VTAPE

The Analog Tape Suite

Operation manual

VirSyn Software Synthesizer

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Caution !

Careless operation of this software can produce excessive sound pressure levels which can be harmful to your ears and can damage your loudspeakers or headphones. To avoid such damages, reduce the main output level before operating the software. VirSyn Software Synthesizer will not be liable to any damages whatsoever arising out of the use or abuse of this software.

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1 Introduction

1.1 Welcome to VTAPE

Congratulations and thank you for purchasing VTAPE !

VTAPE is a set of two independent plugins based on a thorough simulation of the famous sound of analog tape machines.

VTAPE Saturator simulates the recording and playback on an analog tape mastering machine.

With VTAPE Delay this sound is combined with a modern, step sequencer-like tapped delay engine which leads the tradition of the tape echo machines into the 21st century.

1.2 Installation PC

For proper operation of VTAPE the PC system requirements are:

- **Pentium III/IV, Athlon XP with min. 1GHz**
- **Microsoft Windows XP.**
- **min. 512 MB RAM.**
- **min. screen resolution 1024X768 / 16-bit colors.**
- **20 MB free space on your hard disk.**
- **VST2.4 / RTAS compatible host sequencer.**

To install VTAPE, insert the installation CD into your CD-ROM drive. The installation program starts automatically after inserting the CD-ROM. If for some reason it does not do so, you can start the installation program manually by opening the CD-ROM with the explorer and starting „setup.exe". The installation program leads you through the rest of the installation.

For the download version of this product please follow the instructions that are part of the download delivery mail.

This product requires registration on our website www.virsyn.com within 10 days or 20 hours of usage.

1.3 Installation Mac

For proper operation of VTAPE the Mac system requirements are:

- **G4 / G5 / Intel based Mac with min. 1GHz**
- **Mac OS X 10.4 Universal binary**
- **min. 512 MB RAM**
- **min. screen resolution 1024X768**
- **20 MB free space on your hard disk.**
- **VST2.4 / RTAS / AudioUnit compatible host sequencer.**

To install VTAPE, insert the installation CD into your CD-ROM drive. Start the installation by double clicking the VTAPE icon. The installation program leads you through the rest of the installation. The Installer will install all versions:
VST 2.4, AudioUnit and RTAS version of VTAPE.

Then start the installation program for the copy protection device (dongle) by double clicking the SyncrosoftLicenseControl icon.

This product requires registration on our website www.virsyn.com within 30 days or 20 hours of usage.

1.4 Preset management

1.4.1 Browser

The preset browser gives you a structured access to the factory presets and your own creations.

The name of the selected preset is shown in the black window above the browser. If you want to save your own creation for later reuse you can change the name here and click on the "Save" button to the right of the preset name.

1.4.2 Preset file locations

The factory and user presets are stored in files with the extension ".fxp" in the following locations:

VTAPE Saturator / Mac OS X

Factory presets:

/Library/Application Support/VirSyn Software Synthesizer/VTAPE Saturator/Presets

User presets:

/Users/Library/Application Support/VirSyn Software Synthesizer/VTAPE Saturator /Presets

VTAPE Saturator / Windows

Factory presets:

\Document and Settings\All Users\Application Data\VirSyn Software Synthesizer\VTAPE Saturator\Presets

User presets:

\Document and Settings\All Users\Application Data\VirSyn Software Synthesizer\VTAPE Saturator\Data\Presets

VTAPE Delay / Mac OS X

Factory presets:

/Library/Application Support/VirSyn Software Synthesizer/VTAPE Delay/Presets

User presets:

/Users/Library/Application Support/VirSyn Software Synthesizer/VTAPE Delay/Presets

VTAPE Delay / Windows

Factory presets:

\Document and Settings\All Users\Application Data\VirSyn Software Synthesizer\VTAPE Delay\Presets

User presets:

\Document and Settings\All Users\Application Data\VirSyn Software Synthesizer\VTAPE Delay\Data\Presets

1.4.3 MIDI learn

Many parameters of VTAPE can also be adjusted by using MIDI controller messages. You can easily assign a parameter to a MIDI controller by the following procedure:

- right click / ctrl click on the parameter you want to assign.
- Choose “MIDI learn” from the popup menu.
- Turn the knob on your MIDI controller box to send some controller messages to VTAPE.
- Now you will see the knob in VTAPE turning in sync to the external controller box.

To cancel an already made assignment just select “MIDI forget” in the same menu. All assignments are saved in a special file “VSMIDI.vsm” in VTAPE’s home folder.

2 VTAPE Saturator

2.1 Parameters

2.1.1 Input section

Input meter

The input meter shows the peak level of the input signal before the Gain control.

Input Gain

Adjust the gain of the input signal in the range of +/- 40 dB. With values above 0 dB the saturation of the simulated tape starts to become audible as smooth distortion. The colour of the distortion can be influenced with the "Bias" parameter explained below. With high values you usually have to adjust the output gain to avoid digital clipping on the host side.

2.1.2 Tape parameters

The typical "analog" distortion arising from tape saturation is not the only factor for the characteristic "tape sound":

Hiss

The tape hiss is the background noise which can vary between different tape formulations and with different tape speeds. For realistic emulation set the value around -60 dB.

Flutter

This parameter simulates the modulation noise caused by irregularities in the speed of tape travel. This modulation noise is responsible for the 'thickening' of the signal which accounts for the fat sound of analog, compared to the more accurate, but thin sound of digital.

Bias

The bias setting influences the colour of the distortion. With settings near 0 % the incoming signal is distorted in a symmetric way resulting in the addition of mostly odd harmonics to the signal. Increasing the value shifts the distortion characteristic more to even harmonics. For realistic tape emulation values below 50% are best.

2.1.3 Equalizer

The Equalizer controls the frequency response of the tape. With high quality tape recording the typical response curve is nearly flat, but there is a significant drop below about 30 Hz and a small bump (approximately +1dB) at around 50 – 150 Hz. To simulate lo-fi tape machines the high frequencies above 8 kHz should be attenuated.

LF - Low shelving filter

Low-pass filter with shelving characteristic.

MF - Mid peaking band filter

Peaking band filter to enhance or suppress frequency content ranging from 50 Hz to 8 kHz.

HF – High shelving filter HF

High-pass filter with shelving characteristic.

Bypass

Switches the EQ section off.

2.1.4 Output section

Output meter

The output meter shows the peak level of the output signal after the Gain control.

Output gain

Adjust the gain of the output signal in the range of +/- 40 dB.

3 VTAPE Delay

3.1 Parameters

3.1.1 Input section

Input meter

The input meter shows the peak level of the input signal before the Gain control.

Input Gain

Adjust the gain of the input signal in the range of +/- 40 dB. With values above 0 dB the saturation of the simulated tape starts to become audible as smooth distortion. The colour of the distortion can be influenced with the "Bias" parameter explained below. With high values you usually have to adjust the output gain to avoid digital clipping on the host side.

Tempo delay

If the tempo or delay value is changed, these values won't change immediately. They slowly rise or fall to their new values. The time needed to reach the new value is set by this parameter in the range of 0.2 seconds to 20 seconds.

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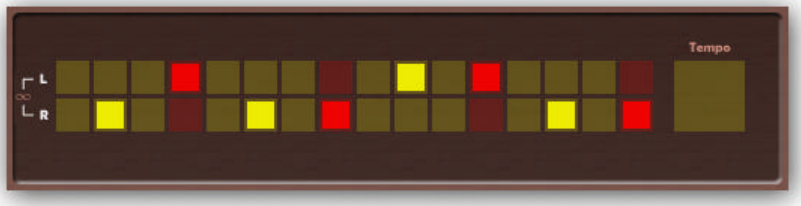
High-pass filter with shelving characteristic.

Bypass

Switches the EQ section off.

3.1.4 Delay Taps

VTAPE Delay is a tapped delay line, with each tap extracting a signal from a point within the delay line. The delay time for each tap is fixed to exactly match a 16th note length according to the tempo set. In contrast to other delay effect plugins, VTAPE uses a "step sequencer" like approach to set the delays. This makes it very easy to set up a rhythmic delay pattern, just enter the sequence the same way you would do it in a sequencer !



And even more you have two separate delay lines for the left and right channel for stunning stereo effects. To make it easier to set both delay lines with the same pattern you can click on the "Link" button (the lying 8).

To program a pattern simply click on the tap you want to set or reset.

The "Tempo" field can be used to manually tab in the tempo. Just click on this field more than once tapping quarter notes of the desired tempo. Instead of clicking into the field you can alternatively use a sustain pedal (MIDI controller no. 64)

The overall feedback tap which controls the repetition rate of the delay is set by the "Delay" parameter explained below.

3.1.5 Delay parameter

Sync

With this button set, the tempo is controlled by the host and the manual "Tempo" setting in VTAPE has no influence.

Tempo

Sets the tempo in beats per minute.

Delay

The Delay parameter sets the overall delay length for the feedback path of the delay line. It can be set from 1/16th to 1/1 note in steps of 16th.

Damping

The damping parameter sets the amount of loss in high frequency content with each signal repetition in the feedback loop.

Kill

This function suppresses the feedback signal for the time the button is pressed. You can use this with high settings of the feedback to stop the "endless" echoes without changing the feedback setting.

Feedback

The feedback parameter controls the signal amount which is fed back to the delay input. With values below 50% the echoes are becoming more quiet with each repetition; with values above 50% the volume of the echoes is increasing until saturation is reached.

Rotation

This unique parameter causes each echo to move in the stereo space. The value controls the speed of rotation.

3.1.6 Output section

Output meter

The output meter shows the peak level of the output signal after the Gain control.

Output gain

Adjust the gain of the output signal in the range of +/- 40 dB.

Dry/Wet

Balance between the dry and delayed part of the output signal. If the "Insert" button is deactivated this control has no effect, the output signal is always 100% wet.

Insert

Activate this button if the plugin is used as an insert effect. Then you can control the effect amount with the dry/wet parameter above.