, [MIDI assignments](#), [Snapshots](#), and global settings. If an older backup is already present on your USB stick, it will not be deleted. Each backup archive is given a unique name. To backup, select the soft button labeled “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.

Restoring Backups

This option restores a backup from your USB stick to the PROFILER. If multiple backups are detected, you will be asked to select one from the list. Note that restoring a backup will replace all Rigs, Performances, module and section presets, MIDI assignments, Snapshots and global settings. To merge a backup file with the existing content, please proceed as follows:

Importing Rigs, Performances, and Presets

We offer you access to a mind-blowing variety of the highest quality PROFILEs and Rigs. Those and other goodies are available in [Rig Manager](#) and can also be downloaded from our website here: www.kemper-amps.com/downloads

You can either transfer these Rigs from your Mac or PC to your PROFILER using our [Rig Manager](#) application or use your dedicated USB memory stick. In this case please copy the Rigs to the directory called “Shared” on your USB memory stick. Next, plug the USB stick into the USB slot of your PROFILER and switch to Browser Mode. Then press the soft button “USB Stick”. You will be presented with an option to import the content. Importing the content will merge the new data with your existing Rigs, Performances, presets, and Snapshots.

- ✓ Import and export functions are only available in Browser Mode.

Selective Export

You can export single Rigs or all Rigs included in the current View to your USB stick by using just a single command. From the Import/Export menu, select soft button “Export current Rig” to export the current Rig or soft button “Export Rigs in View”. This function is corresponding to the [View](#) selected on the home screen; so, for instance, with View set to “All Rigs” you will be exporting all Rigs contained in your browse pool. When View is set to “Favorites”, you will only export Rigs that are currently marked as your favorite Rigs, and so on.

- ✓ By using a USB lock you can prevent anyone else initiating an unauthorized export or backup of your precious Rigs and presets. To avoid mechanical damage of the [USB connector](#), you might need to disconnect the USB lock before putting your PROFILER Head into a bag or hard case.

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 have 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 will find that it's quite easy to do; this guide can show you the basics and get you started right away.

General Considerations

To create a PROFILE™, the original amplifier, which we will refer to as the “reference amp”, has to be connected to the PROFILER using the [DIRECT OUTPUT](#) and the [RETURN](#) input on the back. The 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 PROFILER to learn about the nonlinear behavior of the tube architecture, and the dimensions of the passive components in the original amp. The 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 PROFILER. Even the characteristics of the guitar 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 PROFILER determines the unique way that your reference amp changes the sound of your guitar, dynamically, over time. This information is then used to create a digital PROFILE of your reference amp.

You can PROFILE solid-state amps, as well as software modeling amps, although the results from PROFILING modeled amps can sometimes be underwhelming. The reason for this is that some emulations use techniques that don't necessarily match the analog reality.

PROFILING with Effects in the Recording Chain

Many guitarists get their signature sound by combining their tube amp with distortion pedals, booster pedals, and equalizers/filters. If you want to, you can keep these in the signal chain during the PROFILING process - they will all be accurately included as a part of the reference amp sound. However, there are a few exceptions: some distortion pedals use a special design that cannot be captured 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 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 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 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 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 PROFILER is designed to react to any guitar in an identical way to the reference amp.

Monitoring While Taking PROFILES

The output of the reference amp can be monitored through the outputs of the PROFILER. This way, you can switch between listening to the original reference amp signal and its PROFILE, using the soft buttons in PROFILER Mode. In fact, to avoid confusion, we recommend that you only monitor the reference amp using the PROFILER. It's a good idea to place the guitar 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 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 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 this is by using only headphones to monitor the output of the PROFILER while PROFILING. You can also make appropriate settings in your DAW to prevent the PROFILER from being routed back into itself.

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 artefacts, from your reference amp then you probably have a ground loop. Press the GROUND LIFT button on the back of the PROFILER for both the [MAIN OUTPUTS](#) and the [RETURN](#). If that does not solve the problem, try different combinations using the other GROUND LIFT buttons. It is important that at least one of the GROUND LIFT buttons is not pressed to ensure that the 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 PROFILER when you set the A/B comparison to "KEMPER amp", and the reference amp when you switch to "Reference amp". If you don't, re-connect your reference amp to the PROFILER.

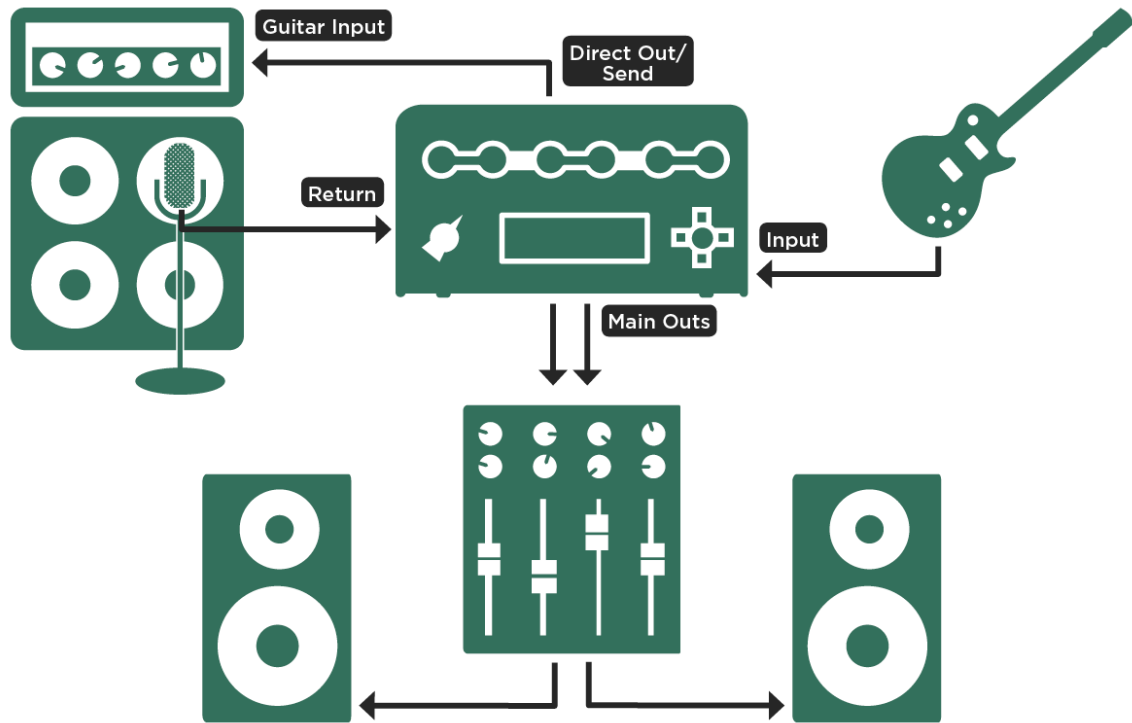
- ✓ We do not recommend using a guitar cabinet as a reference monitor for PROFILING. For best results, please do your PROFILING in a typical studio setting, using either studio monitors, or a PA.
- ✓ If your amp provides a spring reverb, remember to turn it off for the PROFILING process.

Making Connections

Connections for PROFILING a Guitar Amplifier

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

- ✓ Connect your guitar to the [INPUT](#) of the KEMPER PROFILER.
- ✓ Connect the [DIRECT OUTPUT/SEND](#) of the PROFILER to the guitar input of your reference amplifier.
- ✓ Connect your microphone, or microphone preamp, to the [RETURN](#) of the PROFILER (use either the XLR or quarter-inch input, depending on your microphone or microphone preamp).



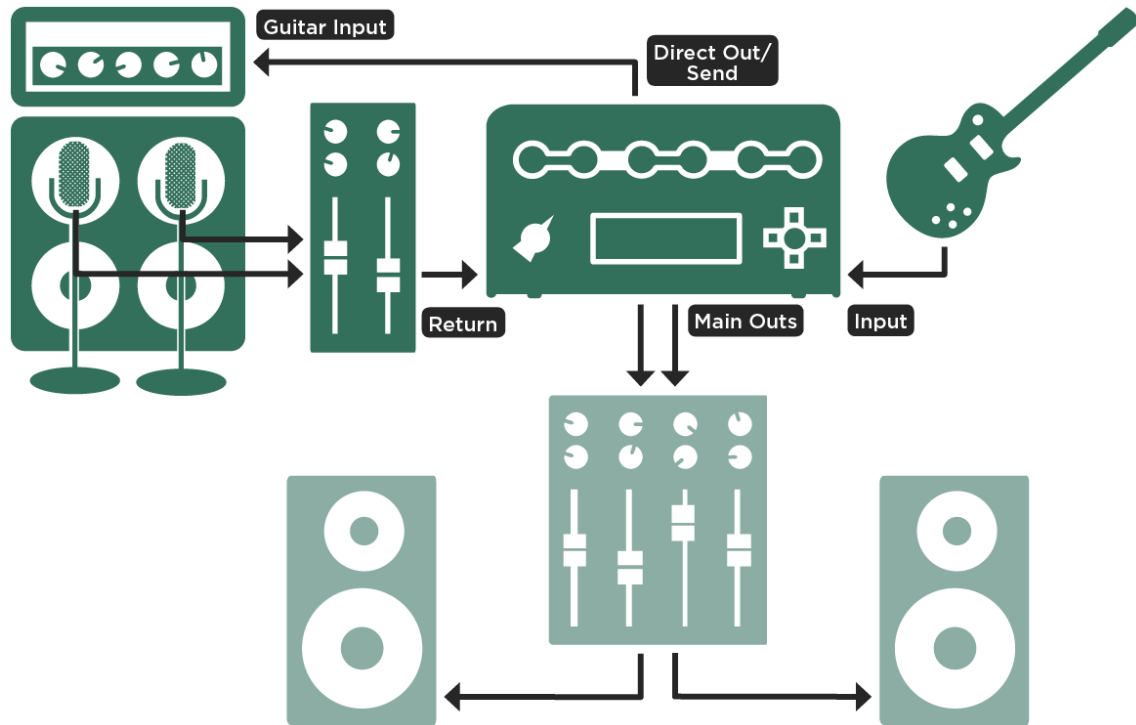
Normal connections

The above assumes that you are miking the guitar 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 KEMPER DI box, you can connect the line-out from a load box directly to the [RETURN](#) of your PROFILER.

The reference amp must be connected to the PROFILER in such a way that only the PROFILER will send and receive the signals. This effectively turns the 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

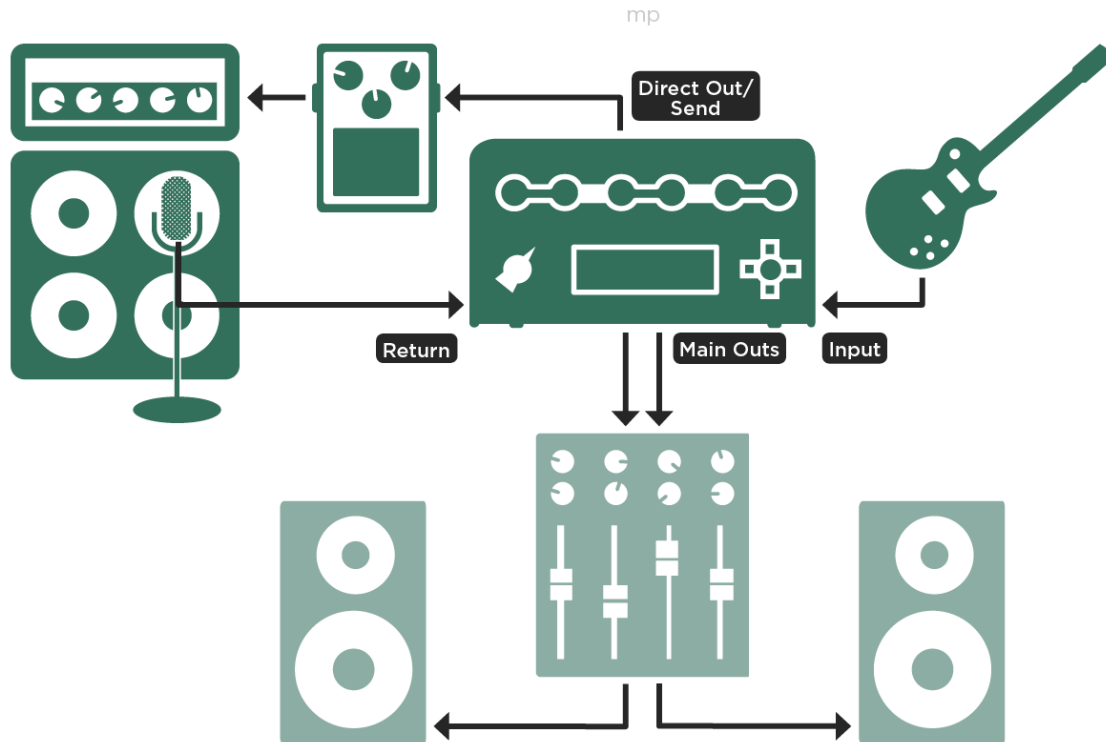
subgroup of your mixer, and then route the output of that subgroup directly to the PROFILING input. You can use the equalizer and phase switches on the mixer to optimize the mix. Make sure that the signal is only routed to the PROFILER and isn't duplicated at the main outs of the mixer.



Connections with multiple microphones

It's a good idea to make the 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 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



Connections including a stomp box

- Connect your guitar to the [INPUT](#) of the PROFILER.
- Connect the [DIRECT OUTPUT/SEND](#) from the 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](#) of the PROFILER.

- ✓ The PROFILER can only take an accurate PROFILE of preamp stomp boxes, such as overdrive and distortion pedals, equalizers and filters, tube preamp pedals, and so on. Attempting to PROFILE a delay, reverb or modulation pedal is unlikely to work as expected.

Connections for PROFILING a Computer-Based Guitar Amp Simulation

- Connect your guitar to the Input of the PROFILER.
 - Connect the [DIRECT OUTPUT/SEND](#) from the 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 this output to the [RETURN](#) of the PROFILER.
- ✓ Be sure to disengage the noise-gate in your guitar amp simulation software before PROFILING it.

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 have 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 Browser 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 PROFILER effects in the reference rig while you are PROFILING is not a problem. Any active effects or stumps will still be audible when you switch to your reference amp, so you can configure them 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 stumps and effects that were part of the original Rig will be stored also.

- ✓ If you prefer a pure sound with no effects, either switch any stumps and effects off prior to PROFILING, or choose a Rig with no active stumps and effects.

Next, turn the [chicken head knob](#) 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 PROFILE.

Levels

Set “Return level” using the corresponding soft knob so that the level of the reference amp roughly equals the level of the internal sound of the 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 output. Don’t worry too much about achieving a perfect volume match; during the profiling process, the “Return Level” will be fine-tuned automatically to match the unity level of the 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 if you don't. 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 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 PROFILER to “Clean”. In truth, this step isn’t strictly necessary; the PROFILER will detect if the reference amp is clean during the PROFILING process. However, setting the 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 “Distorted”.

A 4-band equalizer is available on this page to shape the signal returning from your reference amp, similar to how you would equalize the microphone signal on a mixing desk, before it is returned. Tweaks of this equalizer will be integrated into the resulting PROFILE.

As soon as you select “Start PROFILING”, the 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 Amp” 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 every time you switched back to the 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 twenty seconds. This is no

time for a meaningful solo - you need to play several chords, with attitude! This will generate inter-modulation in the distortion that the PROFILER needs to do its refining. Be sure to strum especially hard so that the 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 until you are satisfied.

The refining process is 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 as a new Rig in your browse pool. We highly recommend that you save the PROFILE before you start modifying its parameters, so as to preserve the original settings. As soon as you press STORE you will be guided through three pages with tags (Rig Tags, Amplifier Tags, Cabinet Tags). Take the time to enter meaningful information, so that you can easily distinguish the PROFILEs you create.

Congratulations! You have added a new guitar amp, and a new guitar cabinet, to the arsenal of the PROFILER. You are now free to combine each of them with other guitar amps or guitar cabinets 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 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 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 cranking up GAIN to distort this sound if you want to! Inside the PROFILER, the "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 "Definition" value is automatically set to a position that matches the reference amp. This allows you to 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 taken a PROFILE of 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 (value 7.0), and set "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 PROFILER is set to a neutral state, leaving you free to tweak the sound to your taste.

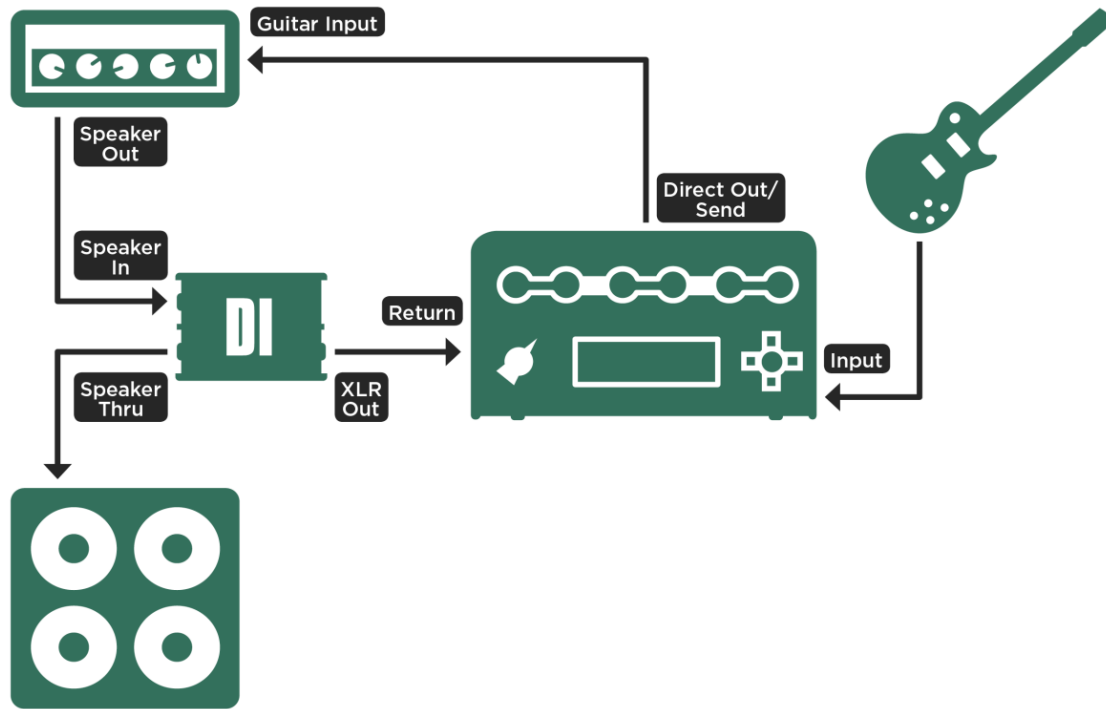
To make another Amp PROFILE, just press the soft button labeled "Create new PROFILE". See? We told you it was easy!

How to PROFILE an Amp without a Cabinet (Direct Amp PROFILES)

So far, we have taken PROFILES of combinations of guitar amplifiers and guitar cabinets. We call these “Studio PROFILES”. The purpose of a [Direct Amp PROFILE](#) is to capture the sound of your tube-amp including its power amp.

When this PROFILE is later run through the internal Class D power amp of your PROFILER, or a separate solid-state power amp, into a guitar speaker, it will faithfully recreate the sound and feel of the original tube-amp. The Direct Amp PROFILE can later be merged with the respective cabinet portion of a Studio PROFILE. Alternatively, Direct Amp PROFILES can be paired with arbitrary [cabinet impulse responses](#), imported by our Cab Maker software. The result is a complete PROFILE that can run a physical guitar cabinet onstage for monitoring, and simultaneously feed the virtual guitar speaker sound to the main PA.

While it is relatively straightforward to capture [Direct Preamp PROFILES](#) from line level outputs of bass amps, or the send outputs of preamps, capturing them from tube amps that include the power tube section is a bit more challenging. It requires you to tap the sound where it is about to hit the guitar cabinet. This tap is the speaker output, where high voltage and high wattage occur, meaning you will need a dedicated DI box for this purpose. A specialized DI box like for example the KEMPER DI box can scale down the voltage to a line level signal, suitable for the PROFILER, on a XLR output jack. The high-power signal is forwarded to the guitar cabinet through a different output jack.



Connections PROFILING with DI

◆ Why do I need my guitar cabinet when I want to capture a PROFILE without a cabinet?

It's true, the sound of the speaker will not be captured in this case, but the complex impedance behavior of the speaker is still needed to create those oft-mentioned interactions between the power tube amp and the connected guitar cabinet. The DI box will ensure that there are real-life interactions for the PROFILING process to capture. Later, when the PROFILE is played back through the built-in Class D power amp, or an external solid-state power amp, it will recreate the same impedance situation to that of the connected guitar cabinet. This is the key to making our built-in power amp sound like a tube power amp. For this reason, we recommend that you don't use any kind of

power-soaks or power-attenuators, either as a substitute for, or in addition to, the DI box and true speaker. Those devices work mostly with simple resistors, which might inhibit the desired impedance interactions, thereby resulting in an inauthentic PROFILE.

Besides the DI box, it helps if you own either a PROFILER with built-in power amp, or a separate solid-state power amp, for capturing a [Direct Amp PROFILE](#). Otherwise, it is not possible to immediately play and check the PROFILE that has been captured.

◆ How to setup Direct Amp PROFILING

- Connect your guitar to the [INPUT](#) of your PROFILER and the [DIRECT OUTPUT/SEND](#) to your reference amp (this part is identical to regular studio PROFILING).
- Use a speaker cable to connect the speaker output of your reference amp to the speaker input of the DI box.
- Use another speaker cable to connect the speaker bypass output of the DI box to your guitar cabinet.
- Finally, connect the line output of the DI box to the [RETURN](#) of the PROFILER.
- Switch off the optional speaker simulation of the DI box, if it has one.

It is not mandatory to connect the [MAIN OUTPUTS](#) to a monitor speaker system, or to use headphones, as you would end up listening to the Direct Amp PROFILE without a guitar cabinet. This sound is very harsh and unnatural. A valid A/B comparison is only possible by connecting your guitar cabinet to the PROFILER power amp, once the PROFILE is captured.

- Enter the PROFILER Mode.
- Play your guitar, and check if the OUTPUT LED shows a signal.
- Adjust the “Return level” parameter so that the LED shows green at input signals. An exact adjustment is not necessary, the correct volume will be found automatically by the PROFILING algorithm.
- Now you can start the PROFILING procedure, as explained earlier in this chapter. Normally, the PROFILER will automatically detect a Direct Amp PROFILE, switch off the cabinet module and capture the entire PROFILE in the amplifier module. In exceptional cases, it can happen that the Direct Amp PROFILE isn’t recognized automatically. In that case manually select “No Cabinet” and repeat the process.

The recommended refining procedure, which comes after the automated part of the process, is a bit of a shot-in-the-dark, as you will continue to hear your reference amp through the physical guitar cabinet only. Still, it's a good idea to go through with it by playing chords on your guitar, as explained in the chapter "Refining the PROFILE".

When the PROFILING is done, it's time to listen to the result!

- Turn down "Monitor Volume" for the power amp of the PROFILER.
- Put your reference tube amp into standby mode, as it should not run without a speaker connected.
- Unplug the speaker cable (the one going to the speaker), and plug it into the [SPEAKER OUTPUT](#) of the power amp.
- Play, and turn up "Monitor Volume" carefully.
- Done! When played through your guitar speaker, the PROFILER and your tube amp will sound identical.
- Save your Direct Amp PROFILE.

How to Create Merged PROFILES

If you are planning to take both a [Direct Amp PROFILE](#) and a Studio PROFILE of the same tube amplifier, for merging them later, we recommend the following sequence:

- ✓ If you like, do the setup and cabling for both PROFILES. Position the microphones by the guitar cabinet as required. However, you will not be able to take both PROFILES in one go, since the PROFILER only supports one return signal for PROFILING.

Make all required adjustments to the amp while listening to it right in front of the guitar cabinet. Don't worry about the mic'ed sound at this stage, as the direct sound cannot be adjusted by anything other than the amplifier controls.

- Capture the Direct Amp PROFILE first, as described above, and save it.
- ✓ Do not touch the controls of the amp after capturing the Direct Amp PROFILE, as both PROFILES, and thus the eventual Merged PROFILE, must be based on the same original amp sound.

- Connect the microphone (instead of the DI box) to the return of the PROFILER. If you want to disengage the DI box, and connect the guitar cabinet directly, don't forget to put your reference amp on standby first.
- Prepare for the capture of the Studio PROFILE by adjusting the microphone positions. To optimize your mic'ed sound, use either the 4-band equalizer in PROFILER Mode, or the equalizers on your mixing desk.
- Capture the Studio PROFILE.

Now, you can merge the cabinet portion of the Studio PROFILE into the Direct Amp PROFILE. Here's the procedure in detail:

- Select the Studio PROFILE in Browser Mode.
- Hold the CABINET button for at least one second until it's in focus.
- Press [COPY](#) on the front panel.
- Press [EXIT](#) and select the respective Direct Amp PROFILE.
- Hold CABINET button again until it's in focus.
- Press [PASTE](#).
- "Merge Cabinet" will appear under a [soft button](#). Push it!
- You can undo/redo the merging by pressing "Merge Cabinet" again and compare results.
- Press EXIT and store your new PROFILE.

Done!

PROFILING a Rotary Speaker Cabinet

The PROFILER already ships with a Rig named "CK Rotary Speaker", 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 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 [RETURN](#) of the PROFILER. 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 speaker and only capture the typical sound character. The resulting PROFILE will probably sound weird and uninspiring on its own, but when you engage the effect type [Rotary Speaker](#) in the MOD module, you'll hear the rich and animated sound of your original rotary speaker cabinet.

✓ Tip: Although the PROFILE is captured in mono, you can use the Rotary Speaker in the X, MOD or DLY module 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 PROFILER is doing during the PROFILING process:

During the first phase, you will hear white noise with a rising amplitude. The 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 PROFILER learns about the circuitry of the reference amp and the frequency response of the guitar 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 PROFILER learns about the dynamic distortion curve of the tubes in the reference amplifier. Using this information, the PROFILER can recreate that curve with the highest possible accuracy. This is also true for transistor-based, as well as digitally-modeled, distortions.

In the third step, the 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 PROFILER to take a "fingerprint" of the DNA of the reference amp's sound. The distortions 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 PROFILER will reproduce faithfully, once the measurements have been taken.

Trouble Shooting

This chapter is intended to help recognize certain error states which can be corrected by the user. Any error states not covered here should be referred to KEMPER Support. Generally, please keep the PROFILER operating system up-to-date and create backups on a regular base. The current operating system release and latest public beta are always available on: www.kemper-amps.com/downloads

◆ PROFILER doesn't power on

In case the PROFILER does not start, and the LEDs and display stay inactive, please check your electricity supply and cabling. If these are intact, it is possible that the internal safety switch protecting the PROFILER against overcurrent has been activated. In this case: pull the power cable, wait about two minutes, reconnect the cable, and try to activate the PROFILER by turning the [chicken head knob](#).

◆ PROFILER doesn't boot up completely

If the PROFILER has not been shut down properly with the [chicken head knob](#), the result could be that the PROFILER isn't able to completely restart. In order to rebuild the internal database, please push and hold the [RIG button](#) while you switch on with the chicken head knob. Hold the RIG button until the message "Initializing current Rig" appears. Your data and settings are not impacted by this procedure.

◆ Noisy outputs

If you should hear noise on any outputs, please check the GROUND LIFT buttons on the back panel. These may only be used selectively, and must never be activated all at the same time. This is very important. Otherwise, you might not only face a shielding issue, but also a serious health risk.

If it's just the [S/PDIF OUTPUT](#) that's producing noise, please ensure that the shielding of the RCA jack has no contact with the PROFILER housing.

◆ Internal power amp has switched off

If the [built-in power amp](#) (Powerhead or PowerRack) switches off during normal operation, this might be an indication of overheating. Please make sure there is sufficient air circulation and that the PROFILER isn't positioned on top of other devices producing heat. The power amp will automatically reactivate as soon as its temperature normalizes.

◆ Unexpected events

In case any inputs or outputs don't operate as you would expect, or you experience any other unpredicted behavior, the soft button "Init Globals" in [System Settings](#) will reset most global parameters in System Settings and [Output Section](#) as well as returning all [locks](#) to their default state. This way, you are always able to recover a defined state of settings. Your stored Rigs, presets, Performances, and Slots won't be impacted by this reset. You could also restore your latest backup, which will recover your complete global settings as well as entire content. We strongly recommend that you [create backups](#) whenever you have performed any major parameter adjustments, or created new content, and that you keep your USB memory stick handy. Given the size of customary USB stick you could easily keep hundreds of PROFILER backup archives available. Another best practice is to store the operating system file "kaos.bin" in the root directory of your USB stick. This way, not only can you effectively upgrade your PROFILER, but also keep some additional recovery options.

Customer Support

Any other error states under current operating system should be addressed to Customer Support, either via phone or e-mail. More information about the Kemper hotline, along with an e-mail template, can be found on the web-page www.kemper-amps.com/contact. Please report all relevant information, such as your operating system revision, and how the situation can be reproduced.

Technical Specifications

KEMPER PROFILER Specifications

◆ Dimensions

PROFILER Head and PowerHead

Height: 21,7 cm (8.54 inches)

Width: 37,8 cm (14.88 inches)

Depth: 17,3 cm (6.81 inches)

PROFILER Remote

Height: 7,5 cm (2.95 inches)

Width: 42 cm (16.53 inches)

Depth: 18 cm (7.09 inches)

PROFILER Rack and PowerRack

Height: 13,9 cm (5.47 inches), 3 HE (3 RU)

Width: 48,3 cm (19 inches)

Depth: 22 cm (8.66 inches)

◆ Weight

Head: 5.32 kg (11.73 pounds)

PowerHead: 6.5 kg (14.33 pounds)

Remote: 2.9 kg (6.39 pounds)

Rack: 5.00 kg (11.02 pounds)

PowerRack: 6.18 kg (13.62 pounds)

◆ Analog Inputs

Front INPUT: ¼-inch TS unbalanced, dynamic range >108 dB, impedance 1 megohms

ALTERNATIVE INPUT: ¼-inch TRS balanced with ground lift, dynamic range =105 dB, impedance 825 kohms

RETURN: XLR balanced, ¼-inch TRS balanced with ground lift, dynamic range =105 dB, impedance 825 kohms

◆ Analog Outputs

MAIN OUTPUTS L and R: XLR balanced

¼-inch TS unbalanced with ground lift, max output level: XLR +22 dBu, TS +16 dBu

MONITOR OUTPUT: ¼-inch TS unbalanced with ground lift, max output level: +16 dBu

DIRECT OUTPUT/SEND: ¼-inch TS unbalanced with ground lift, max output level: +16 dBu

Output dynamic range: >108 dB

HEADPHONE Output: ¼-inch TRS stereo, 32-600 ohms, 330 mW @ 32 ohms, 220 mW @ 600 ohms

◆ Power Amp (PowerHead and PowerRack only)

SPEAKER OUTPUT: 600 watts at 8 ohms, 300 watts at 16 ohms

◆ Control and Data Interfaces

MIDI IN/OUT/THRU: 5-pin DIN connectors

SWITCH/PEDAL: ¼-inch TRS, each for mono/stereo switch or expression pedal
(10 kohms min, 100 kohms max. impedance)

Network: RJ45 connector

USB: USB 2.0 (FS) compatible device, USB-A and USB-B connectors

◆ Digital Inputs and Outputs

S/PDIF IN/OUT: 44.1/48/88.2/96 kHz (24 bits) with RCA phone connectors for coax cables (Master only)

◆ Electrical Requirements

Line voltage: Head and Rack: 90-275 V AC, PowerHead and PowerRack: 100-125 V or 190-245 V AC

Frequency: 50 Hz to 60 Hz, single phase

Power consumption: standby >0.5 watts, operation Head/Rack 13-27 watts and PowerHead/PowerRack 30-800 watts

◆ Environmental Requirements

Operating temperature: 10° to 35° C (50° to 95° F)

Non-operating temperature: -20° to 47° C (-4° to 116° F)

Relative humidity: 5% to 95% non-condensing

Maximum altitude: 3000 m (10,000 feet)

◆ Electrical Approvals

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

EN 55024: 1998 + A1:2001 + A2:2003, 2010