



MOD Duo

User's Manual



Rev. A

Before using the unit carefully read the "Important Safety Instructions" present in this manual.

Important Safety Instructions

Carefully read these important safety instructions and save them for future reference.

Warning

To reduce the risk of fire, electrical shock or product damage:

- Do not expose the apparatus to rain, moisture, dripping or splashing and avoid placing objects filled with liquid, such as vases, on or near the apparatus.
- Only use accessories approved by the manufacturer.
- Do not open the enclosure. There are no user repairable parts inside. Leave service and repairs to trained service personnel only.

Power adapter

Warning

- The adapter is not safety grounded and may only be used indoors.
- To ensure adequate ventilation, do not place the power adapter in tight spaces.
- To prevent risk of electric shock and fire because of overheating, please ensure that curtains and other objects do not prevent adapter ventilation.

Audio outputs

Warning

- Always mute or turn down the volumes before connecting any equipment to the audio- or headphone outputs.
- The apparatus is capable of outputting loud signals via the audio and headphone outputs. These volume levels may damage your gear. Verify that the output volume is set to a level that your equipment can handle.
- High volume levels may damage your hearing, please protect your hearing by paying attention to the output volume.

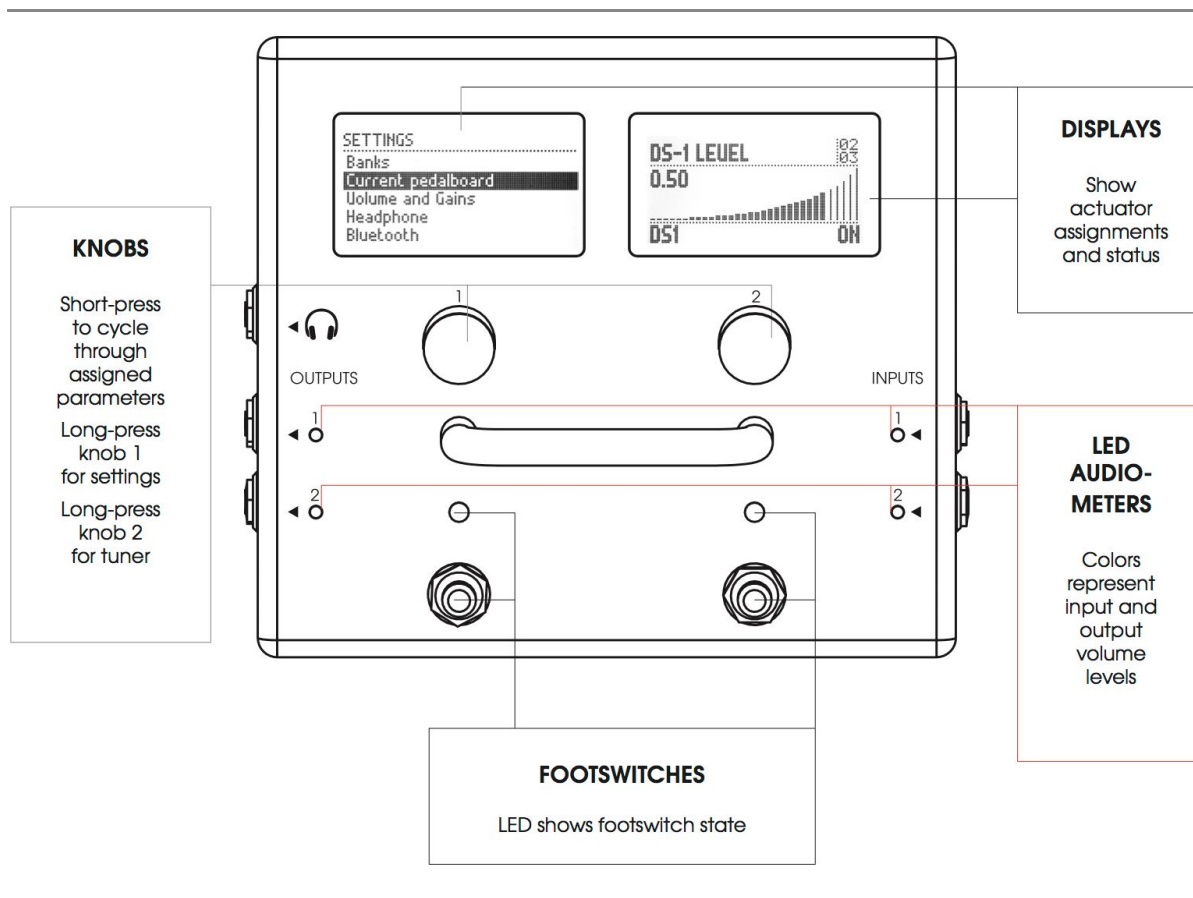
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Getting ready

Overview



Connecting the MOD Duo

HEADPHONE JACK

Here you can connect a pair of (studio) headphones

OUTPUT JACKS

Connect directly to your instrument amplifier(s), mixer or PA.

Keep knob 1 pressed for volume adjustments.

INPUT JACKS

Connect any sound sources (line, instrument or mic) into one or both of the inputs. They are fully independent.

Keep knob 1 pressed for gain adjustments. Monitor the levels in the LED.

DIN-MIDI I/O

Connect to old school DIN-MIDI devices here.

POWER JACK

Connect the included power supply here

CONTROL CHAIN PORT

This port is for connecting Control Chain devices only.
This is not a network port!

USB HOST PORT

This is a general purpose USB port. You can connect USB-MIDI devices, game controllers and Bluetooth dongles. Use a USB hub to increase the amount of available ports.

USB COMPUTER PORT

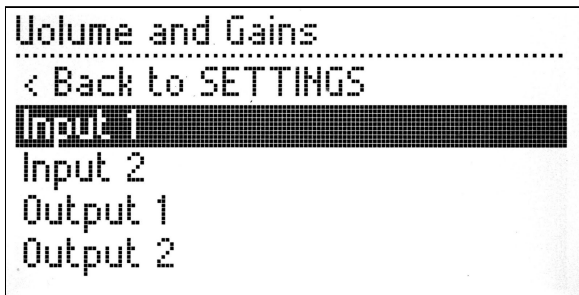
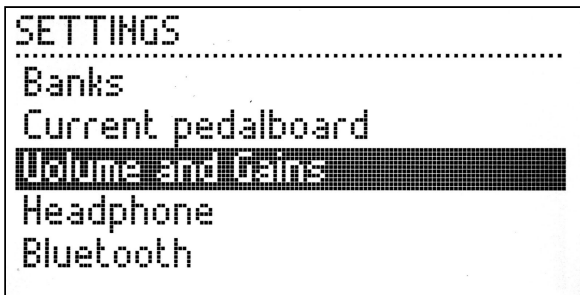
Connect to your computer to build and manage your pedalboards.

To ensure a safe connection, follow the steps below.

1. Turn down the volume of your amp and connect it to the OUTPUT jack(s)
2. Connect your instrument(s) to the INPUT jack(s)
3. Turn on the MOD Duo by plugging in its power adapter
4. Wait until the MOD Duo boots up

Adjusting volumes

The MOD Duo allows each input and output volume to be individually adjusted. To access the **Volume and Gains** menu, first press and hold the left knob for one second. The **SETTINGS** menu will show up, now turn the left knob to select the **Volume and Gains** option and finally short press the knob to access it.



In the **Volume and Gains** menu, turn the knob to select the input or output you want to adjust and short press the knob to access it.

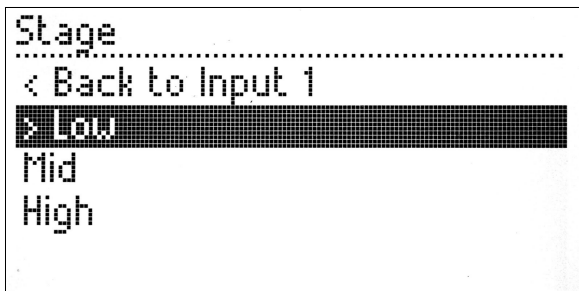
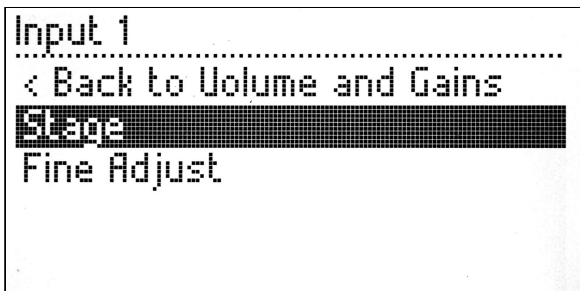
Inputs

The options for adjusting the inputs are **Stage** and **Fine Adjust**.

The **Stage** menu allows you to adjust the gain stage of the selected input. Inside of the **Stage** menu there are 3 options: **Low**, **Mid** and **High**, representing the following input gain levels:

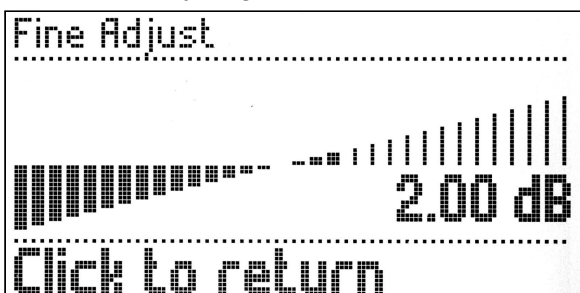
- **Low** = -22dB
- **Mid** = -9.5dB
- **High** = +3dB

You should select the gain stage that best applies to the instrument you have connected. Short press the knob to activate the selected gain stage.



Once you have chosen the desired **Stage** value you can return to the previous menu by selecting the **Back to ...** option.

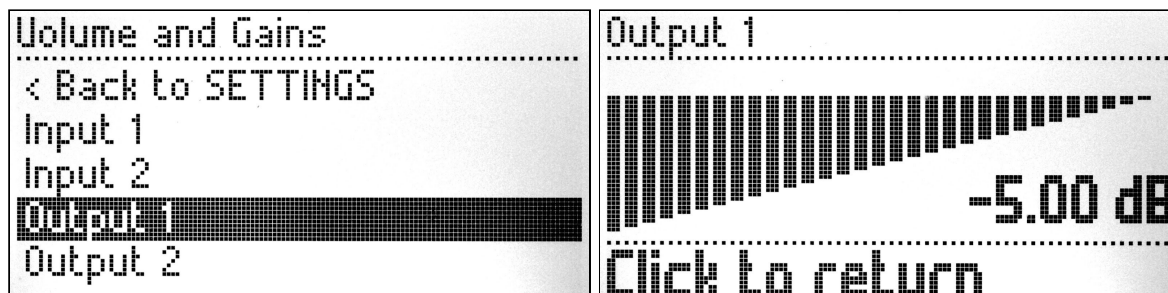
The **Fine Adjust** menu allows you to adjust the gain of the selected input. You should turn the knob until you get the desired value.



Simply short press the knob to return to the previous menu.

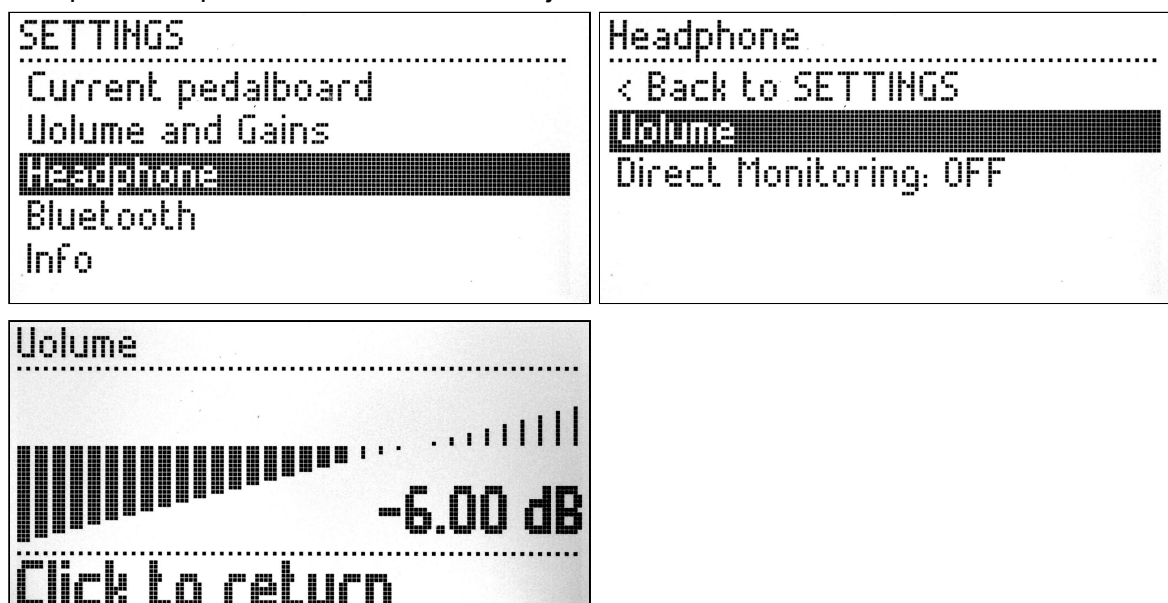
Outputs

The **Output** menu has only one option, which allows you to adjust the attenuation of the respective output. Turn the knob to adjust the value. To return to the previous menu simply short press the knob.



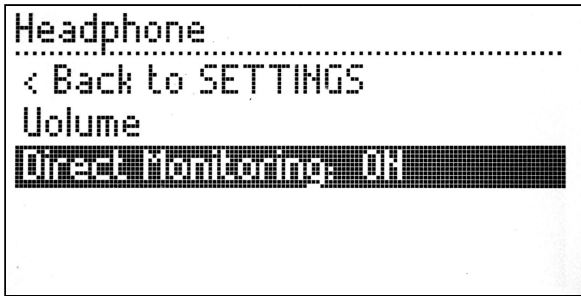
Headphone

In the **SETTINGS** menu you can access the **Headphone** option and adjust the volume of the headphone output. The volume can be adjusted from -33dB to +12dB.



Simply short press the knob to return to the previous menu.

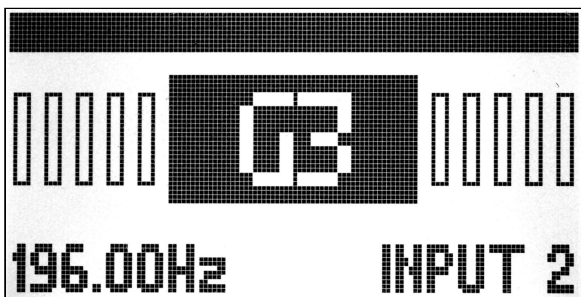
There is also the option to enable the **Direct Monitoring**. By enabling the direct monitoring the headphone will work as a monitor for the dry sound coming into the MOD Duo. To toggle the monitor between **ON** and **OFF** press the knob while the **Direct Monitoring** option is selected.



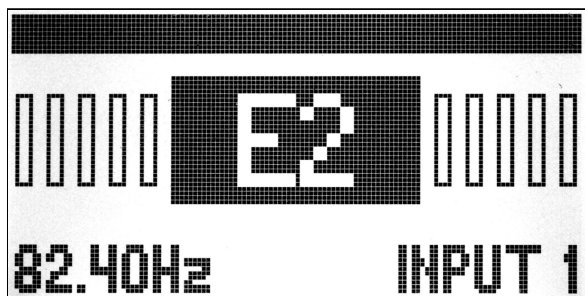
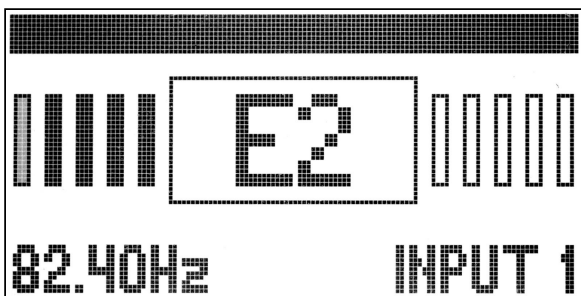
Tuning

The MOD Duo has a built-in chromatic tuner which can be accessed by pressing and holding the right knob for one second. Both inputs can be used as the tuner input, to select between them short press the right knob. To exit the tuner press and hold the right knob for one second.

If you see a question mark on the tuner screen, it means the MOD Duo is not receiving any input.



To tune a guitar, play an unfretted note on a string and tune it until you see the correct note on the display. When the background of the rectangle becomes black the string is in tune. Each vertical bar represents 10 cents. The first bar, to the right or left of the central rectangle, is filled when the signal is between 1-10 cents out of tune, the second bar when it is 11-20 cents out of tune, and so on, and so forth.

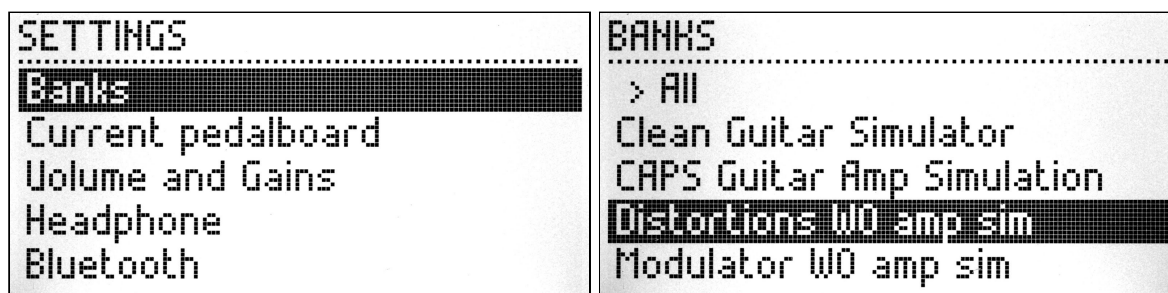


Playing

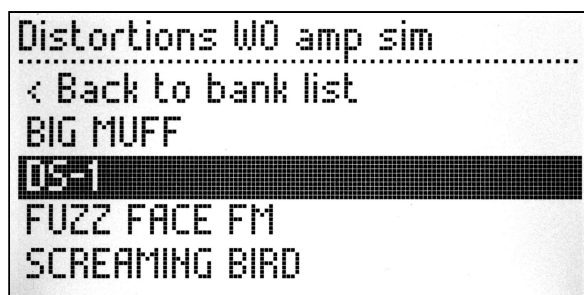
After you have powered on and adjusted the volumes of your MOD Duo, it is ready for playtime. The MOD Duo comes with many pedalboards ready to be used. They are organised in banks and can be accessed via **SETTINGS** menu.

Loading a pedalboard

In order to load a pedalboard, first access the **SETTINGS** menu by pressing and holding the left knob for one second, then select the option **Banks** with a short press.



Once you have the **Banks** menu open, you can select any bank according to your preference. The name of each bank should give you an idea of the style of the pedalboards it stores. A short press on the knob will open the selected bank showing the pedalboards inside of this bank.

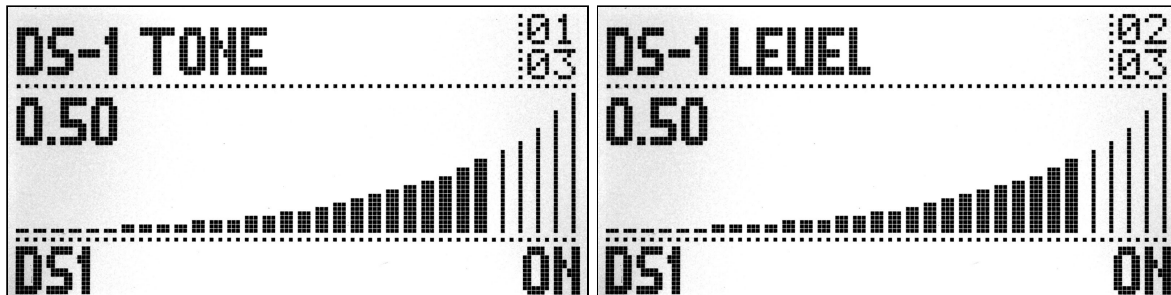


To load a pedalboard, make your selection by turning the knob, followed by a short press on the knob. Each time you load a pedalboard you can try how it sounds and once you find a pedalboard that you like, you can exit the **Banks** or **Pedalboard** menu by pressing and holding the left knob for one second.

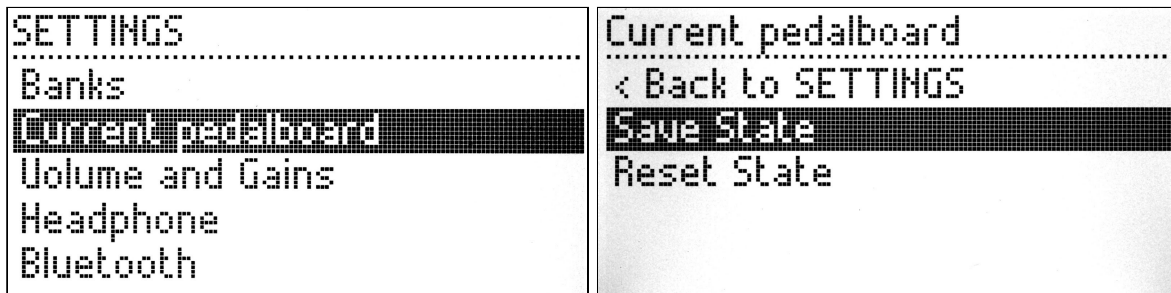
Adjusting pedalboard parameters

As you might have noticed already, the default view of the displays shows the assigned parameters of the plugins for the current pedalboard. You will learn more about assigning parameters in the next chapter.

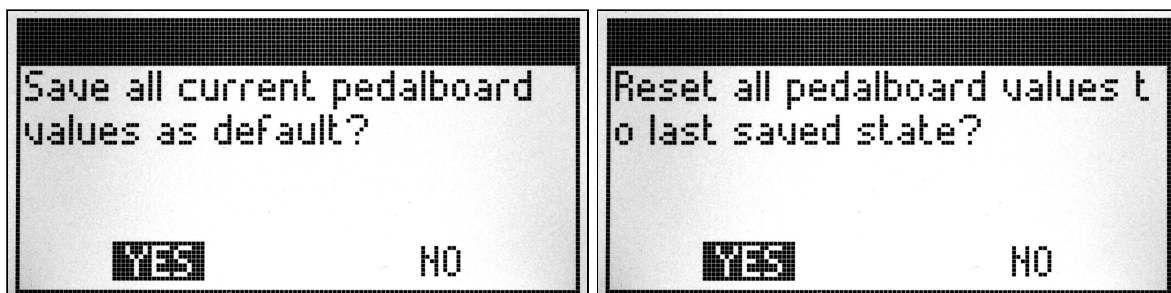
These parameters you see on the displays were considered important to be accessible to the user when the pedalboard is loaded. To adjust the value of each parameter you just need to turn the knob until the desired value is reached. More than one parameter can be assigned to the same knob, to cycle between them, short press the knob. On the top-right corner of each display you can see the index of the parameter being adjusted and the amount of assigned parameters on this display.



After you have changed the values you might want to save or reset them. The reset will restore the last saved values for all assigned parameters, while the save option will save the current parameters values to the current pedalboard. To access these options, press and hold the left knob for one second to open the **SETTINGS** menu, then turn the knob moving the selection until **Current pedalboard** option and short press the knob to select it.



Inside the **Current pedalboard** option there are two options: **Save State** and **Reset State**. Turn the knob to select the desired option, and short press the knob. Finally, confirm the action by selecting **YES** in the pop up dialog, and short pressing the knob. To exit this menu press and hold the left knob for one second.



Editing

Accessing the graphical interface

The MOD Duo has a built-in graphical user interface (GUI), which means you don't need to download any extra software in order to configure the device. To access the interface, you only need a web browser, such as Chrome, Safari or Firefox.

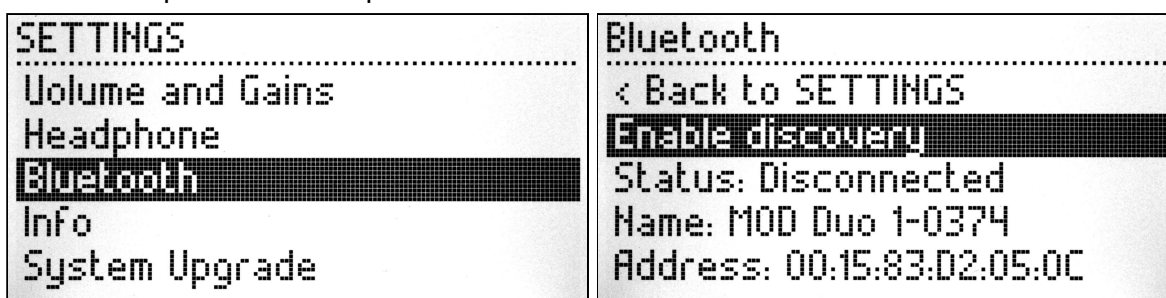
Accessing via USB cable

The easiest way to access the GUI is through the USB cable. Simply connect the USB cable, which you received along with your MOD Duo, to your PC or Mac. The operating system should recognize the MOD Duo as a network device and configure it automatically. However, this process may fail in certain Windows versions, if that is your case please check the troubleshooting page on the MOD Devices Wiki (<http://wiki.moddevices.com/wiki/Troubleshooting>).

After successfully connecting the MOD Duo to your PC or Mac, open your favorite browser and navigate to <http://modduo.local> (or <http://192.168.51.1>).

Accessing via Bluetooth

To access the GUI via Bluetooth you will need a Bluetooth USB dongle (version 3 or higher). Connect the Bluetooth dongle to the USB host port on the MOD Duo, then press and hold the left knob for one second to open the **SETTINGS** menu, turn the knob to select the **Bluetooth** option and short press the knob to access the **Bluetooth** menu.



In the **Bluetooth** menu, turn the knob to select the **Enable discovery** option and then short press the knob to enable it.



You will see a message saying the discovery mode will be enabled for 2 minutes, short press the knob again to close this message. Now your MOD Duo is ready to be connected to your PC, Mac or tablet. From this point on you should proceed with the Bluetooth connection according the device you are using to connect to the MOD Duo.

Creating a pedalboard

Once you have accessed the GUI you should see a screen like this:

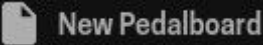


The numbered areas on the interface are:

1. Pedalboard name
2. Pedalboard actions bar
3. Pedalboard assembler
4. Plugins bar
5. Mode selector (Assembler, Pedalboards, Banks and Store)
6. Status bar (Device actions and information)

On the left edge of the assembler area there are 3 connectors: 2 audio inputs and 1 MIDI input. On the right edge there are another 3 connectors: 2 audio outputs and 1 MIDI output. All those connectors represent the real inputs and outputs of your MOD Duo. Be aware that on the interface the signal flows from left to right. Purple cables transport audio signals, cyan cables transport MIDI signals and orange cables transport CV signals.

New pedalboard

To create a new pedalboard click on the  **New Pedalboard** button in the pedalboard actions bar. This action will load the default pedalboard, which is a stereo gain connecting the audio inputs to the outputs.






Adding and connecting plugins

To add plugins, drag-and-drop one from the plugins bar to the pedalboard assembler area. To make a new connection, click on the plugin's output jack and drag it to where you want to connect it to. To unmake a connection, click on the connected jack, then drag and release it to any empty area on the assembler.



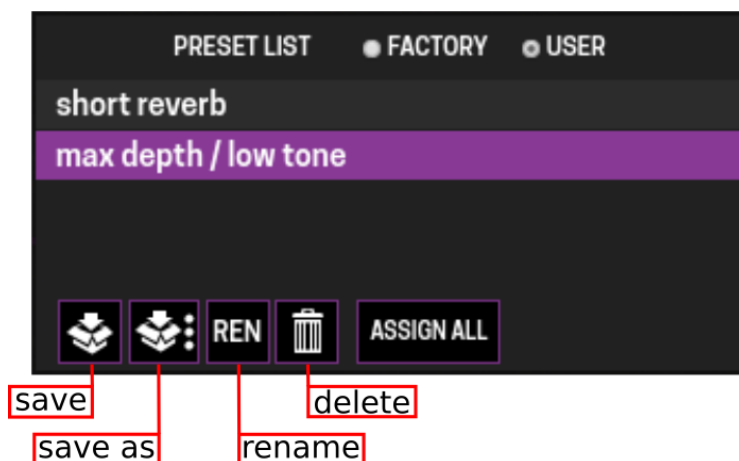
Note that the inputs and outputs of the MOD Duo are completely independent and can process multiple audio paths. The MOD Duo allows you to create multiple connections coming out from the same output and also allows multiple connections to come in the same input. This feature allows the user to create complex pedalboards.

Adjusting plugins parameters

Each plugin has 3 icons on its top:  info,  settings and  delete. To adjust the parameters of the plugin click on the settings icon.




Each knob, list and switch represents a parameter of the plugin and can be adjusted as desired. The combination of all parameter values can be saved/loaded as a user preset and, for the cases in which they are available, factory presets can be loaded.

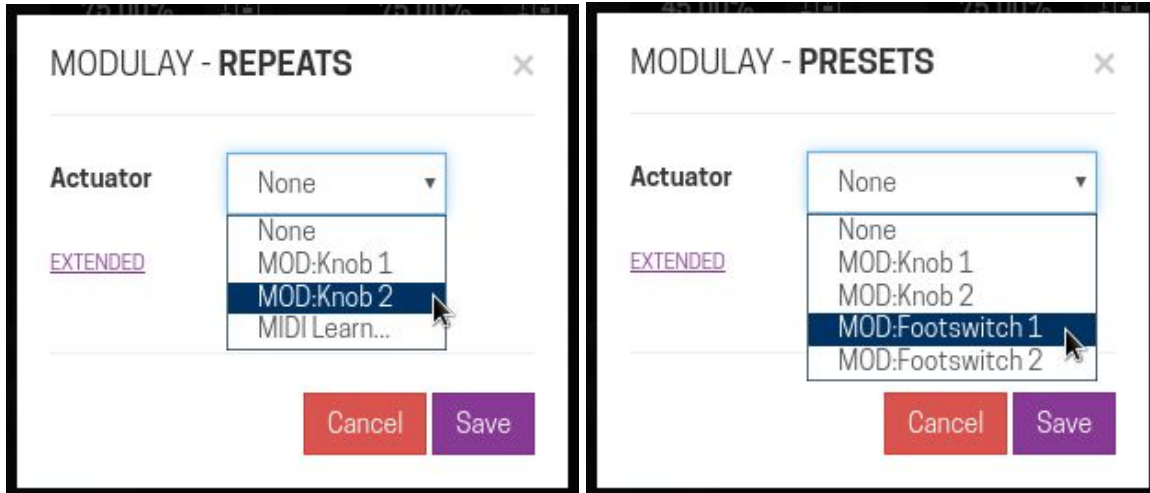


Assigning plugins parameters to actuators

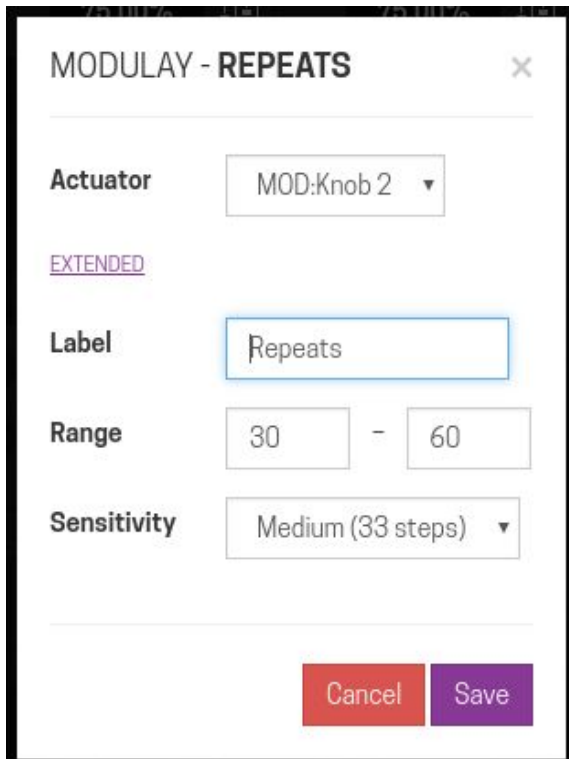
One of the most powerful features that the MOD Duo offers is the ability to assign plugin parameters and preset lists to physical actuators, like knobs and footswitches.

To create an assignment, first click on the fader icon , found on the bottom-right corner of each parameter box. Afterwards, select the actuator you

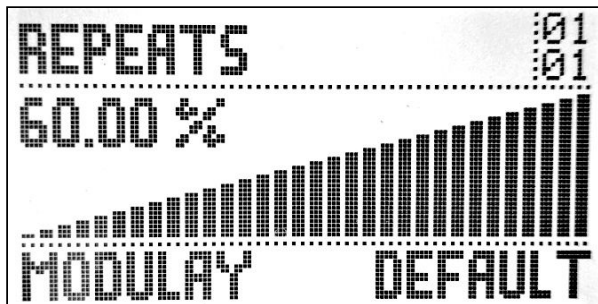
would like to assign the parameter to from the dropdown list. The knobs can hold multiple assignments but footswitches can only hold one.




Any parameter can be assigned, but some parameters can only be assigned to a specific type of actuator. The interface will not show the actuator as an option if it is not allowed to be assigned to. Note that preset lists can also be assigned to actuators. There is also the possibility to adjust further options by clicking on the EXTENDED label.

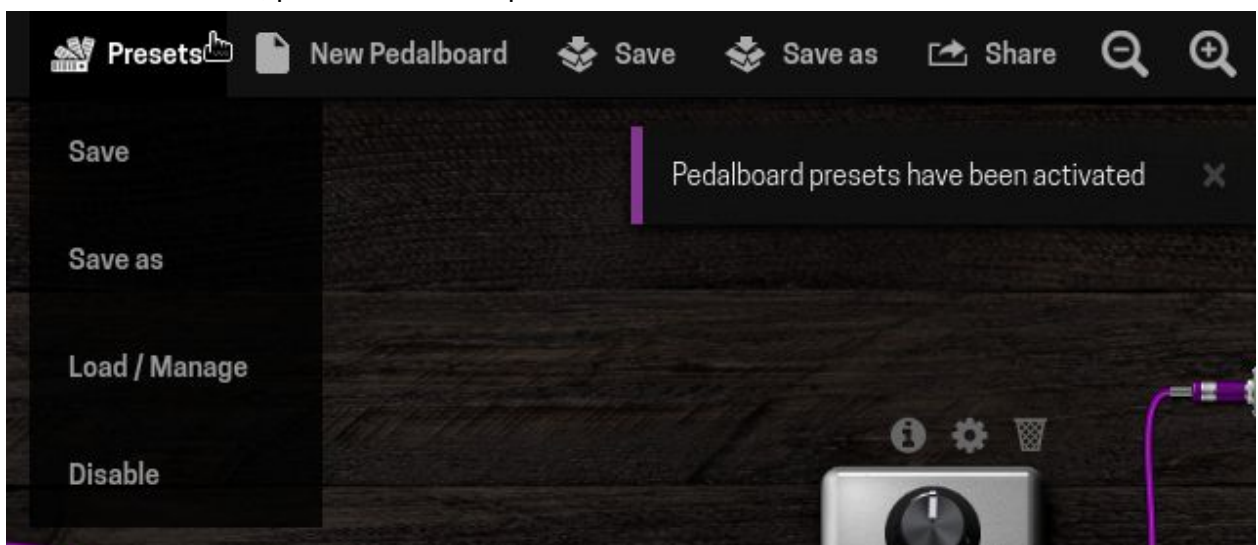


Once you have done the adjustments, click on the **save** button to execute the assignment. At this point you should see the assigned information on the display and be able to operate the parameter through the actuator you have chosen.

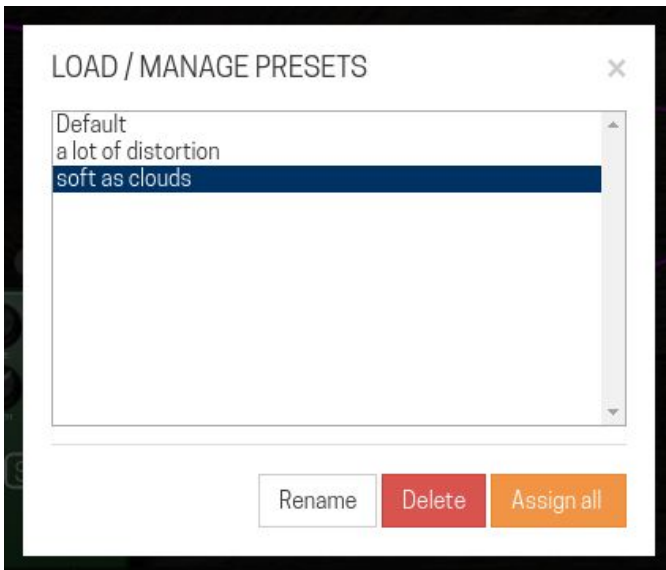


Saving / loading pedalboard presets

You have the possibility to save the combination of parameter adjustments as a pedalboard preset. In order to do so, turn on the pedalboard presets mode by clicking on the presets button  **Presets**, positioned on the pedalboard actions bar.



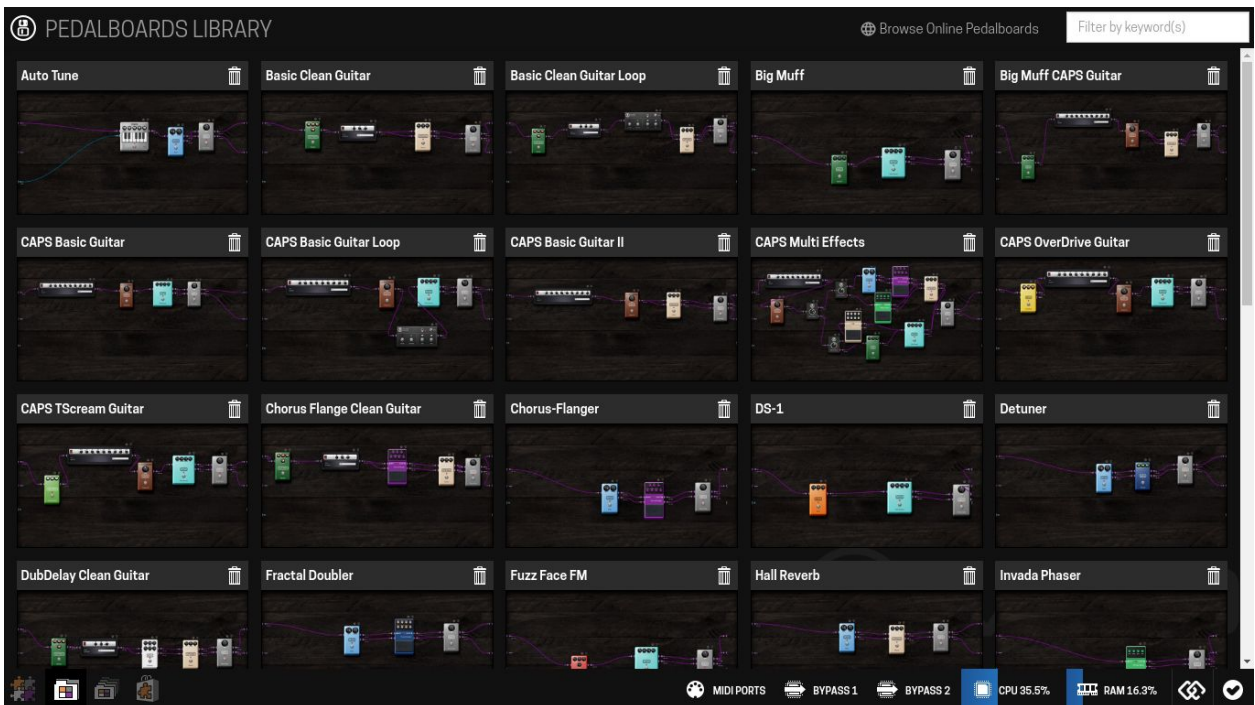
To save the changes to the current pedalboard preset, choose the option **Save**. To save a new preset use the option **Save as** and give it a name. To load, delete or rename a saved preset use the option **Load / Manage**.




A single click on the name of the preset will load it. You also have the option to assign the presets list to an actuator by using the **Assign all** button.


Saving a pedalboard

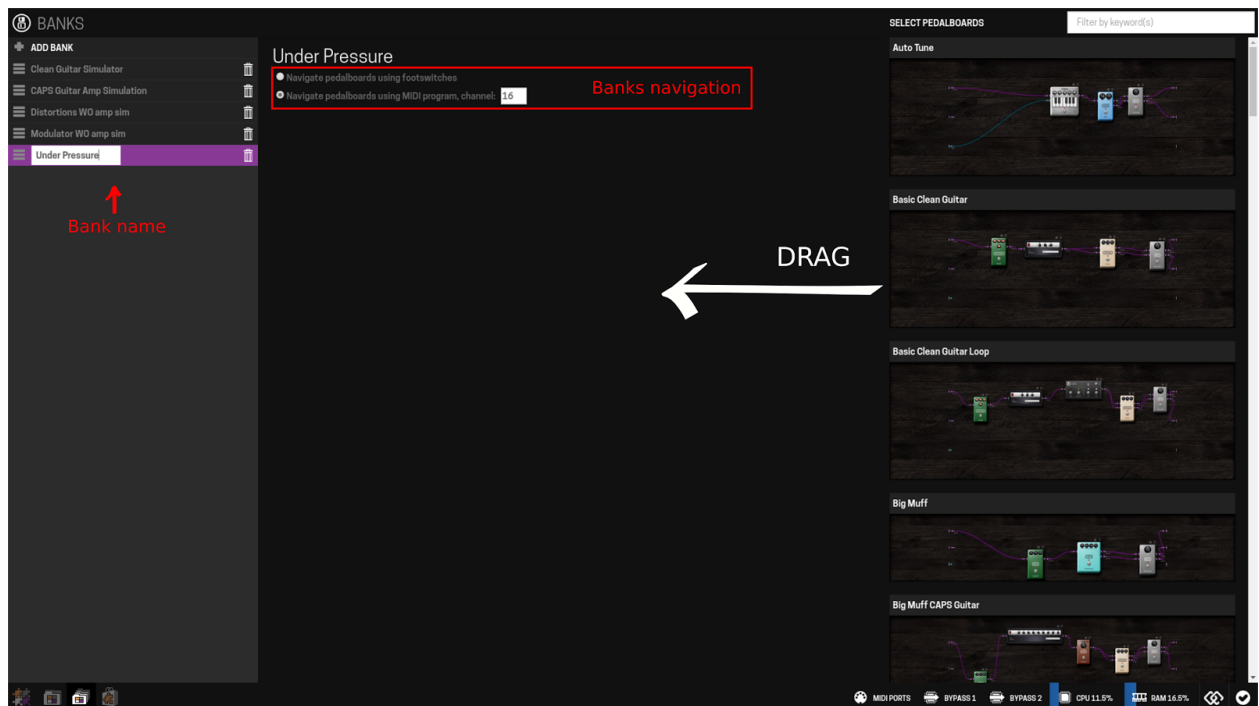
To save a pedalboard use the buttons **Save** or **Save as** on the pedalboard actions bar. All previously saved pedalboards can be found and loaded from the pedalboards library. To access the pedalboards library click on its button  in the mode selection bar.




A single click on the pedalboard image or name will load it to the assembler. To delete a pedalboard click on its trash icon  on the right of the pedalboard name.

Organizing in banks

In order to make it easy to access your pedalboards while the MOD Duo is disconnected from your PC, Mac or tablet, you can organize your pedalboards in banks. To access the banks configuration click on the banks icon  in the mode selection bar.



In the banks configuration mode, use the  button to create a new bank and name it as you like. At this point your bank is empty and ready to receive your pedalboards. To add pedalboards to your bank drag them from the right lateral panel into the center of the screen. You can add as many pedalboards as you want. It is also possible to add multiple instances of the same pedalboard to your bank.

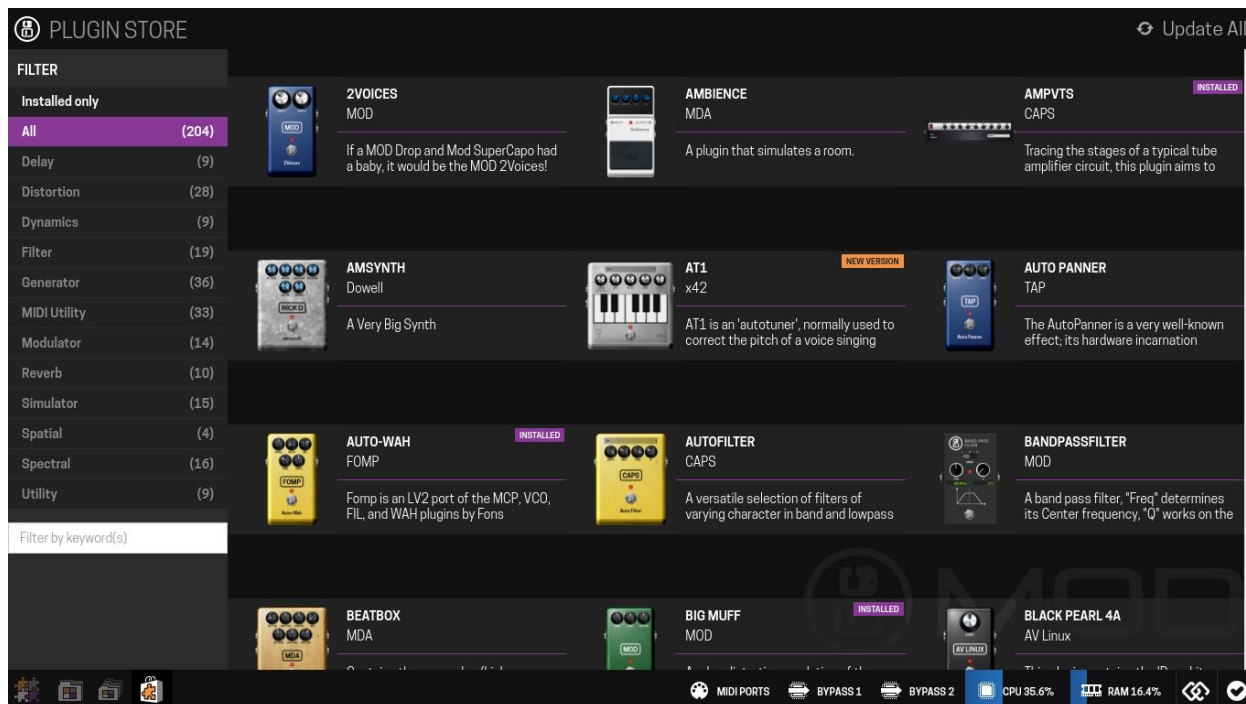
In the top-center of the screen, under the bank name, you can choose how you want to navigate between the pedalboards of this bank when the MOD Duo is not connected to the PC, Mac or tablet. There are two options: using the MOD Duo footswitches or using MIDI program change messages.

Installing new plugins

By default the MOD Duo comes with many plugins installed, but you can install even more. The plugins available for download on the MOD Duo are created either by the MOD team, or by independent developers. To learn more about plugins please check the **Advanced Information** chapter.



In order to install new plugins you need to access the plugin store by clicking on its icon in the mode selection bar. After you have accessed the store you can look for the plugin you want by filtering by category or typing a keyword in the search box.




Once you have decided which plugin you want to install, click on it to open the description dialog, and then click on the **install** button. The plugin will be automatically downloaded and installed on your MOD Duo. You can also **remove** or **upgrade** an already installed plugin by clicking on the corresponding button.

GxQuack
 URI: http://guitarix.sourceforge.net/plugins/gx_quack/#_quack
 Category: Filter
 Author: Guitarix team
 Homepage:
 LATEST VERSION: **1.84.0-2**
[INSTALL](#)
 Envelope controlled wah pedal with some extra features
[See online](#)

CONTROL PORTS:

Control	Default	Min	Max
BYPASS	1	0	1
DEPTH	1	0	1
DRIVE	0	0	1
GAIN	0	-12	6
MODE	2	0	2
PEAK	5	-6	20
RANGE	1	0	1
TONE	0	0	2

Sharing a pedalboard

Another great feature that the MOD Duo has is allowing you to share and load pedalboards from the existing MOD online community. To share a pedalboard, go to the pedalboard assembler and click on the share  **Share** button in the pedalboard actions bar. Fill in the sharing dialog and (optionally) record a sample by clicking on the red circle. After finishing the recording, you can listen to it, or record it again. When you are done, click on the **share** button.


SHARE ×

AUTHOR NAME E-MAIL

PEDALBOARD NAME

What's special about this pedalboard?

Record a sample


(optional)

SHARE ×

AUTHOR NAME E-MAIL

PEDALBOARD NAME

What's special about this pedalboard?

To load pedalboards from another MOD Duo user, visit: <https://pedalboards.moddevices.com>, listen to the samples and once you find a pedalboard you like, click on the **Try Now** button. Note that in order to load an online pedalboard, you need to have the MOD Duo GUI opened.

TAP AutoPanner ☆
 URI: <http://moddevices.com/plugins/tap/autopanner>
 Category: Spatial
 Author: MOD Team
 Homepage: <http://moddevices.com>
 INSTALLED VERSION: 1.7.2-3

The AutoPanner is a very well-known effect; its hardware incarnation originates in the age of voltage controlled synthesizers. Its main use is to liven up synth tracks in the mix.

[See it in action](#) [See online](#)

CONTROL PORTS:

Control	Default	Min	Max
Rate	3	0	20
Depth	80	0	100
Level	0	-70	20

Expanding the MOD Duo controls

MIDI devices

The MOD Duo has two ways to connect MIDI devices, via the classic MIDI DIN connector and via USB.

MIDI DIN - Input

To use the MIDI DIN simply connect your device to the MIDI Input and use the **MIDI Learn** function to assign a control to a plugin parameter (see **assigning plugins parameters to actuators** section).

GXCABINET - MASTER

Actuator: None

EXTENDED

None
 MOD:Knob 1
 MOD:Knob 2
 MIDI Learn...


Cancel Save

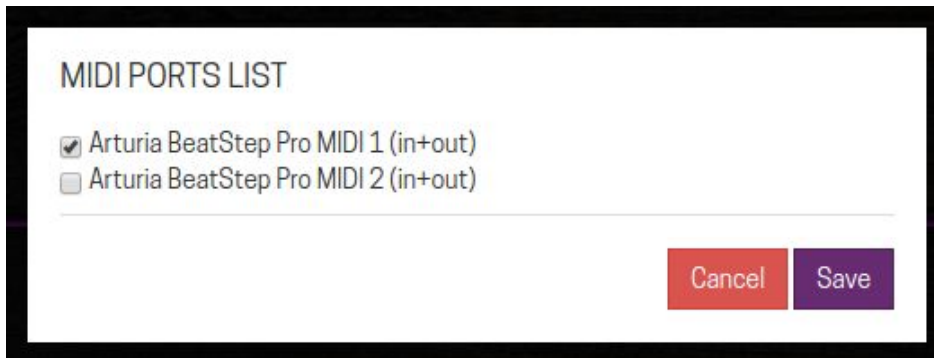
Once you selected and saved the MIDI Learn function go to your MIDI device and operate the actuator you want to control the parameter. At this point you should be able to control the plugin parameter using your MIDI device.

MIDI DIN - Output

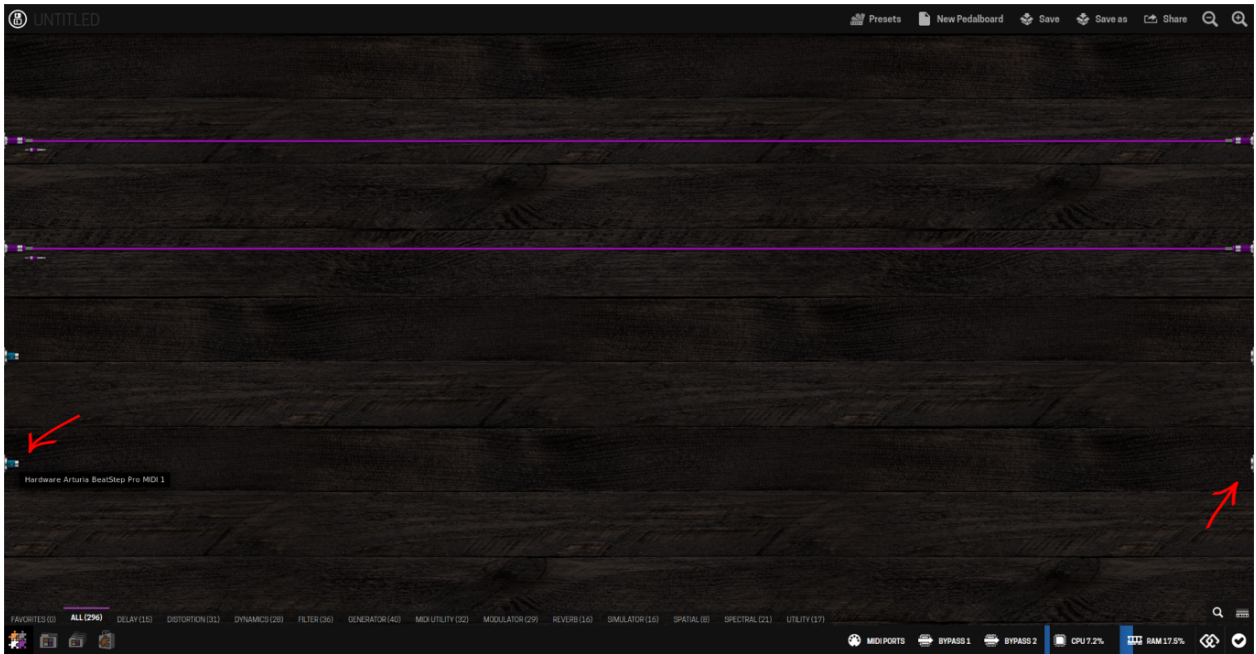
Some plugins have MIDI output ports, which generate MIDI output data like control change messages and notes. You can use this output to send this data to your other equipment.

MIDI USB

In addition to the classic MIDI ports you can also use the USB port to connect your MIDI device. The MOD Duo will recognize your MIDI device when it is plugged in and add it to the MIDI ports list. Because a single MIDI device can have multiple ports, they are not visible in the assembler by default. To make them visible you will have to enable them first by clicking on the MIDI ports  button.



On the MIDI ports list select the ports that you want to enable and click on the **Save** button. Now you should see the new ports added to the assembler screen. Note that you do not have to enable a specific MIDI port to be able to use MIDI learn. For MIDI learn, all MIDI devices will work as soon as they are connected to the MOD Duo.



Control Chain devices

Control Chain is an open standard developed by MOD Devices that defines a communication protocol, electrical specification, cables and connectors. It's used to interconnect external controllers, such as expression pedals and footswitch extensions, to the MOD Duo.

Compared to MIDI, Control Chain is a lot more powerful. For example, instead of using hard-coded values like MIDI does (0 to 127), Control Chain has what is called a device descriptor, and its assignment (or mapping) message contains the full information about the parameter being assigned, like parameter name, absolute value, range and any other data. Having all that information on the device's side allows developers to create powerful peripherals that can, for example, show the absolute parameter value on a display or use different LED colors to indicate specific states.

The Control Chain devices are connected to the MOD Duo using a regular Ethernet cable and they have two connectors, which allows an extra external controller to be connected, thus creating a chain. The MOD Duo provides power to the devices via the Ethernet cable.

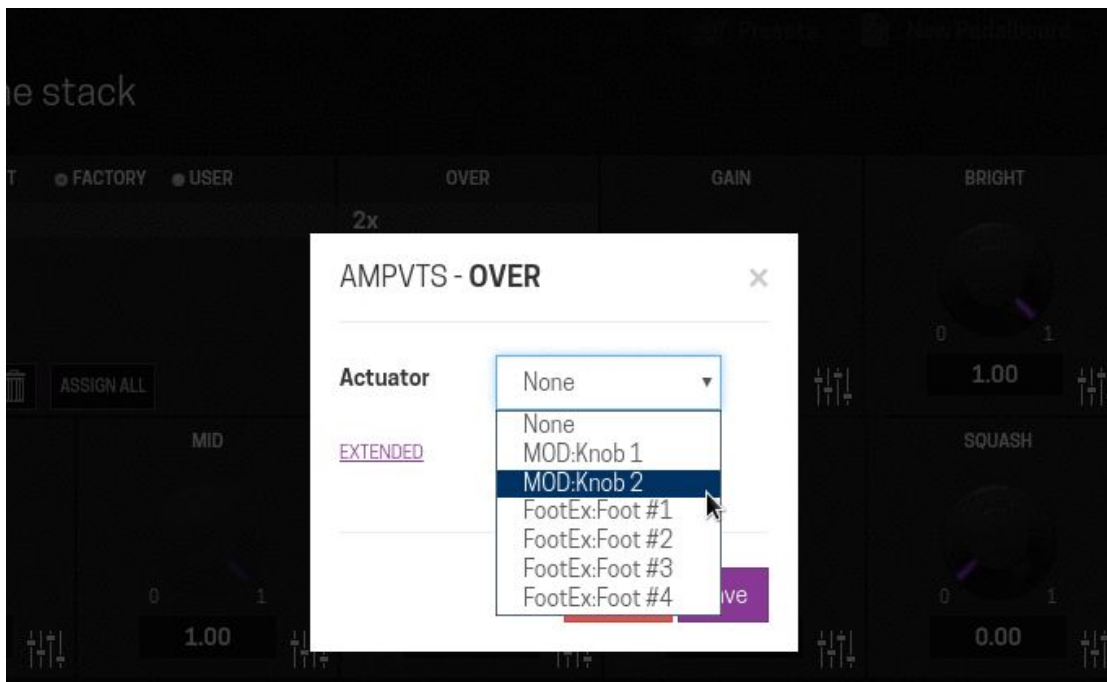





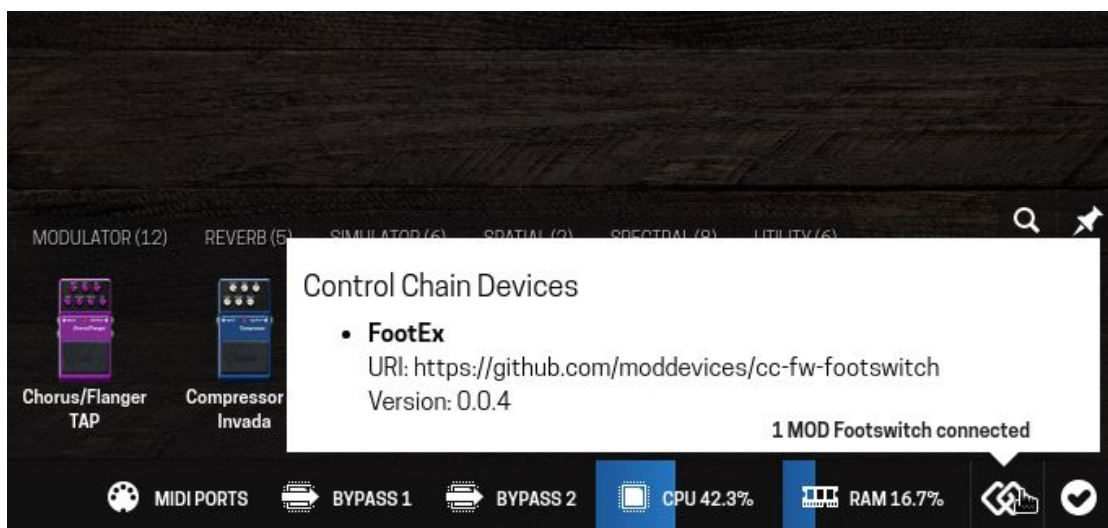
We welcome you to visit our website (<https://moddevices.com>) to check all the available devices.

Assigning plugins parameters to Control Chain actuators

You can assign plugin parameters and preset lists to Control Chain actuators in the same way as the regular actuators on the MOD Duo. Right after a Control Chain device is connected to the MOD Duo, it will be detected and ready for use. The new actuators of each Control Chain device will show up as options to be assigned to in the plugin configuration screen.



To see a list of all connected Control Chain devices click on the Control Chain button  in the status bar.





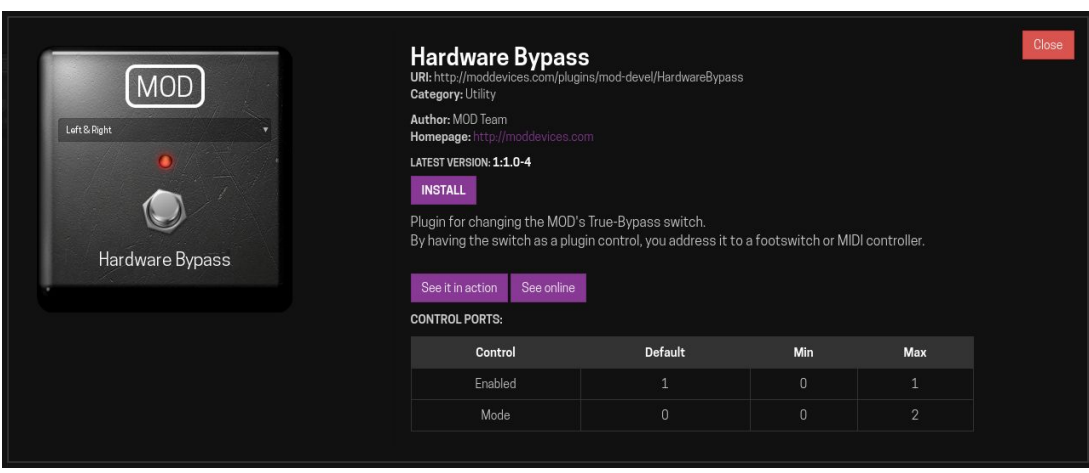
Advanced information

This chapter covers extra features of your MOD Duo.

True Bypass

The MOD Duo has a true bypass circuit for each pair of input/output. This allows you to physically connect input 1 to output 1, and input 2 to output 2. The true bypass is enabled when the MOD Duo is off and it is automatically disabled after the current pedalboard is loaded. You can enable or disable the true bypass via the GUI using the two bypass buttons

 **BYPASS 1**  **BYPASS 2** in the status bar. As a second option you can control the true bypass using a special plugin called **Hardware Bypass**.



Install the **Hardware Bypass** plugin via the plugins store (see **Installing new plugins** section) and add it to your pedalboard. Now you can assign the ON/OFF parameter to any physical actuator (see **Assigning plugins parameters to actuators** section) and control the true bypass with it.

CPU Usage

In the status bar of the GUI there are CPU and RAM meters. It is useful to monitor these resources when you are creating your pedalboard. It's recommended to keep the CPU usage lower than 80%. Note that each plugin consumes a different amount of CPU and RAM.



LED audio meters

The LED audio meters are very useful to adjust the volumes of both inputs and outputs. Check the table below to understand what the colors represent.

Signal	LED color
Signal < -30 dB	Off
-30 dB < Signal < -12 dB	Green
-12 dB < Signal < -3 dB	Yellow
Signal > -3 dB	Red


About plugins

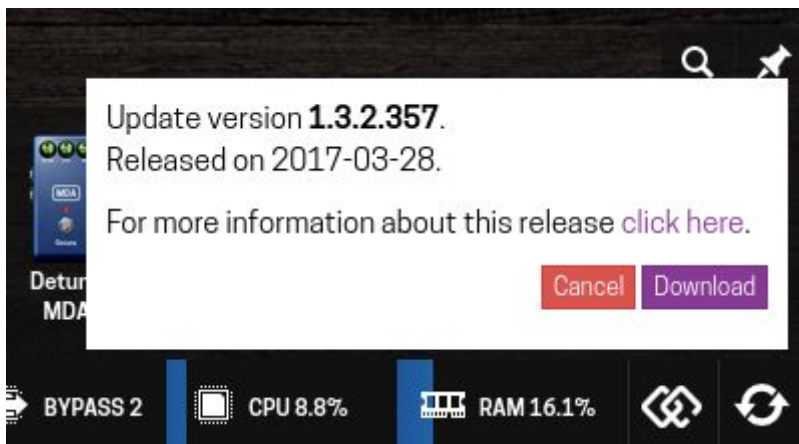
The MOD Duo is not only a platform for musicians but also for developers, because it uses the LV2 open standard for audio plugins and thus allows any developer to create his/her own plugin (without any license restrictions). LV2 has a huge community and a vast documentation already available online. As a first step, consider checking the official LV2 website: <http://lv2plug.in>.

Upgrading the MOD Duo

New features and also fixes are frequently released as new versions of software. The MOD Duo will inform you via GUI (see **accessing the graphical interface** section) when a new release is available.



To install the new software, click on the upgrade  button and then on the **download** button.



The download will start. When it finishes, a dialog box will ask you to confirm the software upgrade, click OK to start the software upgrade process.

Warning

Do not disconnect your MOD Duo from the power outlet during this process.

Remember to always keep your MOD Duo updated to receive the latest features and bug fixes.

More information online

The MOD Duo has a growing community of musicians, developers and enthusiasts. Please consider being a part of this community by joining our forum at <https://forum.moddevices.com>. The MOD Team is always around replying to questions, posting breaking news and opening discussions about new features. On the forums, you will find not only MOD related topics but also very good discussions about music in general. Of

course it also gives you the opportunity to be in touch with lovely people from all around the world!

To listen and see what other MOD Duo users are doing you can check our pedalboards page: <https://pedalboards.moddevices.com>.

If you are looking for technical information, including development topics check our Wiki (<http://wiki.moddevices.com>) and GitHub (<https://github.com/moddevices>) pages.

Finally, add our blog (<http://blog.moddevices.com>) to your RSS reader to receive posts about tutorials and events.

Social Networks

Facebook: <https://facebook.com/moddevices>

YouTube: <https://youtube.com/moddevices>

Twitter: @moddevices

Instagram: @moddevices