Verb

User Guide

Eventide®

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Welcome

PART 1

1.1 Tverb Introduction

> "I only had the one track left, so I couldn't record these microphones on separate tracks. What I did is put a gate on microphone two and another gate on microphone three; so when he sang with a quiet deep voice those gated microphones wouldn't open up, you wouldn't hear the ambience in the room. When he sang with a fairly loud voice, the middle microphone would open up and you'd start to hear the room. When he sang in the loudest voice possible, almost screaming (he called it 'Bowie histrionics'), all three microphones would be open and the massive reverb you hear on that recording is only that glorious room." – Tony Visconti

Inspired by the legendary Heroes session at Hansa Tonstudio in 1977 Berlin, this plug-in was developed with the encouragement and support of Tony Visconti.

The historic Meistersaal concert hall, built in 1910, was Hansa's studio 2. It's a large room designed for classical music concerts. Mr. Visconti, impressed by the acoustics of the room, had an idea. Why not utilize the hall's acoustics to augment Bowie's vocal? From his many years of collaboration with David, Tony knew both the power of that voice and Bowie's willingness to explore new sonic vistas. The result was and is iconic.

Tverb provides an intuitive interface to recreate the three vocal channels that came together to become this classic title track. A close mic offers clean or compressed signal while two gated mics can be moved anywhere in the virtual room for customizable gated reverb.

2.1 Tverb Overview

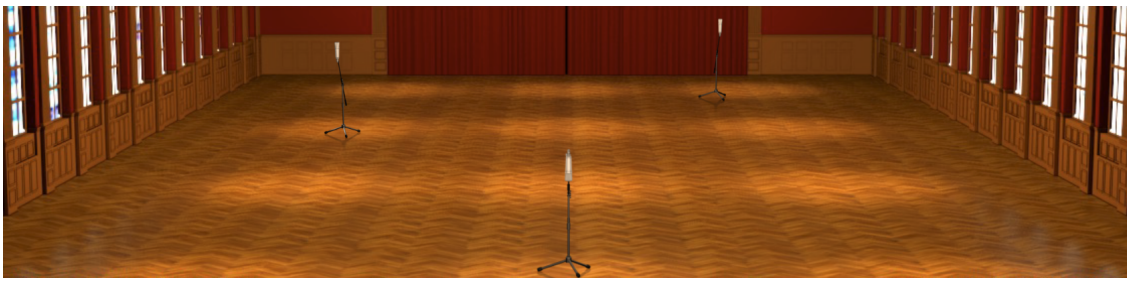
The Tverb UI is divided into 2 components: the room and the console. The room provides an intuitive way to place the 2 distant mics in the hall, while the console provides post-reverb channel processing for each individual mic and the master.

The following features apply to all Tverb controls:

- Values can be changed by typing into the corresponding text box or by dragging the text box up or down.
- **Double clicking** or **Option** (macOS) / **Alt** (Windows) **+ clicking** on any control will revert it to its default value.
- **Command** (macOS) / **Ctrl** (Windows) **+ dragging** on any control will result in more precise range of motion.
- All controls are automatable.

2.2 Tverb Room

The room view recreates Tony Visconti's view of the Meistersaal hall from Hansa's control room during the Heroes session. You can see the three mics that he set up. They are labeled Mic 1, Mic 2, and Mic 3, corresponding to the console channels.



Tverb Room

Mono vs. Stereo Microphones

Tverb comes in "Mono In, Mono Out" (MIMO), "Mono In, Stereo Out" (MISO), and "Stereo In Stereo Out" (SISO) modes. Depending on which instance is selected, the mics are either mono or stereo. In MISO and SISO instances, we simulate stereo microphones to capture a wide stereo reverb sound and to preserve the stereo image of the input sound source captured by the close mic. In MIMO instances of Tverb, we simulate traditional mono microphones summing the room sound to a mono signal.

Microphone 1

The interface assumes the input sound source is coming from the front of the room, so Mic 1 is fixed in place, representing David Bowie's close mic. While it cannot be moved throughout the room, its settings can be adjusted by hovering your cursor over the microphone.

Polar Pattern Selects the polar pattern of the microphone: Omni, Cardiod, or Figure 8.

- **Omni** - The wettest of the 3, as it picks up a full radius of ambient room sound.
- **Cardioid** - The cleanest of the three, as it only picks up the clean signal with no additional reverb.
- **Figure 8** - Captures less ambience than the Omni pattern, but more ambience than the Cardioid pattern.

Low Cut Attenuates the signal by 12 dB/octave below 150Hz.

High Cut Attenuates the signal by 12 dB/octave above 8kHz.

Microphones 2 and 3

These are the near and far mics of the Heroes session and can be moved anywhere in the room.

Distance Moving a mic farther in the room adds predelay and modifies the reverb's early reflections corresponding to the mic's position.

Lateral In stereo instances of Tverb, the lateral position affects the balance of the signal picked up by the microphone. For example, if a mic is along the left wall, it will capture more of the stereo input's left channel than the right channel.

Key Commands

A handful of key commands are provided for ease of mic placement:

- **Shift + Mic Drag** - Solos the mic being dragged. This will temporarily override the solo settings of the console until the mic is released. It will not override the mute setting if it is engaged.
- **Right Click + Mic Drag** - Restricts the mic movement to only one dimension (Distance or Lateral), depending on which direction is engaged first. You can **Right Click + Mic Drag** in conjunction with **Shift + Mic Drag**.
- **Text box** - Instead of dragging the microphone, you can type values into the text boxes to position the microphone.

Additionally, as with all GUI controls, **Double clicking** or **Option** (macOS) / **Alt** (Windows) **+ clicking** on the microphone will return it to its default position. **Command** (macOS) / **Ctrl** (Windows) **+ dragging** the microphone will result in additional precision when positioning the microphone.

Microphone Overlap

While dragging Mic 2 and Mic 3 around the room, you'll notice that they cannot be placed in exactly the same spot. However, if you type the same Distance and Lateral values into both microphones' text box, one mic will disappear behind the other at exactly the same position. This is a feature not a bug!

When Mic 2 and Mic 3 are perfectly overlapping, engaging one of their invert switches will cause 100% phase cancellation and no reverb will be heard. This is an asset because if you add a gate to one of these mics, you can achieve an "Inverse Tverb" effect where reverb appears when a gate closes rather than opens. More details about this technique are provided in the Tips And Tricks section.

2.3 Console Overview

Inspired by the 70's Neve that Tony Visconti used in the Heroes session, the console provides mixing and signal processing for the three microphones. Since the room mics are virtually plugged in to the console, all console processing occurs post-reverb.

Mimicking Tony Visconti's console settings from the Heroes session, Mic 1 has a compressor module while Mic 2 and Mic 3 have linkable gate modules. The Master channel includes an additional module that affects the tone of the room reverb.

Tverb Console

2.4 Compressor Module

As in the original session, a compressor is applied to the close mic, Mic 1. The Polar Pattern of this microphone will determine how 'clean' this signal is. Cardioid captures the direct, dry signal whereas Omni and Figure 8 add a bit of room ambience.

Compressor Module

On Whether the compressor is bypassed or not.

Threshold The threshold at which the compressor begins attenuating.

Ratio The ratio at which the compressor attenuates the signals above the threshold.

Attack The speed at which attenuation kicks in.

Release The speed at which attenuation releases.

Gain Provides additional 24 dB of gain after the compressor attenuation.

In Displays the input level of the compressor module.

GR Displays the amount of attenuation.

2.5 Gate Modules

Channels 2 and 3 (corresponding to Mic 2 and Mic 3) have a gate module rather than a compressor, which can be used for dynamic gated reverb effects.

Gate Modules

On Whether the gate is bypassed or not.

Threshold The signal level at which the gate begins to open.

Attack Determines how rapidly the gate opens when the threshold is reached.

Release Determines how quicky the gate closes when the signal level falls below the threshold.

Hold The minimum length of time the gate will remain open once the signal has gone above the threshold.

Pre If Pre is selected, the Mic 1 signal (post Polar Pattern, pre Compressor) is used as the key to both gates. By default, Pre is not selected and each gate's key is the same as its input. Pre is useful if you want to trigger the gates with a pre-reverb signal.

LINK Links the controls of the two gates. With Link ON, all of GATE 2's values will change to match GATE 1's values. Any further changes to either gate will affect both. Furthermore, the inputs to the gate thresholds will also be linked, so if one gate opens, the other will too, even if the other didn't receive enough signal to open on its own.

IN Displays the input level of the gate.

GR Displays how open the gate is. It does not display how much the input signal is being reduced. For example, when the gate is closed, the GR meter will be fully illuminated regardless of whether signal is attempting to pass through.

2.6 Room Module

Suspend your disbelief: this mixer module allows you to adjust the tone of the room. It isn't a post-reverb effect, it's controlling the sound of the room itself!

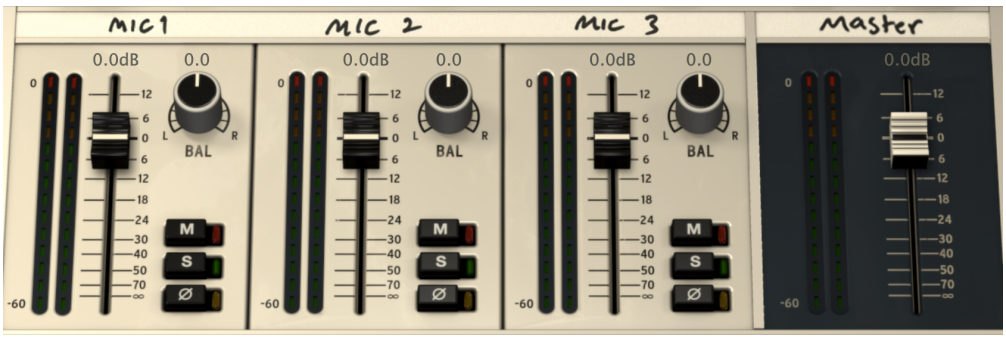
Room Control Module

Decay	The length of the room's reverb tail.
Diffusion	The level of diffusion in the room.
High Frequency	The center frequency of the high band.
High Frequency Gain	The attenuation of the selected high frequency.
Low Frequency	The center frequency of the low band.
Low Frequency Gain	The boost or cut of the selected low frequency.

2.7 Levels Modules

Everything in this section occurs post-reverb and post-gate/compressor processing.

The MASTER channel sums the three mic channels.



Levels Modules

FADER The output level of the channel.

BALANCE The channel's balance value. The balance knobs are only present in MISO and SISO. In MIMO the balance controls are hidden.

MUTE Mutes the signal, overrides SOLO.

SOLO Solos the channel. SOLO is exclusive by default but multiple channels can be soloed by shift-clicking multiple SOLO buttons.

INVERT Inverts the signal's phase. This is useful when MIC 2 and MIC 3 are placed close together and experience phase cancellation.

CHANNEL METER Displays the output level of each channel.

The faders of MIC 2 and MIC 3 can be momentarily linked by holding down the Shift key while dragging either fader.

2.8 Preset Bar

Located at the top of the Tverb Plug-In, the Preset Bar lets you load and save presets, along with several other features.

When Tverb is installed, the factory preset library is placed in the following platform-specific location:

Mac	`<user>/Music/Eventide/Tverb/Presets`
Windows	`<user>/Documents/Eventide/Tverb/Presets`

Presets for Tverb have a **.tide** extension and can be saved or loaded from the Tverb preset bar in any supported DAW. You can also create sub-folders within the preset folder for organizing your presets if you wish.

> *Many DAWs offer an additional generic preset bar that saves DAW-specific presets to a separate location. We strongly recommend only saving your presets using the Tverb preset bar to ensure that your presets will be accessible from any DAW.*

LOAD Loads your **.tide** format presets.

SAVE Saves your presets in **.tide** format.

COMPARE Click to toggle between two different settings for the plug-in. This is useful for making A/B comparisons.

INFO Click this button to open this manual.

SETTINGS Opens a drop-down menu with scaling settings for changing the overall size of the plugin.

MIX LOCK When enabled, the current MIX value will remain unchanged as new presets are loaded. This is especially useful on an effect return track where the mix should always be set to 100.

Mix	Sets the mix value of the plug-in. Right-clicking on the mix value toggles between the current mix value and the dry signal.

Tips And Tricks PART 3

3.1 Not Just For Vocals

Tverb is a great sounding reverb. Try it on other sound sources and instruments! Eventide has compiled an extensive list of Artist and Factory presets to get you started. Use the drop down from Tverb's preset bar and explore, or "Throw a cat in a bucket and put it through Tverb" - Tony Visconti

3.2 To Gate Or Not To Gate

By their nature, gates are level dependent so some source material may not be optimally suited to interact with the gates. As well, sources with transients and wide dynamic range can make the best use of them. To effectively use the gates on other sources, like vocals, you'll need to find the point in the track where you'd like each mic to kick in and adjust each gate accordingly.

3.3 Gate Adjustment

When using gates, keep in mind that Tverb's gate threshold is usually the most important gate parameter to adjust. As a starting point for gate setup:

1. Use a DECAY time of around 3 seconds.
2. Turn ATTACK, RELEASE, and HOLD to their quickest (most counter-clockwise) positions.
3. Loop a portion of audio in your DAW, centered around the section and level where you want the gates to open.
4. Adjust THRESHOLD so that the gates are only triggered for the desired audio section's level, but not at a lower level.

5. After finding a good value for THRESHOLD, adjust ATTACK, RELEASE, and HOLD to taste.

Experimentation is key and remember that the Artist and Factory presets may need some gate threshold adjustment depending on your material. Also note that the gates are triggered from the mic returns listening to the room, i.e. post-reverb. To trigger the gates using the input to Tverb, engage the PRE switch.

3.4 Long Decay Times

Tverb's reverb is designed to model the acoustics of Hansa Meistersaal and does a faithful job at normal decay times. For the plug-in we've extended the decay time to an unnatural 7 seconds to provide for more extreme creative control. At these extremes the reverb begins to sound unnatural because it models a hall with very hard, reflective surfaces.

3.5 Mic Position Automation

One of the features of Tverb is its real-time, smooth, and clip-free sound processing while changing the MIC 2 and MIC 3 positions. Exploit this interactive and dynamic sound effect to its fullest using plug-in automation. Labeled as 'DISTANCE' and 'LATERAL' automation parameters, try judicious use of mic position automation to create your own interesting reverberant effects. It's like having two studio assistants moving mics around a live room, in real-time, just for you.

3.6 Room Equalization

Tverb allows you to tailor the frequency response of the room giving you creative flexibility seldom available in a real studio. Here are some room EQ tricks to try:

- On snare, try lowering the room's HIGH FREQUENCY GAIN to remove the snare "sizzle" from the reverb tails. Also try this with bright sound sources.
- On some instruments, lowering the LOW FREQUENCY GAIN can remove boominess and can sometimes create more separation between the instrument and its reverberation.
- Try cutting both LOW and HIGH FREQUENCY GAIN at the same time for a band-pass filtered reverb effect.

3.7 Image Shifted Effects

You can use mic distance together with balance control to create image shifting (panning) effects. Different mic distances will change each mic's early reflections (in addition to other tones) which can be used to create a type of panning called Haas panning. Try this as a starting point:

1. Set Decay below 3 seconds.
2. Mute Mic 1 from the console.
3. Move Mic 2 near the front of the room.
4. Place Mic 3 further toward the back of the room.
5. As a starting point, adjust console Balance controls hard left for Mic 2 and hard right for Mic 3.

With this setup, Mic 2 will pick up more early reflections than Mic 3. When panned in the manner above, the listener will perceive the sound to be coming more from the left despite similar Mic 2 and Mic 3 levels.

3.8 Inverse Tverb Effect

By entering the same Distance and Lateral values into the text boxes of Mic 2 and Mic 3, they'll be placed in the exact same position and Mic 3 will disappear behind Mic 2. This is a feature that enables a useful effect that we call "Inverse Tverb". Whereas Tverb usually passes reverb when a gate is open and blocks reverb when a gate is closed, "Inverse Tverb" does the opposite: reverb is blocked when a gate is open and passes when a gate is closed.

Here's how to recreate it:

1. Place Mic 2 and Mic 3 in the exact same location within the room. You can only achieve this by entering text values, as we prevent mic overlap when dragging.
2. Engage the Invert switch on the Mic 2 channel. This will cause 100% phase cancellation and no reverb will come through on either channels.
3. Turn on the gate of the Mic 2 channel. When Mic 2's gate is open, there is full cancellation between the channels and no reverb will be heard. However, as the gate of the Mic 2 channel closes, the phase cancellation melts away and reverb begins to pass on the Mic 3 channel.

4. The faders of the Mic 2 and Mic 3 channels need to be at the same level to maintain 100% phase cancellation. If you want to adjust the reverb level, try holding down the Shift key while moving the fader of either the Mic 2 or Mic 3 channel; this controls both faders at the same time.

An effect like this could be useful on a complicated piano track. Perhaps you want a clean signal when the piano part is busy but you'd like reverb to creep in as the part slows down and more space is introduced between chords. This is possible with "Inverse Tverb"!

Conclusion PART 4

We hope you enjoy the Tverb plug-in and put it to good use in all of your mixes. Please be sure to check out Eventide's other native plug-in offerings for more unique and interesting effects.

For further questions or support, head over to the user forums.