

# OwnTHD

## User manual



## Table of Contents

Chapter 1. Introduction .....	1
Chapter 2. Installation/Setup .....	2
Chapter 3. Registration and Activation .....	3
Chapter 4. Components .....	5
4.1 Vintage Equipment Simulation .....	5
4.2 Overdrive Control .....	6
4.3 Feedback Control .....	6
4.4 Bias Control .....	6
4.5 Depth Control .....	6
4.6 Volume .....	6
4.7 Sweet Spots .....	6
4.8 Solid-State Simulation .....	7
4.9 Tube Simulation .....	7
4.10 Tape Simulation .....	7
4.11 Input and Output Volume Control .....	7
Chapter 5. Presets .....	8
Chapter 6. F.A.Q. ....	9
Chapter 7. Credits .....	10

## Chapter 1. Introduction



OwnTHD is an audio effect plugin, that makes extra distortion. Distortions can be described as gains in harmonics, which makes up the name of this product (total harmonic distortion, THD).

Different amount and styles of distortions would induce different "colors" on sound, and these colors are originated from real-world vintage equipment pieces.

## Chapter 2. Installation/Setup

### Minimum System Requirements

- ✓ 64-bit Intel or AMD CPU, with SSE3 support
- ✓ Mac OS X 10.9 or Windows 7
- ✓ 2GB RAM
- ✓ 10GB free hard disk space

Please note that Logic Pro 9 is NOT supported, please use Logic Pro X or higher.

### Mac:

To install OwnTHD for the first time, double click on:

- OwnTHD-1.1.X-programs-en\_US-retail

Then follow the instructions in them.

### Windows:

To install OwnTHD for the first time, double click on:

- OwnTHD-1.1.X-programs-retail-en\_US.exe

Then follow instructions in them.

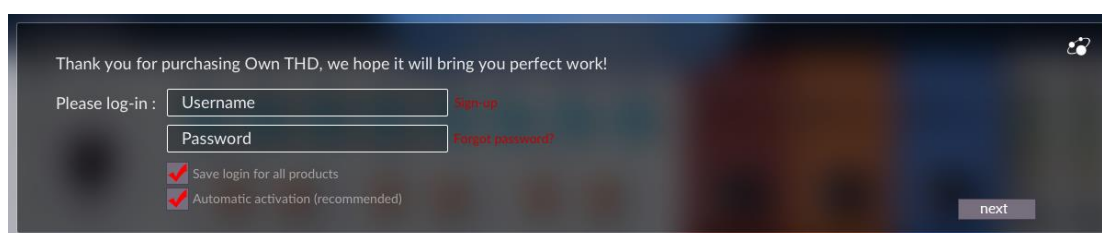
## Chapter 3. Registration and Activation

To ease users managing purchased products, all products need to be activated with a single ThreeBodyTech account. Please visit <https://my.threebodytech.com/register> and sign up an account for the activation.

After an account has been created, please login and select OwnTHD, enter the serial number to bind it with your account.

### Activation

When the first time you run OwnTHD, the following page will be shown:

A screenshot of a software activation window. At the top, it says "Thank you for purchasing Own THD, we hope it will bring you perfect work!". Below this, there's a "Please log-in:" section with two input fields: "Username" and "Password". To the right of the "Username" field is a "Sign up" link, and to the right of the "Password" field is a "Forgot password?" link. Below the input fields are two checkboxes: "Save login for all products" and "Automatic activation (recommended)", both of which are checked. At the bottom right, there is a "next" button.

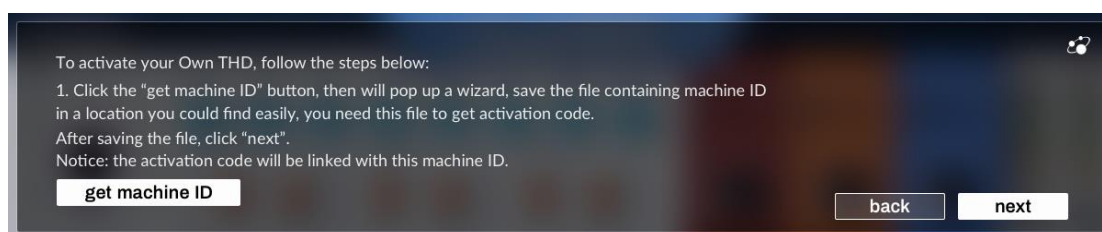
Now you have two choices: automatic activation or manual activation

### Automatic Activation

Please enter the username and password of your account, keep Automatic Activation checkbox selected, then click on "next" button. If you have Internet connection on your computer and your account has been bound with the corresponding serial number, your product could be activated automatically.:

### Manual Activation

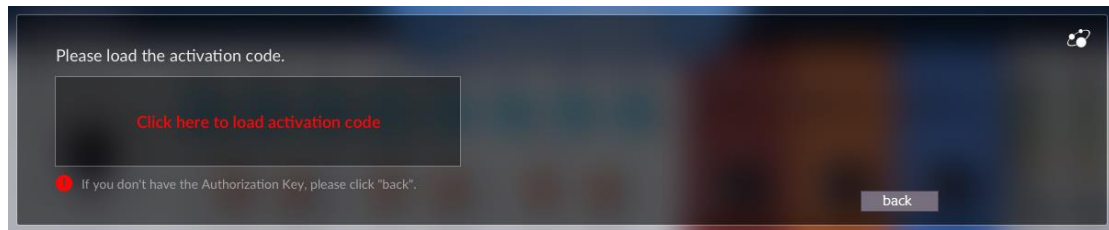
If you don't have Internet connection on your computer installed with OwnTHD, you can activate it manually. Deselect "Automatic Activation" checkbox and click on "next" button, the following page will be shown:

A screenshot of a manual activation window. It contains the following text: "To activate your Own THD, follow the steps below:", "1. Click the 'get machine ID' button, then will pop up a wizard, save the file containing machine ID in a location you could find easily, you need this file to get activation code.", "After saving the file, click 'next'.", and "Notice: the activation code will be linked with this machine ID." At the bottom left, there is a button labeled "get machine ID". At the bottom right, there are two buttons: "back" and "next".

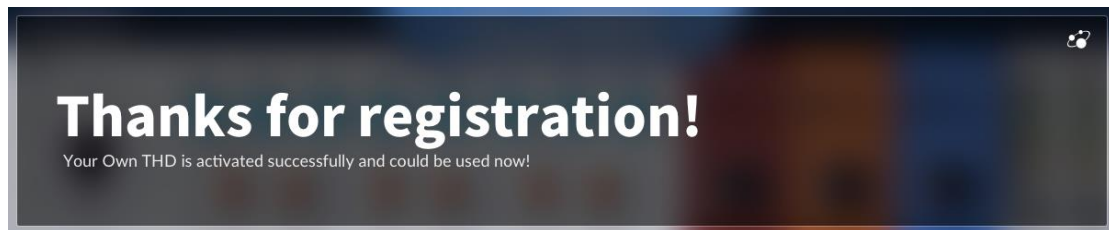
Now you need to perform a series of operations to activate OwnTHD manually:

- Firstly, click "get machine ID" button, your computer identification information will be stored as a file.
- Find another computer that has Internet connection, copy the machine ID file to that computer with a mobile storage device.

- Visit <https://my.threebodytech.com>, login to your account and switch to “my products” page. Select OwnTHD, then select an available serial number and upload the machine ID file in “Manual Activation” frame.
- The website would hint you to download the activation file for your computer. You probably need to save it to a mobile storage device to transfer it back to the computer that needs activation.
- Return to the computer installed with OwnTHD, click on “next” button and the following page will be shown:



- Copy the activation file to this computer and load it here, then it's done. You will see the following page once the automatic or manual activation is complete:



Congratulations! Your OwnTHD has been activated successfully and you can use it now.

## Chapter 4. Components

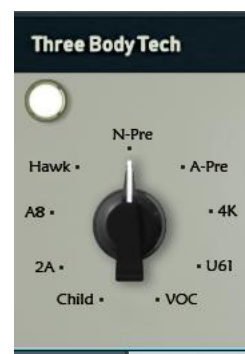
OwnTHD is composed of four components: Vintage Equipment Simulation, Solid-State Simulation, Tube Simulation and Tape Simulation. All of them are connected in serial, and each can be turned on/off individually.



### 4.1 Vintage Equipment Simulation

This component mimics 9 equipment that are commonly used in audio mixing/mastering, each has different "color" to the sound and is suitable in different music styles. The prototype of these equipment including microphone preamps, mixers, EQs and other effect hardware, and we only mimic their "THD" part. By turning the **Type** knob, you can switch among these equipment pieces. They are introduced below:

- N-pre: modeled from one of the most famous microphone preamps in the world. The sound is warm and has rounder, deeper low-end. When processing drum tracks, it would generate very classic Rock & roll feeling; and when processing orchestra audio tracks, it would wider the sounds.
- A-pre: modeled from another very famous microphone preamp. It is somewhat similar with N-pre but are more "focused" on mid- and low-frequency.
- 4K: modeled from a very famous equipment also. It makes punchy sound.
- U61: modeled from a tube microphone preamp that has very warm and dense mid-frequencies.
- VOC: modeled from a channel strip that has sweet high-frequencies.
- Child: modeled from a legendary limiter.
- 2A: modeled from a famous limiter.
- A8: modeled from a famous tape machine.
- Hawk: modeled from an overdrive module. This module has strongest distortion among all 10 modules in OwnTHD, and produce significant distorted sounds.



## 4.2 Overdrive Control

When modeling on each equipment, we found that the circuits contain multiple parts that generate distortions. So we provide four knobs (**Drive**, **Drive1**, **Drive2** and **Drive3**) to tune distortion level. By adjusting these parameters individually, you can have more freedom on how to THD.

The **Drive** button adjust total distortion level, and **Drive1/2/3** buttons adjust distortion amount of level 1/2/3 respectively.

Please notice that when Drive buttons turned up too much, OwnTHD would generate significantly distorted sounds.



## 4.3 Feedback Control

Some equipment contains positive or negative feedback circuit. The negative feedback would decrease distortion amount in some manner, and the positive feedback increases distortion.



## 4.4 Bias Control

By inducing positive or negative DC offset, the upper period and lower period of waves could have different amount of distortion. In general, positive bias would produce warmer sounds, while negative bias would produce colder sounds. But in real cases, affected by other parameters (such as Feedback), the effect of bias would be much more complicated.

In some circumstances, the bias could induce low-level noises.

## 4.5 Depth Control

By adding a low-shelf on feedback signal, it can have varied sounds on low-frequency. The effect would be complicated, so please adjust it accordingly. Please note that when Feedback knob is set to zero, the Depth knob would have no effect.

## 4.6 Volume

The output volume of the Vintage Equipment Simulation component.



## 4.7 Sweet Spots

Each equipment has its own "sweet spots". When modeling circuits on these equipment, we hope user could have a way to adjust these sweep spots. So we provide three sweet spots modules.





- **Freq.:** the frequency of this sweep spot.
- **Amount:** when this knob is turned to right side, the sound of this frequency hears more "loose"; when turned to left side, the sound contains more amount of THD, and hears more "rough".

## 4.8 Solid-State Simulation

Mimics the characteristics of a solid-state transistor in "ideal condition". The toggle button switches this component between on and bypassed. When it is on, turn up the knob produces larger amount of THD.



## 4.9 Tube Simulation

Simulates the effects produced by vacuum tube under "ideal condition". The toggle button switches this component between on and bypassed. When it is on, the larger the knob's value, the more THD will be produced. The amount of THD of tube in realistic is usually large, and it is same in our software, so the distortion amount of this part is larger than all other three parts.



## 4.10 Tape Simulation

Simulates the features of a tape machine under "ideal condition". The toggle button switches this component between on and bypassed. When it is on, the larger the knob's value, the more amount of THD it will generate.

Maybe you still remember there is also a Tape Simulation (**A8**) in the equipment Simulation component. The differences between **A8** and the one described here is that **A8** simulates a hardware in realistic, while the Tape Simulation being described here simulates the characteristic of Tape Machine in ideal condition. Please note: they don't conflict with each other, and the two could be used at same time.



## 4.11 Input and Output Volume Control

This rightmost panel controls input and output volume. The input gain would also affect amount of distortion, where higher input gain results in more significant distortion.



## Chapter 5. Presets

### Loading Presets

You can use preset selector in OwnTHD to load preset files.

### Saving Presets

Click on "Save" button to store current state of OwnTHD to a preset file. Although you can select any location to save the file, only preset files in specific folder can be recognized and loaded by OwnTHD preset manager. The path of the folder is:

Windows:

```
C:\Users\ (yourname) \AppData\Roaming\ThreeBodyTech\OwnTHD\presets
```

Mac:

```
/Users/ (yourname) /Library/ThreeBodyTech/OwnTHD/presets
```

If the file name of the saved preset is "default", then OwnTHD will load this preset every time it starts.

## Chapter 6. F.A.Q

### **Can I use OwnTHD as overdrive/distortion effect?**

Yes, but please notice that OwnTHD is not designed as a overdrive/distortion pedal, and the equipment it simulated do not have large amount of distortion.

### **I can't feel obvious effect from OwnTHD, why?**

The equipment pieces simulated by OwnTHD have almost linear response in low levels -- as we only want to color the sounds, but not distorting it -- and would have significant non-linear effects on suitable input gains. Many recording engineers would make microphone preamps working on slight overdrive level to obtain expected sounds. So if you want to have more significant effects, you may try to increase input volume, or turn up Drive knob. In one word, more gain, more harmonics. Hope you could find a delicate balance between no harmonics, suitable harmonics and too much distortion.

### **OwnTHD add too much distortion to my tracks, why?**

Most equipment would have large amount of distortion when input volume is too high, and so does OwnTHD. If input volume is too high, or drive parameters are too high, it would produce significant distortion.

Sometimes, if the volume of low-frequencies is too high, it would also generate too much distortion.

### **I should insert OwnTHD on every track or on the buss?**

You could do both. We suggest you use it in serial, and each level increase small amount of harmonics. For instance, one for bass drum, one for drum group, and one for master track. This would make a more complicated sound and is usually better than only using one OwnTHD.

## Chapter 7. Credits

### Product Design

Li Xinhe, Yan Yan, San Shou, Meng Ke, Nathan Jiang, Wang Lei and Yang Xi

### DSP & Math

Meng Ke, Yang Xi, Nathan Jiang and Wang Lei

### QA

Hang Ruixiang and Wang Zhen

### Editors

Marshall M and Kevin Zhang

### UI Design

Gao Ruyue and Meng Kaiting

### Special Thanks

Wang Pu, Feng Wei, Michael Cecil & Qiu Qiu  
Our friends and family

Dear Users  
Our friends and family

**OwnTHD User Manual**

written by

Xi Yang, Marshall M, Wang Zhen, Meng Ke, Nathan Jiang, Kevin Zhang and Zhou Kaijie

Manual updated April 7, 2022

Copyright © 2022 TBTECH Co., Ltd.

All rights reserved.

TBTech Co. Ltd.

[www.threebodytech.com](http://www.threebodytech.com)