

# Multiverse Designer Quick Start Guide



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June 6, 2023**



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# Revision History

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# Introduction

The **Multiverse Designer** application is your entry point to the Multiverse experience, allowing you to design virtual pedalboards, set and tweak effect controls, all in a rich graphical environment that provides the real-world experience of tweaking knobs and routing effects.

The **Multiverse Designer** does more than let you create your presets and upload them to the pedal. When connected to the **Multiverse** pedal by USB, the **Designer** graphical environment is synchronized with your hardware to provide real-time control over presets and effect pedals.

Once your virtual pedalboards (presets) are programmed into the pedal, it's ready to go to the gig, no computer required! And of course you can also continue to tweak and save your effect settings directly on the pedal without the need for a computer.

The steps to use the **Multiverse Designer** can be summarized as:

1. Start the **Designer** application, and **IMPORT** your effects from the **Multiverse Web Store** into your **Effect Library**.
2. Create your first patch by dragging and dropping effects from the **Effects Library** onto the virtual **Pedalboard**.
3. Make patch connections between effects to build up your signal chain.
4. Name and save your patch.
5. Assign EFX controls to the hardware controls on the Multiverse.
6. If desired, create more presets and save them. Each patch can have different effect connections and settings.
7. Click **BUILD** to create your collection of virtual pedalboards.
8. Click **PROGRAM** to upload your collection of presets to the Multiverse pedal.

## Device Keys and Registration

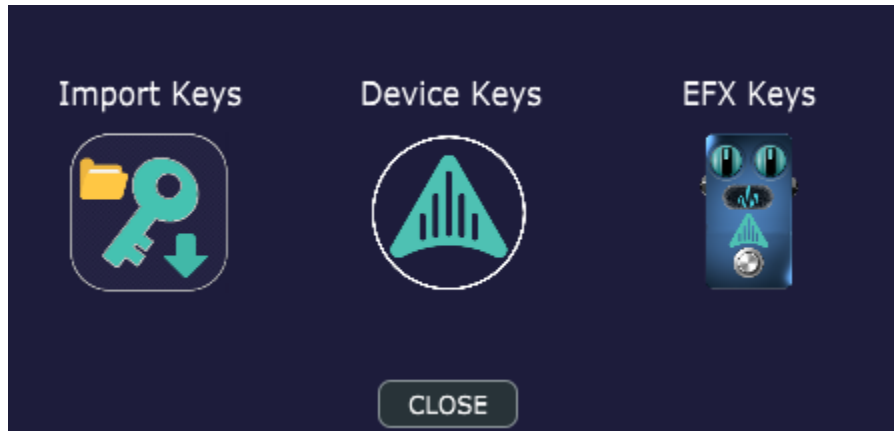
In order to use your **Multiverse** pedal, you will need two types of keys.

- Device Key - this key is provided to you by Aviate Audio when you register your device.
  - Retrieve your hardware unique ID by connecting your pedal to the Designer software via USB and selecting the 'About' button in the Designer tool.
  - Register your hardware UID by creating a user account at [aviateaudio.com/account](https://aviateaudio.com/account) and filling out the Multiverse Registration form.
- EFX keys - each effect will have a unique key for your hardware.

Multiverse uses keys to ensure that effects (both free and premium) are properly authenticated before running on the hardware. This allows the user to know the audio effect has been validated by Aviate Audio and passed its QA testing process before publication to users.

Keys are added by clicking the **KEYS** button in the lower-left corner of the application: Clicking the **KEYS** button brings up a window to select from:

- Importing keys (of any type)
- Viewing the Device Key Table
- Viewing the EFX Keys Table



Your **Device Key** file is provided to you when you first register your Multiverse Pedal at [www.aviateaudio.com](http://www.aviateaudio.com). Add your key to your copy of the Multiverse Designer by clicking the **KEYS** button in the lower-left corner of the application, then click the **Import Keys** button on the left of the window. This will open a file browser to select your key files.

Your **EFX Keys** are provided when you obtain new audio effects from the Multiverse Store. EFX

To import your **EFX Keys**, use the same method. Select the 'Import Keys' button and load any Effects Key files you received from Aviate Audio.

## Application Overview

The application GUI consists of six primary sections.

1. *Patch Control* - these buttons are used to create, edit and navigate effect presets.
2. *Build & Program* - these buttons are used for building and programming virtual pedalboards to the hardware pedal.
3. *Virtual Hardware* - this virtual representation of the physical pedal lets you manipulate the mapped controls without having to touch the hardware.
4. *Effect Library* - the effects you download from the *Multiverse Web Store* are organized here.
5. *Virtual Pedalboard* - this is where you arrange, connect and configure your presets.
6. *Hardware / Software Info* - these buttons provide information about your hardware pedal and software version.



## Quick Start Tutorial #1 - Bypass Mode

The very first thing we should do is create a bypass patch to make sure that everything is working correctly. If you run into any issues, it will be easier to troubleshoot using a simple bypass patch.

### Step 1 - Clear the pedalboard

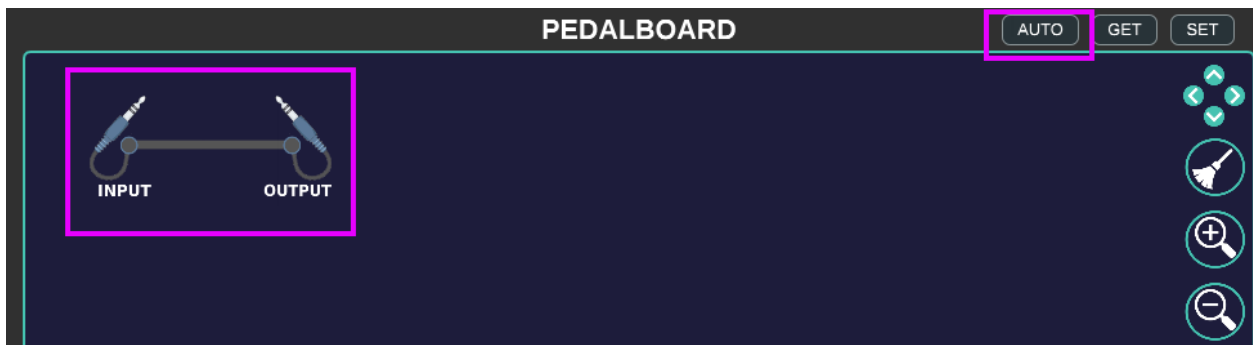
After starting the program for the first time, you should have a clear **PEDALBOARD**, with no saved presets. If you wish to return to a clean slate and remove any previously stored presets, you can click the **CLEAR** button in the *Patch Controls*.

Your screen should look similar to the following, with the default patch name '000 - New Preset', and no effects on the pedalboard.



## Step 2 - Create the signal chain

Make sure the routing mode is set to **AUTO**, then create a bypass signal chain by clicking and dragging the **INPUT** and then the **OUTPUT** EFX icons from the *Effect Library* onto the *Virtual Pedalboard*. Choose horizontally adjacent positions. Because they are adjacent, the router will automatically make a connection between them when using auto mode.



### Step 3 - Set this preset into the virtual pedalboard collection

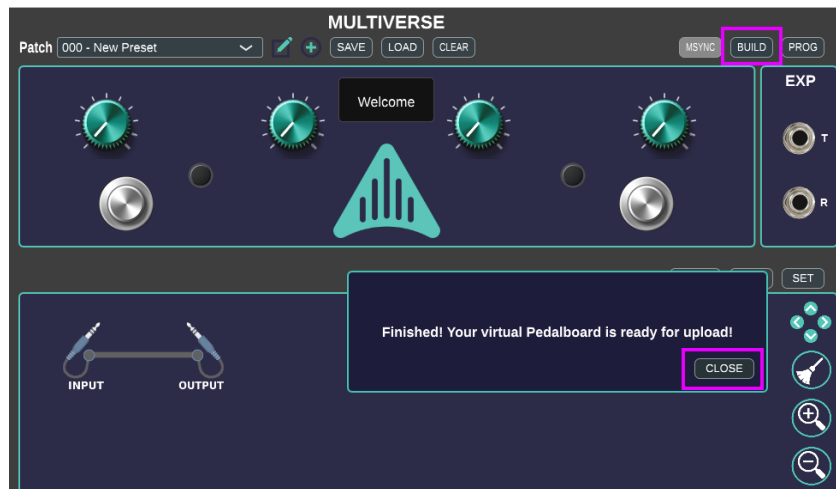
In order to set this preset in the collection of pedalboards, click the **SET** button. A popup dialog will appear to confirm that the preset has been saved to your computer disk. Click **OK** to clear the message.



### Step 4 - Build the pedalboard

Click the **BUILD** button to create the virtual pedalboard. If successful, a pop window will indicate success. Click **CLOSE** to close the notification.

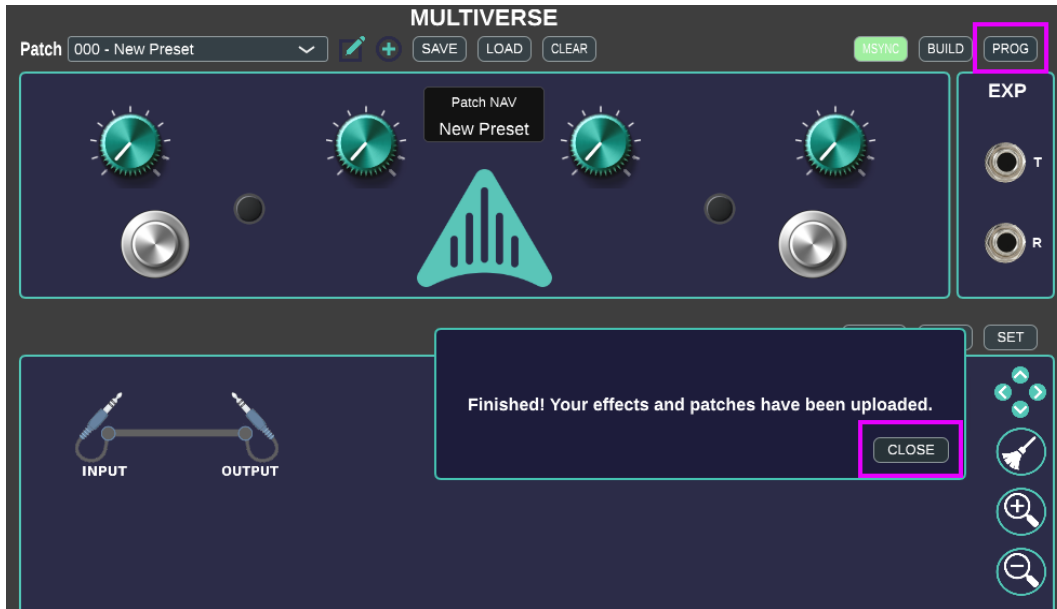
*NOTE: even though we have a single preset (pedalboard) at this point, normally you will have many presets but you only need to click BUILD once to build the entire set.*





## Step 5 - Upload the pedalboard

- Before programming, turn down the **LEVEL** knob on the *Multiverse* pedal or on your amp to avoid any sudden volume changes.
- Connect your *Multiverse* pedal via USB cable to your computer and press and release the program button on the side of the pedal to put it in programming mode.
- Click the **PROG** button. If successful you will see a pop up notification. Click **CLOSE**. You can now set your volume controls back to normal.



## Step 6 - Testing the bypass preset

- Connect your guitar or instrument to the ¼" **IN** jack at the top of the *Multiverse* pedal.
- Connect your guitar amp or headphone amp to the ¼" **OUT** jack at the top of the *Multiverse* pedal.
- For best sound quality, set the **LEVEL** control to maximum and adjust the **GAIN** knob until you can hear the instrument clearly. If the **GAIN** is set too high and the pedal detects clipping, it will flash the LEDs on the front of the pedal to alert you to turn down either the instrument or the input gain level.

**Congratulations!** You've built your first virtual pedalboard! Not a very exciting tone yet, but the good news is that as you build more complex presets, the process of creating, building and programming stays the same as in this *Quick Start - Bypass Mode* section.

If you run into problems, please consult the *Troubleshooting* section at the end of this guide.

## Quick Start Tutorial #2 - Simple Effects Chain

In this section we will create a simple effects chain using a *Transmogrifox Distortion* and *Blackaddr Audio Tremolo*.

This tutorial builds upon the simple bypass presets we made in the previous tutorial in order to explore how *Multiverse* supports multiple presets.

If you have not already complete **Tutorial #1**, please go back and complete it now to ensure your hardware and connections to your *Multiverse* pedal are working correctly.

### Step 1 - Rename the existing preset

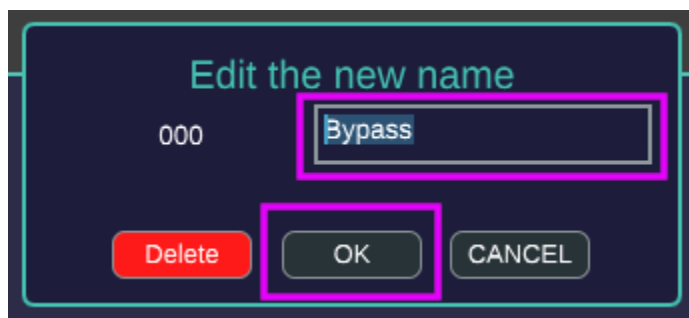
We created a bypass preset in the previous tutorial but we didn't give the preset a name. Let's do that now. Click the *edit* icon next to the preset name.



A popup window to edit the preset *name* and *sorting* number will appear. You can edit either field by double-clicking on it. The sorting number is helpful if you wish to change the ordering of your presets as they are always arranged in ascending order. **Sorting numbers do not need to be unique. If multiple presets have the same number, they will be sorted alphabetically by name.**

Double-click on the *name*, and change it to 'Bypass'. Click **OK** when finished.

*NOTE: If you wish to ever delete a preset, you can do so in this window by clicking the **DELETE** button.*



Notice now that the preset pulldown menu has been updated with your new name.



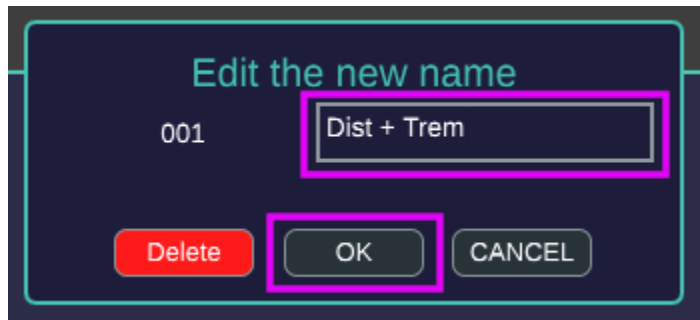
## Step 2 - Create a new preset

To add a new preset, click the *Add* button as shown below.



The preset edit window pops up again. Just as before, double-click on the *name* to change it. Let's call this one '*Dist + Trem*'. Notice that the preset number has auto-incremented to *001*.

Click **OK** when finished.



After clicking **OK**, you will see that our new name is reflected in the preset navigation pulldown menu.



## Step 3 - Importing Effects

Before placing effects on your virtual pedalboards, you must download the effect from the *Multiverse Web Store*. Each individual effect is an EFX file which must be imported into your *Designer* application.

Click the **IMPORT** button at the bottom of the *Effect Library*.



This will popup a standard file-selection window. Navigate to where you downloaded your EFX files and select one or more EFX files to import.

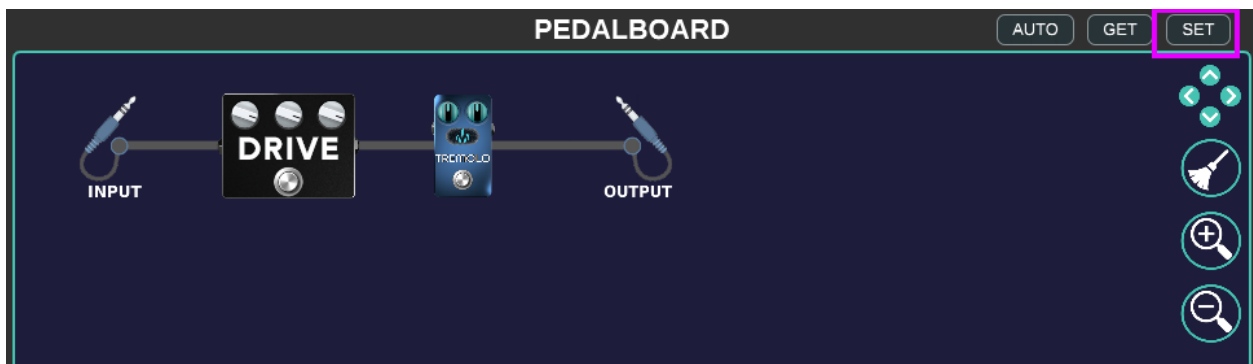
For this tutorial if you have not already done so, download the free *Transmogrifox Distortion* and *Blackaddr Tremolo* files and import them.



## Step 4 - Create the effects chain

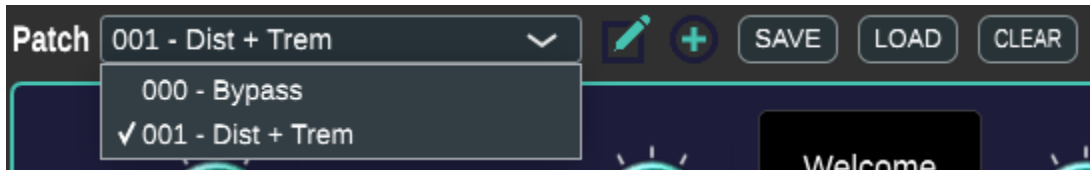
Similar to **Tutorial #1**, drag the following EFX icons from the Effects Library onto the pedalboard and arrange them as you see in the figure below. Make sure the router button is set to **AUTO** to automatically create audio connections between adjacent effects in a pedalboard row.

Click the **SET** button when finished to save this change in the virtual pedalboard preset, then click the **OK** button to clear the popup message (not shown below) acknowledging that your pedalboard has been saved to your computer.



## Step 5 - Changing presets

Now that we have two presets we can change between them. Click the preset selection pulldown menu to see the list of presets available.

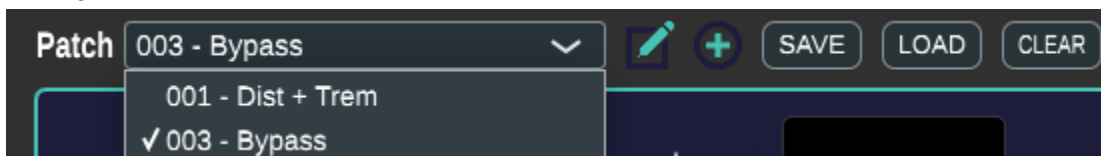


We can see the first preset '000 - Bypass' is first in the list and the checkmark indicates the selected preset is '001 - Dist + Trem'.

Select the '000 - Bypass' from the list by clicking on it. Our virtual pedal board will change from the distortion/tremolo back to the bypass one we made earlier. We also can see that the preset navigation pulldown menu shows we are in '000 - Bypass'.



Use what you learned above in **Step 2** to edit the '000 - Bypass' preset, but this time change the sorting number from 000 to 003. Click **OK** in the preset edit window when finished.



Notice the order of the presets has changed! Bypass is now the second in the list because we changed its sorting number to 003, which is greater than the *Dist + Trem* preset which has sorting number 000.

**PRO TIP:** We didn't have to choose 002, we can use any 3-digit number we like. Order your presets with tens instead of one's digits. E.g. 010 and 020 instead of 001 and 002. This leaves room in the future to insert new presets wherever you want without having to change the sorting numbers of the existing ones.

Our virtual pedalboard now consists of two different presets which consist of different arrangements of effects. Nice!

## Step 6 - Build and Program your new virtual pedalboard

Just as you learned in **Tutorial #1**:

- a) Before programming, turn down the volume either on the *Multiverse* pedal using the **LEVEL** control, or on your amp to avoid sudden volume changes.
- b) Click the **BUILD** button, then click **OK** to clear the acknowledgement screen.
- c) Connect your *Multiverse* pedal via USB to your computer if it is not already.
- d) Press the **Program** button on the side of the *Multiverse* pedal.
- e) Click the **PROG** button to upload your virtual pedalboard, then click **OK** to clear the acknowledgement screen.
- f) Once programming is complete, you will see the *Multiverse* pedal restart. You can now turn the volume levels back up to normal.

## Step 7 - Changing presets in real-time

Once your new virtual pedalboard is running on the *Multiverse*, confirm you can hear your instrument.

The **Message Sync** button should be green to indicate the *Designer* app is synchronized with your *Multiverse* pedal



**PRO TIP:** When synchronized, you can change presets using the preset selection pulldown menu in the app and this will also change the preset running on the *Multiverse* pedal.

By changing the preset, you should now hear the instrument switching between the clean bypass and the '*Dist + Trem*' signal chain.

## Quick Start Tutorial #3 - Controlling Effects Part I

In this first of two tutorials on controlling effects, we will use the *Designer* app to adjust the knobs on our effects and set this in our virtual pedalboard.

In the previous tutorial, we created a simple signal chain with a distortion and a tremolo effect. We will now adjust the effect settings using the virtual effect controls in the *Designer* app.

## Step 1 - Check your audio connections

After completing the previous tutorials, you should now have your virtual pedalboard containing two presets (Bypass, and Dist + Trem) programmed onto your *Multiverse* pedal and able to switch between the presets using the preset select pulldown menu in the app.

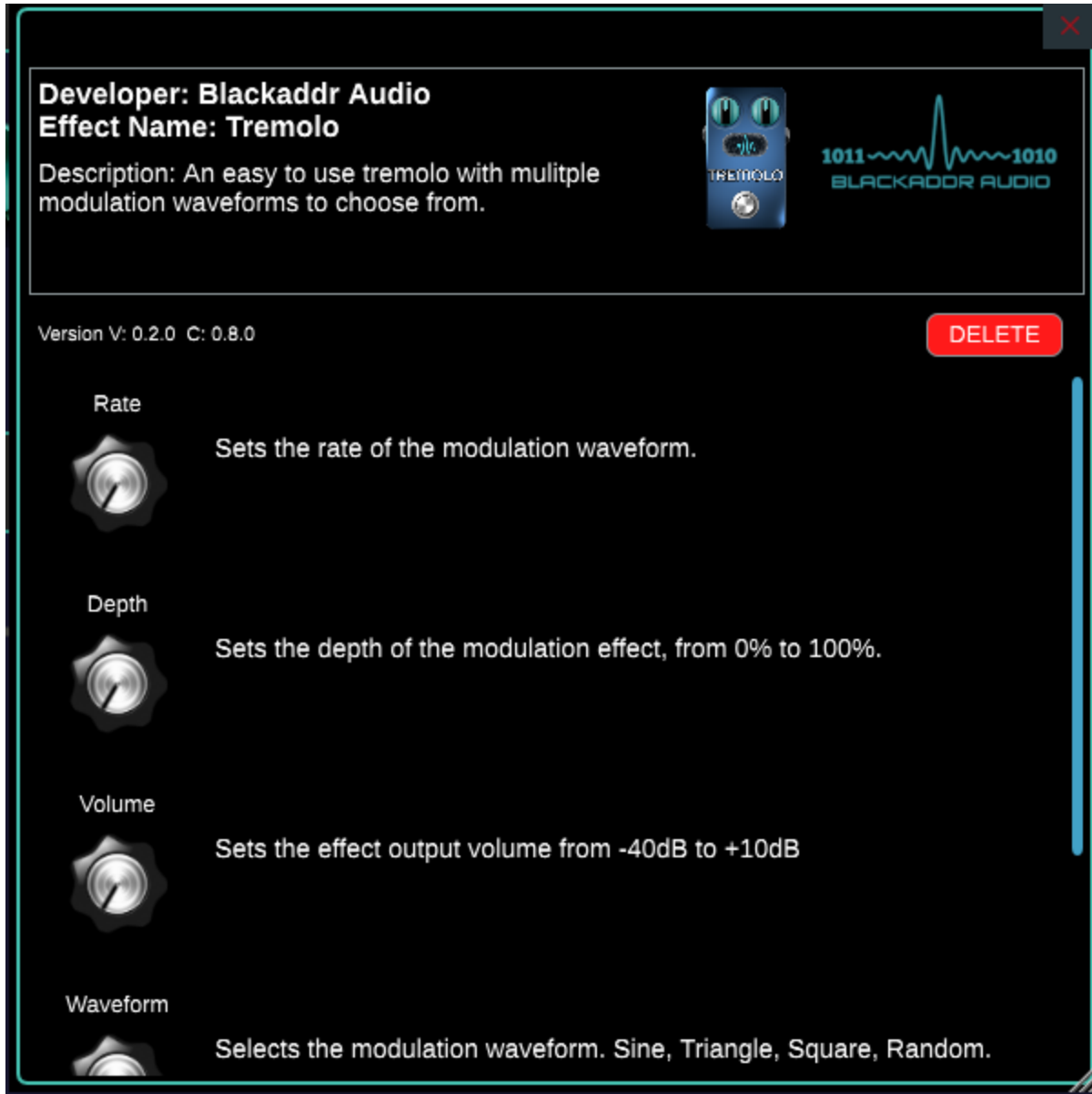
You should also be able to hear your instrument through your amp and hear the distortion and trem effects turning on and off as you switch between the two presets.

## Step 2 - Opening the Effect Info window

Right-click on the Tremolo EFX icon in the *Effect Library*. This will bring up the *Effect Info Window* for that particular effect.

The info window header contains the following information for an EFX virtual effect pedal:

- Effect developer name
- Effect name
- Description of the effect
- The effect icon that appears in the *Effect Library* and the *Pedalboard*
- The company logo
- The version of the effect itself (0.2.0 in the example below)
- The version of the Multiverse core software (0.8.0 in the example below)
- A **DELETE** button to remove the effect from the *Effect Library* if desired.



Below the header we have a list of every adjustable control on the effect. For each control we have the name of the control, the graphical representation of the control (e.g. a knob or switch) and a description of the control.

**PRO TIP:** The *Effect Info Window* is a separate window on your desktop from the *Designer* app. The info window can be scrolled, resized, moved around the desktop etc.

**PRO TIP:** You can have multiple *Effect Info Windows* open at the same time for different effects by right-clicking on another icon in the Effect Library.



## Step 2 - Opening the virtual Effect Control window

Close any *Effect Info* windows you have open by clicking the red 'X' in the upper right corner.

This time, right-click on the distortion effect on the *Pedalboard* to bring up the *Effect Control Window* for that effect.

This window is your virtual effect pedal! Cool!

The top section includes:

- A header similar to what you saw in the *Effect Info Window* (logo, description, etc.)
- preset name
- Effect name + instance (pedalboards can have the same effect more than once!)
- Input / output sound level meter for channel 0 input / output
- Buttons to switch pedal viewing mode, set/get control settings, set defaults, change and change between art graphics and control array views.
- SAVE and LOAD buttons for effect settings (.patch files) for the EFX.



The bottom section is the virtual pedal itself. If the effect developer has provided full pedal artwork, this will be the virtual representation of a real pedal. If no artwork is provided, it will appear as a simple array of controls.

**PRO TIP:** You can have multiple *Effect Control Windows* open at the same time for different effects by right-clicking on another effect icon in the Pedalboard.

## Step 3 - Changing the effect settings

The **SYNC** button should be green indicating the effect is syncing the *Effect Control Window* with the effect running on the *Multiverse* pedal.

Try adjusting the level controls, and turning the Drive/Boost on and off. You will hear the changes take effect immediately through the *Multiverse* pedal, just like using a real pedal!

**TO SAVE YOUR EFFECT SETTINGS, CLICK THE SET BUTTON TO STORE THEM IN YOUR PRESET. DO NOT FORGET TO CLICK 'SET' AFTER MAKING PEDALBOARD CHANGES.**

**PRO TIP:** Build up your effect chains and presets using the *Designer* app with some initial settings and then build & program your virtual pedalboard. Once running, you can use the *Designer* app along with the *Effect Control Window* of your effects to tweak the sound how you like. Just don't forget to click **SET** to save your effect settings to the preset.

**PRO TIP:** Just like the *Effect Info Windows* from the *Effect Library*, multiple *Effect Control Windows* can be open at the same time, and can be resized, moved, etc. You can close windows by clicking the 'X' in the upper-right corner of the window.

## Quick Start Tutorial #4 - Controlling Effects Part II

In our final tutorial, we will map controls from our EFX virtual pedals in the *Designer* app to the physical controls on our *Multiverse* pedal. This allows full effect control directly on the hardware without the need to have the *Designer* app connected.

This is the most exciting part as we will demonstrate the amazing flexibility and integration to customize any preset with assignable physical controls.

### Step 1 - Assigning physical controls

Starting from where we left off in *Tutorial #3 - Controlling Effects I*,

- a) Use the preset selection pulldown menu in the *Designer* app to activate the 'Dist + Trem' preset.

- b) right-click on the Distortion effect to bring up the *Effect Control Window*, then move it to the side by clicking and dragging the title bar so you can see the main *Virtual Hardware* area at the top of the *Designer* app as well.



- c) Click on the *Effect Control Window* to make sure it's at the front (active window), then right-click on the **OD Drive** knob. A box will appear around the knob indicating it is selected.



- d) Left-click and drag the selected knob over to the Designer app drop it on the top-left knob in the *Virtual Hardware* area.



Notice that the name of the effect (DIST) and the control (OD Drive) now appeared above the knob. We have now assigned this knob on the *Multiverse* pedal to control the OD Drive control when this preset is active.

If you wish to remove an assignment in the *Virtual Hardware* RIGHT CLICK on the control near the assigned name to remove it.

- e) Assign the rest of the controls as shown in the image below, using the same process of right-clicking on the control in the *Effect Control Window* to select it (box appears around the control), then click and drag it onto a knob, button or LED in the *Virtual Hardware* area.

You can assign controls from different EFX to the virtual controls in the *Virtual Hardware* area.

Also note that we have the DIST-OD Enable control on both the Virtual Hardware S1 stomp switch as well as the LED by clicking, dragging and dropping twice. Yes! **Switches can be mapped to the LEDs so you can see their status!**



- f) When finished, don't forget to click the *Pedalboard* **SET** button to save these settings into the preset.

**PRO TIP:** Each individual preset stores the EFX layout, the settings for each EFX control in that preset, and the assignment of any physical control.

## Step 2 - Use the physical hardware controls

- g) Click **BUILD**, then when finished, push the **Program** button on the side of the *Multiverse* pedal, then click the **PROG** button in the *Designer* app.
- h) Once your pedalboard is uploaded, make sure the preset 'Dist + Trem' is selected, now try playing with the encoder knobs and stomp switches on the *Multiverse* pedal.

NOTICE: as you turn the encoders or press the stomp switches on the *Multiverse* pedal:

- i) The effect sound changes in real time

- ii) The hardware graphics display shows the control you are changing and its value
- iii) The *Virtual Hardware* knobs and display in the app also update to reflect changes
- iv) If the *Effect Control Window* for the effect (i.e. Distortion) is open when you turn the hardware knob, the knobs in this window changes as well!
- v) You can adjust the knobs/switches in the *Virtual Hardware* area as well to change the sound.

In summary, when a virtual effect knob or switch is mapped to a physical control, it can be changed in three places to change the sound (the *Multiverse* pedal, the *Virtual Hardware* area, or the *Effect Control Window*) and all three stay synchronized. Try it!

### Step 3 - Unmapped controls

You may be thinking, “*When not connected to the Designer app, what if I need to adjust an EFX control that I didn’t map to a physical control?*”

With the *Multiverse* pedal, you can still access every EFX control from the built-in menu system. Let’s adjust the **OD Tone** control from the distortion. Recall we did not assign this EFX control to any of our physical knobs.

- a) Press and *hold* the **Encoder A** knob, then press the **Encoder B** button. This will access the **Menu**. You can then release both knobs.
- b) Turn the **Encoder A** knob to navigate the **Menu**. Turn it clockwise until you see ‘**EFX Edit ->**’. Press and release the **Encoder A** knob to access this sub-menu.
- c) In the ‘*Effect Select*’ sub-menu, rotate the **Encoder A** knob to select the DIST0 effect, then press and release the **Encoder A** knob. NOTE: we only have one distortion and it is called DIST zero. If we had more instances, we would have DIST1, DIST2, etc.
- d) In the ‘*Param Select*’ sub-menu, rotate the **Encoder A** knob until you see ‘O-TON’. This is our OD Tone control.
- e) Now rotate **Encoder B** to adjust the setting of the **OD Tone**. Once you are happy with the setting you can exit the menu one of two ways:

Exit 1) Rotate **Encoder A** counter-clock wise until it goes all the way back to the beginning and shows “**<-Back**”. Press and release **Encoder A** to go back up one menu.

Exit 2) At any time, in any *Menu*, you can Press and *hold* the **Encoder A** knob, then press the **Encoder B** button. This combination lets you toggle between the normal *Effect Control Mode* (where the hardware knobs/switches change the mapped controls) and the *Menu* mode where **Encoder A** and **Encoder B** navigate and edit *Menu* entries.

**PRO TIP:** assign controls you change frequently while playing to the physical knobs, and adjust other effect controls using the **Menu**.

## Step 4 - Saving presets from the Multiverse pedal

In the previous step we directly edited EFX control values using the **Menu**. If you wish to keep these settings, you can save them locally on the pedal without using the *Designer* app.

Otherwise, if you change to a different preset and then return, the edits will revert to the original.

- a) Enter the **Menu** by pressing and holding **Encoder A**, then press **Encoder B**. Release both when you are in the **Menu**.
- b) The first option in the *Menu* is '**Save Preset->**'. Press and release **Encoder A** to select this option.
- c) You will receive the "**Save?**" prompt. The default is '**No**'. To save, rotate **Encoder A** clockwise to select '**Yes**'. Press and release **Encoder A** to execute the save.
- d) Once successfully saved, you will receive the '**DONE**' prompt. Press and release **Encoder A** to select '**OK**' and return to the previous menu.
- e) You can continue navigating the menus, or return to the *Effect Control Mode* by pressing and holding **Encoder A**, then press and release **Encoder B**.

## Step 5 - Navigating presets on the Multiverse pedal

In previous tutorials, we changed presets using the preset pulldown menu in the *Designer* app. We can also change presets directly from the *Multiverse* pedal.

- a) Access the **Preset Navigation Mode** by pressing and holding **Encoder C**, then press and release **Encoder D**.
- b) Rotate *Encoder D* clockwise to move to the next preset in the list. Preset changes will be instantaneous, you do not need to select them.
- c) Rotate **Encoder C** counter-clockwise to move to the previous preset in the list.
- d) Return to the *Effect Control Mode* by pressing and holding **Encoder C**, then press and release **Encoder D**.

## Summary

The purpose of this *Quick Start Guide* is to familiarize yourself with the essential steps to create virtual pedalboards with your EFX bundles, arrange them in presets, and get them running on the *Multiverse* hardware pedal.

This guide barely scratches the surface of what you can do as a *Multiverse* user. Please review the *Multiverse Designer Reference Guide* for complete instructions and documentation.

# Nomenclature

*EFX* - Multiverse compatible virtual effect pedals are called EFX. This can refer to the effect, or the file itself that is downloaded from the *Multiverse Web Store*.

*Effect Library* - an area in the Multiverse Designer App where your EFX virtual pedals are organized.

*Effect Control Window* - this window contains the graphical representation of your virtual EFX pedal and lets you turn knobs, switches, etc.

*Effect Info Window* - detailed information about an EFX, obtained by right-clicking on the EFX icon in the *Effect Library*.

*Hardware Virtual Area* - this area near the top of the *Designer* app is where you click and drag EFX controls to assign them for use on the physical *Multiverse* pedal controls.

*Patch* - a snapshot of the settings for a single EFX.

*Pedalboard Area* - this area in the *Designer* app is where you arrange and connect your effects together.

*Preset* - a snapshot of your collection of pedalboards, their effects and their effect settings.

*Multiverse Designer* app - the GUI program you run on your computer to arrange and build your virtual pedalboards as presets.

*Multiverse* pedal - the physical hardware pedal used for real time virtual effect pedals.

## Troubleshooting Tips

- You must remember to **SET** any changes in the *Effect Control Window*, and click **SET** in the *Designer* app before building, otherwise your changes will not have been saved in the virtual pedalboard collection.
- If you hear clipping, use the *Effect Control Window* for each effect to look at the input and output level meters. Reduce output volume at the first EFX that is in the red zone or clipping. If the input of the first EFX is clipping, reduce the **GAIN** knob on the *Multiverse* pedal.
- Computer USB ports are notoriously noisy power and communication interfaces and can often create ground loops. If you are getting more noise/hum than expected, try disconnecting the USB cable once you have programmed your presets.

# Customer Support

If you need support, please contact the Aviate Audio team and we will be happy to assist you.

Email: [contactus@aviateaudio.com](mailto:contactus@aviateaudio.com)

Or join the 'Aviate Audio Multiverse' community [Discord](https://discord.gg/B9jRYKUS) (<https://discord.gg/B9jRYKUS>).