Delay Time

Tempo Sync

Feedback

Input

WET

Mix

Trebl

TON

Bass

Tube Delay

MADE BY SOFTUBE AB SWEDEN

Tube Delay™
USER'S GUIDE

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Contact Details

If you would like to get in touch with Softube, please e-mail info@softube.com. Alternatively, you could use the phone or send an old-fashioned mail (do you remember envelopes, stamps and paper?) to:

Softube AB
S:t Larsgatan 10c
SE-582 24 Linköping
Sweden

Web: www.softube.com

E-mail: info@softube.com

Phone: +46 13 21 1623 (9 am – 5 pm CET)

Support

On the Softube website (www.softube.com) you will find answers to common questions (FAQ) and other topics that might interest you.

Support questions can be posted at http://www.softube.com, where we will help you as fast as we can!

Installation and Authorization

IF YOU BOUGHT THE PRODUCT IN A BOX you will have to register it in order to transfer the license to your iLok account:

1. Go to http://www.softube.com/register to transfer the license to your iLok account. You will need the **License Code** found in the box, your **iLok.com User ID**, and your **iLok USB dongle**. Follow the instructions on the web page.

IF YOU BOUGHT THE PRODUCT ONLINE and have got the confirmation e-mail, the license will already be deposited in your iLok account:

2. Make sure that you have the latest iLok drivers installed. They can be found at http://www.ilok.com.

3. Log on to http://www.ilok.com and transfer the newly received license to your physical iLok dongle.

4. Install the software from the CD, or download the latest version from http://www.softube.com/installers.

Sometimes the CD contains installers for all Softube products, but you will only be able to run those that you have acquired licenses for. In some cases, extra demo licenses are included when you buy a Softube product.

Introduction

Thanks for purchasing Tube Delay! The delay audio effect has a long history going back to the times when recording engineers would experiment with analog tape to get a decaying echo effect. Later on, standalone tape delay units were built and even later, delay created with digital technology became possible. Vacuum tubes, or valves, used in audio equipment are known for their unique sonic imprint on sound, something we perceive as "warmth" when the signal passing through it is overdriven.

Tube Delay is a marriage between analog and digital, combining the warmth and natural compression from tubes with the features and versatility of a digital delay. There are three tube sections in Tube Delay, one in the direct signal section, one in the delay feedback loop and one after the feedback loop. The tube sections are created with Softube's patented modeling technology and gives a faithfully recreated sound of a "real" tube preamp.

So, think of Tube Delay as a tube preamp with an added delay section. The tubes in the delay section deteriorates the signal and you can even add more distortion after the delay before blending it with the direct signal passing through the preamp. The effect is perfect for fattening vocal tracks, adding slap-back echo to drums or getting a gritty delay for guitars!

Patents
This product is protected by patent SE525332 and patents/patent applications US2004-0258250, EP1492081 and JP2004-183976.

User Interface

The Tube Delay has the following controls:

Mix

CONTROLS THE BALANCE BETWEEN THE DELAY AND THE DIRECT SIGNAL. Outputs only the original signal through the tube preamp section when set on DRY, and only the delay effect with added tube saturation when set to WET.

Set this control to blend the wanted amount of delay with the dry signal.

*Remember! Since there are drive controls for both wet and dry signal paths that affects the volume, there might be a difference in volume between the paths. The differences should not be huge but it's best to take a bit of care and move the **Mix** control slowly when drive settings differ alot.*

*Figure 1: The **Mix** knob goes from DRY (100% input signal) to WET (100% delay effect).*

Direct Drive (top knob)

CONTROLS THE AMOUNT OF TUBE DRIVE IN THE DRY SIGNAL PATH. Because the dry signal path is really a model of a tube preamp, you can use the dry signal path to color or distort audio passing through it like you might use a "real" tube preamp.

*Try moving the **Mix** control to full left and notice the coloring of the dry signal path when adjusting **Direct Drive**. This can be useful to just add some warmth to a single track or even a whole mix.*

Delay Drive (bottom knob)

CONTROLS THE AMOUNT OF TUBE DRIVE IN THE WET SIGNAL PATH. Use **Delay Drive** to add color or distortion to the delay signal. This can make the delay signal stand out in a mix and give it a sound that ranges from organic to smashed.

Delay Drive affects the signal after the delay line feedback loop and will thus add distortion to all repetitions of the delay.

*Figure 2: **Direct Drive** (top knob) and **Delay Drive** (bottom knob) goes from gentle color to full overdrive.*

Delay Time and Tempo Sync

CONTROLS THE LENGTH OF THE DELAY in milliseconds or syncs to host tempo. The total length of delay after the original signal in Tube Delay is one second. In millisecond mode (**Tempo Sync** off) **Delay Time** will adjust the time from 1 to 1000 ms. The first half of the control goes from 1 to 100 ms, the second half goes from 101 to 1000 ms. This gives tweaking in the 1 to 100 ms range a greater resolution.

*Figure 3: **Delay Time** goes from 1 to 1000 milliseconds, divided in two sections.*

*Common **Delay Time** settings are around 40 ms for a doubling effect and roughly 100 to 250 ms for a slap-back echo.*

When the **Tempo Sync** switch is ON (the "up position"), **Delay Time** is synced to the tempo setting of the host application. The **Delay Time** knob sets the length of the delay in these fractions of a measure: 1/16, 1/12, 1/8, 1/6, 1/4, 1/3 and 1/2. The maximum delay time is still one second though. To get to these values directly, simply click the numbers around the knob. It's also possible to get values in between the fractions by adjusting the knob.

Some hosts don't support reporting Tempo information to the plug-in, in these cases a warning will be displayed.

Tempo Sync

Here are some examples of the resulting delay time for a given host tempo when the **Tempo sync** switch is set to O N (upwards position).

	60 BPM	80 BPM	100 BPM	120 BPM	140 BPM
1/16	250 ms	188 ms	150 ms	125 ms	107 ms
1/12[1]	333 ms	250 ms	200 ms	167 ms	143 ms
1/8	500 ms	375 ms	300 ms	250 ms	214 ms
1/6[2]	667 ms	500 ms	400 ms	333 ms	286 ms
1/4	1 s	750 ms	600 ms	500 ms	429 ms
1/3[3]	(1 s)	1 s	800 ms	667 ms	571 ms
1/2	(1 s)	(1 s)	(1 s)	1 s	857 ms

1 **1/12** is a eighth note triplet
2 **1/6** is a quarter note triplet (a common reggae/dub delay rhythm)
3 **1/3** is a half-note triplet

Feedback

CONTROLS THE AMOUNT OF DELAY REPETITIONS. The higher this setting is, the higher the amount of delay is returned to the input of the delay line.

Feedback goes from no repetitions (just a single delay) to a full feedback with never ending repetitions.

Figure 4: Feedback knob

Tone Settings - Bass and Treble

CONTROLS EQUALIZATION of the input of the effect. This affects both dry and wet signal paths and thus also the amount of distortion.

Figure 5: The tone controls affect both the direct (dry) and delay (wet) signal.

Controls Summary

The knobs are controlled by either dragging Left-Right or Up-Down, or by using the mouse-wheel.

Mouse
- **Up/Down**: Increase/Decrease the setting of a knob/switch
- **Left/Right**: Increase/Decrease the setting of a knob/switch
- **Click**: Increase the value of a switch (for instance the **Tempo Sync** switch) or immediately set the delay time to a specific tempo sync value.
- **Mouse wheel** *(Mac OS X only)*: Increase/Decrease the setting of a knob/switch

Keyboard Commands
Use these key commands while changing a parameter.

- **Fine Adjust**: Command (Mac) or Ctrl (Windows)
- **Reset to Default**: Alt
- **Automation Control Window** *(Pro Tools only)*: Ctrl+Command+Alt+click (Mac) or Ctrl+Windows+Alt+click (Windows)
- **Show Automation Track** *(Pro Tools only)*: Ctrl+Command+click (Mac) or Ctrl+Windows+click (Windows)

Multi-Channel Operation

Tube Delay supports the following multi-channel modes:

- MONO : This is the normal mode

- MONO-TO-STEREO : The output will be the same for both Left and Right channel

- STEREO : The Left and Right input channel are processed independently with the same settings.

How the different modes are selected depends on your host software. In most hosts, inserting Tube Delay on a mono-track will make it use the Mono-mode, and vice-versa with a stereo-track.

Block Diagram
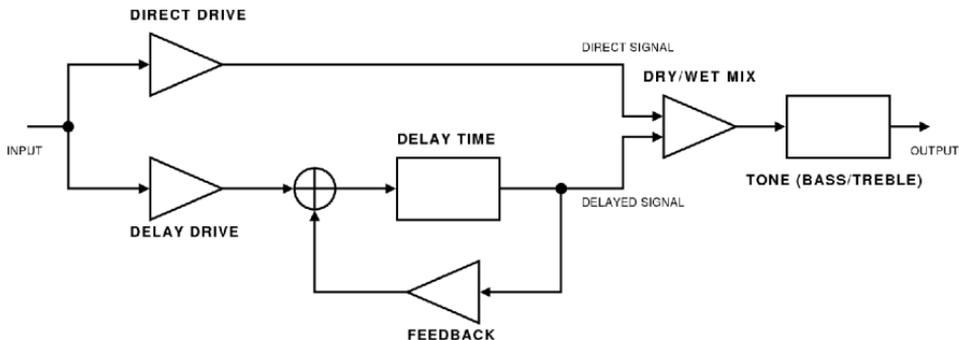
*Figure 6: Block diagram of the Tube Delay effect. As you can see, the dry signal (direct signal) isn't very dry, it is affected by both the tone stack and the tube circuits in the **Direct Drive** knob.*

*For simplicity, the **Tone** control has been depicted as the last stage after the **Mix** knob. In reality, the **Tone** control is embedded within all tube stages, and will thus affect all distortion.*

System Requirements

Please make sure that you have the latest Interlok drivers installed!

- 44.1, 48, 88.2, 96, 176.4 and 192 kHz samplerates are supported
- Mono, Mono-to-stereo and Stereo modes are supported. See "Multi-Channel Operation" for more information.

Mac OS
- Mac OS X (10.4 or higher)
- Intel or PowerPC processor (G3 or higher)
- 512 MB RAM
- Any VST, RTAS or AudioUnit compatible host application
- iLok USB key and the latest version of Pace Interlok*

Windows
- Windows XP or higher
- PIII or higher
- 512 MB RAM
- Any VST or RTAS compatible host application
- iLok USB key and the latest version of Pace Interlok*

*) Please, make sure that you *always* use the latest iLok driver. It can be downloaded from www.ilok.com.

Tube Delay was made by Torsten Gatu – sound design and framework programming. Oscar Öberg – modeling and framework programming. Niklas Odelholm – framework programming and graphic design. Arvid Rosén – framework programming. Ulf Ekelöf – 3D rendering and graphics. Henrik Midtgaard – concept.