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Special thanks to the Beta Test Team, who were invaluable not just in tracking down bugs, but in making this a better product.

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# 1 Introduction

Powered by the GUITAR RIG platform, a dozen of TRAKTOR's tried and tested floor-rocking effects have been adapted for use within your own productions. TRAKTOR has established itself as the DJ software of choice for the world's top DJs—and one of the most compelling reasons why, is the quality of its effects. TRAKTOR'S 12 includes some of the most inspiring and contemporary sounds from TRAKTOR's arsenal—effects that have been road tested by top DJs in the world's biggest clubs. Incredible delays, reverbs, and filters join TRAKTOR's unique and hugely popular Beatmasher, Transpose Stretch and Mulholland Drive, among others, to form a powerful studio tool with true club pedigree.

TRAKTOR'S 12 is the result of top DJs looking to move beyond the standard effects available with most DAWs and bring the legendary power of TRAKTOR into their studio – without needing complicated workarounds. Utilizing the GUITAR RIG PLAYER, TRAKTOR'S 12 is instantly and easily usable in any studio set up. Maintaining the feel and ease-of-use familiar from TRAKTOR, the FX are controlled by only four intuitive knobs and buttons—yet retain an insane amount of sound mangling potential. Any Producer (DJ or otherwise) who wants to bring the excitement and suspense TRAKTOR delivers in the club into their own tracks will love the dirty dozen!

We sincerely hope you enjoy TRAKTOR'S 12.

Your Native Instruments team

## 2 The Effects

This section describes each of the TRAKTOR'S 12 Effects and their associated controls in detail. After installation, TRAKTOR'S 12 is found under the Components tab in GUITAR RIG. Double click or drag the effect you want to make it appear in the Rack.



Fig. 2.1 TRAKTOR'S 12 expanded in GUITAR RIG's Component Window

## 2.1 Common Parameters

All effects have the following sets of parameters in common:

- **D/W (Dry/Wet):** For all effects this parameter controls the mix between the original direct signal (Dry; full left position) and the processed effect signal (Wet; full right position).
- **ON:** For all effects this button turns the effect on and off. Some buffer based effects such as the Delay or the Reverb will continue outputting sound for a certain amount of time, even after turning them off. To fully disable the action of an effect on a specific channel use the [Effect Assign](#) buttons in the mixer strip of that channel.

## 2.2 TRAKTOR Delay

This is the classic tempo-synced filter Delay with Freeze button. When GUITAR RIG is used in Standalone mode, the rate of the Delay is directly controlled by the Master Clock of GUITAR RIG to ensure that the Delay syncs to the beat even during tempo changes. You can control the desired frequencies with the **FILTER** knob and control the strength of the delay's feedback with the **FEEDBACK** control. Change the delay time with the **RATE** knob or use the **FREE** button to allow for continuous delay time changes.



Fig. 2.2 TRAKTOR Delay loaded in GUITAR RIG

Control	Function
FILTER	Internal high pass and low pass filter (similar to a bandpass filter). The filter is open when the knob is in the centre position. It progressively cuts out low frequencies when turned to the right and cuts out high frequencies when turned to the left.
FEEDBACK	Controls the strength of the delay's feedback, making the effect stronger and more colorful. Min: low feedback. Max: strong feedback.
RATE	Controls the Delay time. Min: long delay times. Max: short delay times. The 7 available values are expressed in fractions of bars, and are equally distributed over the range of the knob. Min - Max: 1/32, 1/16, 1/8, 3/16, 1/4, 3/8, 4/4.
MUTE	Mutes the input signal.
SPRED (SPREAD)	Creates an offset between the delay times of the left and right channel giving the effect of spatial depth. The Delay times are: L Min - Max: 1/32, 1/16, 1/8, 3/16, 2/4, 3/8, 4/4 R Min - Max: 1/32, 1/8, 3/16, 3/8, 3/8, 2/4, 4/4.
FREEZ (FREEZE)	Freezes the Delay by closing the input and turning up the Feedback to maximum value. The filter remains active in the feedback loop. For endless freezes, turn the FILTER knob down to the full left position.
FREE	When pressed, delay times are not quantized and can be changed continuously. Changing delay times while the Delay is active can result in sudden skips in pitch and rhythm.



Even in FREEZ mode the Delay follows the Master Clock and will therefore seamlessly merge into the mix once released.



You can switch the effect rate during operation without any crackles or glitches in audio!



**Note:** The RATE knob continues to work in FREEZ mode and allows interesting mash-ups. It is important though to turn the knob down to low values only briefly because otherwise the buffer will empty.



## 2.3 Digital LoFi

Digital LoFi is a distortion effect that decomposes the music by reducing its bit depth and the sample rate. This effect adds digital artifacts and lets you to lower the "quality" of the sound. Use this effect to change the Bit Depth of your input, or the Sample Rate reduction to create a more "smooth" sound.



Fig. 2.3 Digital LoFi loaded in GUITAR RIG

Control	Function
BIT (BIT DEPTH)	Controls the bit rate ranging from full bit rate in full left position to just above one bit in full right position.
SMOOTH	Smooths the effect by introducing a lag into the sample rate reduction.
SMPLRATE (SAMPLE RATE)	Controls the Sample Rate reduction raging from no reduction in full left position to 100 Hz sample rate in full right position. Note: This knob only has an effect in combination with the Sample Rate reduction.
SPRED	Creates an offset between the sample reproduced on the right and left stereo channel giving the effect of spatial depth.

## 2.4 Mulholland Drive


The Mulholland Drive is a highly sensitive overdrive effect with two independent overdrive units and unpredictable self-oscillating behavior. Use the **DRIVE** knob to control which overdrive unit is fed more or to select a mixture between the two.

Activate Feedback by turning the knob from the full left position. When Feedback is activated, it has greatest effect on music with gaps in it, such as drum loops, because the self-oscillation can develop best in empty parts of the music.  
Without Feedback activated Mulholland Drive behaves like a regular drive effect.



Fig. 2.4 Mulholland Drive loaded in GUITAR RIG

Control	Function
TONE	Controls the frequency of the feedback tone. Requires a certain amount of feedback to have an effect. Creates a great variety of tones when used in combination with the FEEDBACK knob.
FEEDBACK	Controls the amount of feedback in the effect ranging from 0 to 100%. With zero feedback in full left position, the effect behaves like regular tube distortion.
DRIVE (OVERDRIVE)	Controls which of the two overdrive units is fed and by how much. Drives only one unit in full left and full right position and morphs between them when in between.
FBACK (INVERTED FEEDBACK)	Only passes uneven harmonics, making the effect sound deeper in frequency.
GATE	Acts as a noise gate to suppress sustained feedback.

 At high DRIVE and FEEDBACK values the effect can produce sound even without any input.

## 2.5 Formant Filter

Formant Filter is a filter that imitates the sound of vowels spoken through the human mouth by morphing three bandpass filters into each other. Control the nature of this effect by adjusting the “sharpness” of the vowel sound or the “size” of the mouth. Use the **TALK** button to morph between the different vowel sounds and to adjust the brightness of the sound.

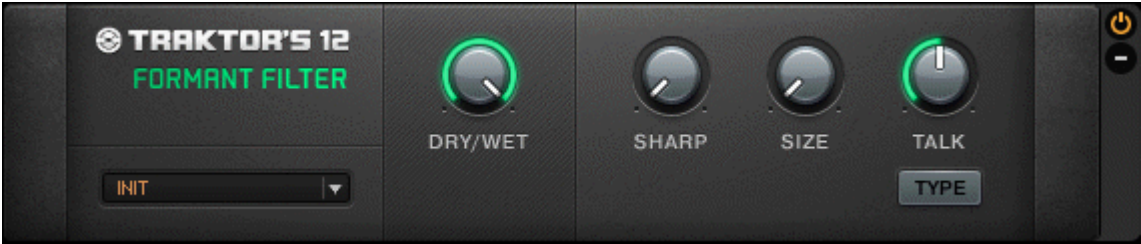


Fig. 2.5 Formant Filter loaded in GUITAR RIG

Control	Function
SHARP	Makes the vowel sound more present by adding sharpness.
SIZE	Represents the size of the mouth. On the left side, sound is comparable to that of a child; on the right side it sounds more like an old man.
TALK	Morphs between the formants that the mouth produces (a, e, i, o, u). On the left it sounds dark becoming brighter when moving to the right.
TYPE	The TYPE button deactivated makes the vowels sound “German.” Activating the button makes them sound more “English.”

## 2.6 Peak Filter

The Peak Filter adds a peak to the original signal for a specific frequency spectrum, giving you DJ-friendly control over the frequencies you want to hear. The peak can be increased to four times louder than the original signal. An additional brickwall limiter makes sure that the increased db is limited to the maximum 0 db. Use the **EDGE** knob to add resonance and make the emphasized frequency more prominent.



Fig. 2.6 Peak Filter loaded in GUITAR RIG

Control	Function
DRY/WET	Not only mixes the modulated audio signal to the original signal but additionally increases the filter frequency of the peak.
PUMP	Adds brickwall limitation to the effected signal. This effectively smooths all the peaks and boosts the volume.
EDGE	Modulates the width of the peak by increasing the resonance. When turned to the right, the emphasized frequency becomes more and more pronounced.
FREQ (FREQUENCY)	Controls the frequency that is emphasized.
KILL	Inverts the peak and gives the effect similar to a notch filter.

## 2.7 Ring Modulator

The Ring modulator is an effect that modulates the tracks by multiplying the high frequency signal onto the audio material. This effectively adds harmonics to the input. Choose between amplitude or ring modulation and use the **RAW** knob to change the shape of the modulator oscillator to create a “smoother” or a “harsher” effect.



Fig. 2.7 Ring Modulator loaded in GUITAR RIG

Control	Function
AM-RM	Morphs the type of modulation from amplitude modulation in full left position to ring modulation in full right position. Amplitude modulation sounds softer compared to ring modulation.
RAW	Controls the shape of the modulation oscillator. The oscillator is a sine wave in full left position for smooth sounds and a filtered square wave in full right position for harsher sounds.
PITCH	Controls the frequency of the modulating oscillator from low in full left position to high in full right position (100 Hz - 8371 Hz).

## 2.8 TRAKTOR Reverb

This is a Classic Reverb with extreme room sizes, individual low pass and high pass Filter controls, and Freeze function. Control the size of the room and the associated reverb amount with the **SIZE** knob and use the filters to achieve the desired frequencies in the effect loop.



Fig. 2.8 TRAKTOR Reverb loaded in GUITAR RIG

Control	Function
HI PASS (HP)	HP filter in the effect loop – fully open when turned to the right.
LOW PASS (LP)	LP filter in the effect loop – fully open when turned to the left.
SIZE	Controls the size of the added reverb, ranging from small to vast room sizes.
MUTE	Mutes the input signal.
FREEZ	Freezes the Reverb by closing the input and leaving the output open.

## 2.9 Beat Masher

A buffer based effect for capturing a loop from the current audio material and successively mashing it up. Press the **MASH** button to start the effect. A loop with a length defined by the **LENGTH** knob is sampled and played back. Use the **GATE** knob to produce a mixture of sampled and currently played audio signal. Experiment with the **REVR**, **WRAP** and **ROTATE** controls to produce further interesting effects on the sound. When using GUITAR RIG in Standalone mode, Beat Masher is synced to GUITAR RIG's metronome.



Fig. 2.9 Beat Masher loaded in GUITAR RIG

Control	Function
GATE	Combined controller for different ways of mixing and gating the sampled material: In full left position the effect is bypassed. From full left to center progressively bigger chunks of the buffered audio are mixed in. In centre position just the buffered audio is played. From center to full right position progressively bigger chunks of audio are cut out like a gater effect.
ROTATE	Shifts the sampled audio relative to its original position in steps of 1/8 notes. At minimum Length, the ROTATE knob continuously rotates the sample.
LENGTH	Controls the length of the audio played back from the buffer.
MASH	Starts the effect. When this button is off there is no change in the signal.
WRAP	Re-syncs the effect to the start of each bar, no matter what the Length value is.
REVRS (REVERSE)	Reverses the playback direction of the buffered audio samples.

## 2.10 Gater

The Gater rhythmically mutes parts of the audio at adjustable rates. When using GUITAR RIG in Standalone mode, Gater is synced to GUITAR RIG's metronome. The GUITAR RIG Master Clock controls the rate and the point in time at which muting takes place. A hissing noise can be added to the Gater using the NOISE knob for emphasizing the rhythmical pattern. Adjust the rate of the Gater by using the RATE knob or press the FREE button to allow for continuous rate changes.



In order for the Gater to match the beats in the music, it is absolutely necessary that your tracks have well aligned Beatgrids and that the Master Clock follows the track tempo in Auto Mode.





Fig. 2.10 Gater loaded in GUITAR RIG

Control	Function
NOISE	Controls the amount of hissing noise added to the Gate. Min: No added hissing, Max: Much added hissing.
SHAPE	Controls the shape of the Gate. Min - Center: 1% Hold, 0% Decay - 50% Hold, 0% Decay Center - Max: 50% Hold, 0% Decay - 0% Hold, 100% Decay.
RATE	Controls the rate of the Gater. The 5 available values are expressed in fractions of bars, and are equally distributed over the range of the knob. Min - Max: Off - 1/4 - 1/8 - 1/16 - 1/32
ON	Turns the effect on or off.
MUTE	Mutes the input so that only the noise is played. This is useful for producing scratch-type sounds.
STUTR (STUTTER)	Activates 3/16 gating time for producing a stuttering effect.
FREE	Decouples the Rate from the tempo allowing a non-quantized, free rate.

## 2.11 Reverse Grain

A buffer based effect for capturing a loop from the current audio material and successively playing it backwards with different mash-up options. This effect is good for reversing beats and generally mutilating sound. The **ON** button starts the effect and causes the current audio to be sampled and looped. The pitch of the audio sample can then be increased or decreased as well as the speed and size of the audio grains. Press the **FRWD** button to invert the captured audio playback direction to forward playback.





Fig. 2.11 Reverse Grain loaded in GUITAR RIG

Control	Function
PITCH	Controls the pitch of the sampled audio. Normal pitch in full right position. Progressively decreases pitch when turned to the left. Ranges from 0 to 100.
GRAIN	Controls the size of the audio grains. Creates interesting effects when used in combination with the <b>SPEED</b> knob.
SPEED	Controls playback speed of the samples' audio grains. Plays at normal speed in full right position. Progressively reduces playback speed when turned to the left.
ON	Starts the audio sampling and plays the buffer backwards.
INVERT	Plays the grains in reversed order.
FRWD (FORWARD)	Inverts playback direction from backward playback to forward playback.

## 2.12 Transpose Stretch

The Transpose Stretch is a classic Pitch-Shifter with additional Grain-Size and Time-Stretch control. Press the **ON** button to start the effect, causing the input audio to be recorded and looped. Adjust the Pitch by using the **KEY** knob and press the **TYPE** button to record 2 bars of looping material instead of just one.

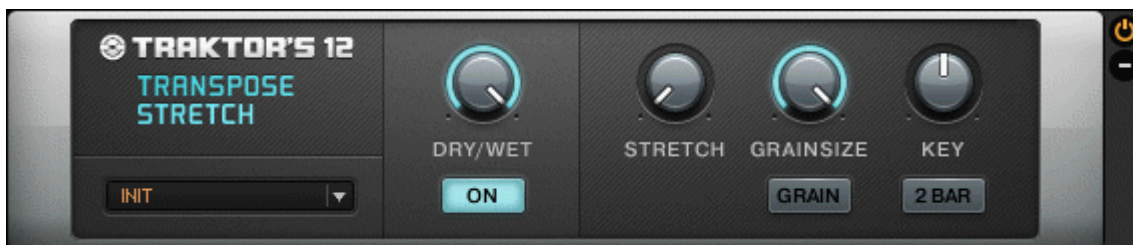


Fig. 2.12 Transpose Stretch loaded in GUITAR RIG

Control	Function
STRETCH	The more the knob is moved to the right, the more the time is stretched until the music comes to a complete stop on a single “Grain”. When stretch is in the full left position the audio passes through without being looped.
GRAINSIZE	This knob only works when the <b>GRAIN</b> button below is enabled, and controls the size of the grains. Otherwise the grain size is automatically linked internally for best overall pitching. It ranges from large grains (333 ms) in full left position to short grains (5 ms) in full right position. Very small sizes can lead to nice FM/ring modulating metallic sounds. Also try starting at “full stop” and then transpose to max for metallic “moaning” sounds.
KEY	Controls the pitch of the grains. Center position is neutral and plays the grains at original pitch. To the right, the grains are pitched up to +1 octave in full right position. To the left, the grains are pitched down to -5 octaves.
ON	Turns the effect on or off.
GRAIN	Enables Grain Size Control.
2 BAR	Causes 2 bars of input to be recorded and looped instead of 1 bar.

## 2.13 Beat Slicer

This effect samples a bar of audio, subdivides it into small chunks and replays the chunks in a different sequence, creating a rhythmically shuffled version of the original music. The effect provides 20 different patterns grouped into 5 styles. The effect starts sampling two bars when turned ON and will stay in sync with the Master Clock even during tempo changes. Activate the GATE button to add silence intervals to the selected PATTERN, creating an infinite variety of possible sliced and gated combinations. When using GUITAR RIG in standalone mode, Beat Slicer is synced to GUITAR RIG's metronome.

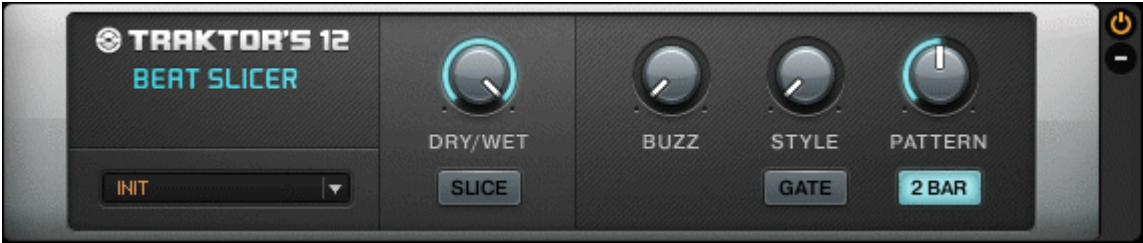


Fig. 2.13 Beat Slicer loaded in GUITAR RIG

Control	Function
BUZZ	Creates a beat-roll effect by increasing the repetition rate within one beat of the current pattern.
STYLE	Selects one of five groups of patterns.
PATTERN	Switches between different patterns within a group. The first pattern of a group is always neutral (i.e. bypasses the signal in original sequence).
SLICE	Turns the effect on, causing 1 bar of input audio to be recorded, looped and at the same time manipulated.
GATE	Layers a gate controlled by another pattern over the effect. The combination of the slicing patterns with the gating pattern creates an infinite variety of combinations. When activating GATE, the BUZZ parameter is disabled.
2 BAR	When activating the 2 BAR button, the entire buffer of two bars is used for slicing. Otherwise only the first bar of audio buffer is sliced.

## 2.14 TRAKTOR'S 12 Sampling Effects in Plugin Mode

The behavior of the TRAKTOR'S 12 sampling effects (Beat Slicer, Beat Masher and Transpose Stretch) is unusual especially when GUITAR RIG is used as a plugin.

Beat Slicer and Beat Masher are performance effects that do live sampling and loop manipulation. These effects do not save the state of the SLICE/MASH buttons with a preset or host project. You'll need to automate the SLICE/MASH buttons in a song in order to use them effectively. An elegant way to do this is to assign a MIDI note as a controller assignment to these buttons. In this way you can use your host program's Pianoroll Editor to easily create "automation" for these effects.

Transpose Stretch is also special but works a bit differently. When the STRETCH knob is set to a value other than zero the effect's behavior is similar to that of Beat Slicer and Beat Masher. The difference is that the state of the ON button is saved with a preset or host project so there is no need for automation.

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