

How to Use

Mooer Studio for GE300

The Missing Manual



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Introduction

Manual and Illustrations by Steven B. Schweitzer
Some illustrations by Mooer Audio, where noted.

Mooer Studio is a highly capable software interface to help manage and control the Mooer GE300 Amp Modeling, Synth and Multi-Effects unit.

This manual was written to help others navigate and use the Mooer Studio software interface after my frustration of finding out there was no manual for the software. While Mooer Studio is mostly intuitive, like most software, there are little secrets and tricks buried within. Knowing them can make your playing time more productive and use of the software easier. Finding those tricks can sometimes be a challenge.

What This Manual Is and Isn't

This manual is written for the **Mooer Studio software V1.2.0 on a PC platform**, and all instructions contained within will illustrate using PC-based screen shots. I am not a MAC user and do not know of the nuances that may be in the MAC version of Mooer Studio. For the MAC audience, I am sure this manual can still provide general guidance on how to use the features within Mooer Studio.

This manual is designed to accompany the Mooer GE300 Owner's Manual, not replace it. This manual may contain some personal viewpoints and does not suggest they are the same opinion of Mooer Audio.

This manual will *not* provide:

- Instruction on how to use the physical Mooer GE300 unit itself (*refer to the current version of the Mooer Owner's Manual*)
- Using the Synth Module (*this can be an entire instruction manual in itself*)
- Using the MIDI functions (*this is highly dependent on your midi controller and can be an entire instruction manual in itself*)
- Using Tone Capture for Guitar mode, amp/stomp box mode or IR mode

There are plenty of excellent videos on YouTube® which cover the above topics in greater detail, including any additional equipment you may need (such as microphones and pre-amps).

Expectations of You, the Reader

The manual is written with the expectation that the user has fundamental knowledge of his/her computer operating system such as right-clicking, left-clicking, saving files, how to find them, unzipping files, etc. For example, when the instructions say to unzip a file and double-click it to run, no further instructions will be given on how to double-click or unzip files. Likewise with the instruction to 'click-and-drag'. These are fundamental knowledge requirements of your operating system and are assumed you already know. If you don't know how to perform operating-system level tasks, please Google how to do so.

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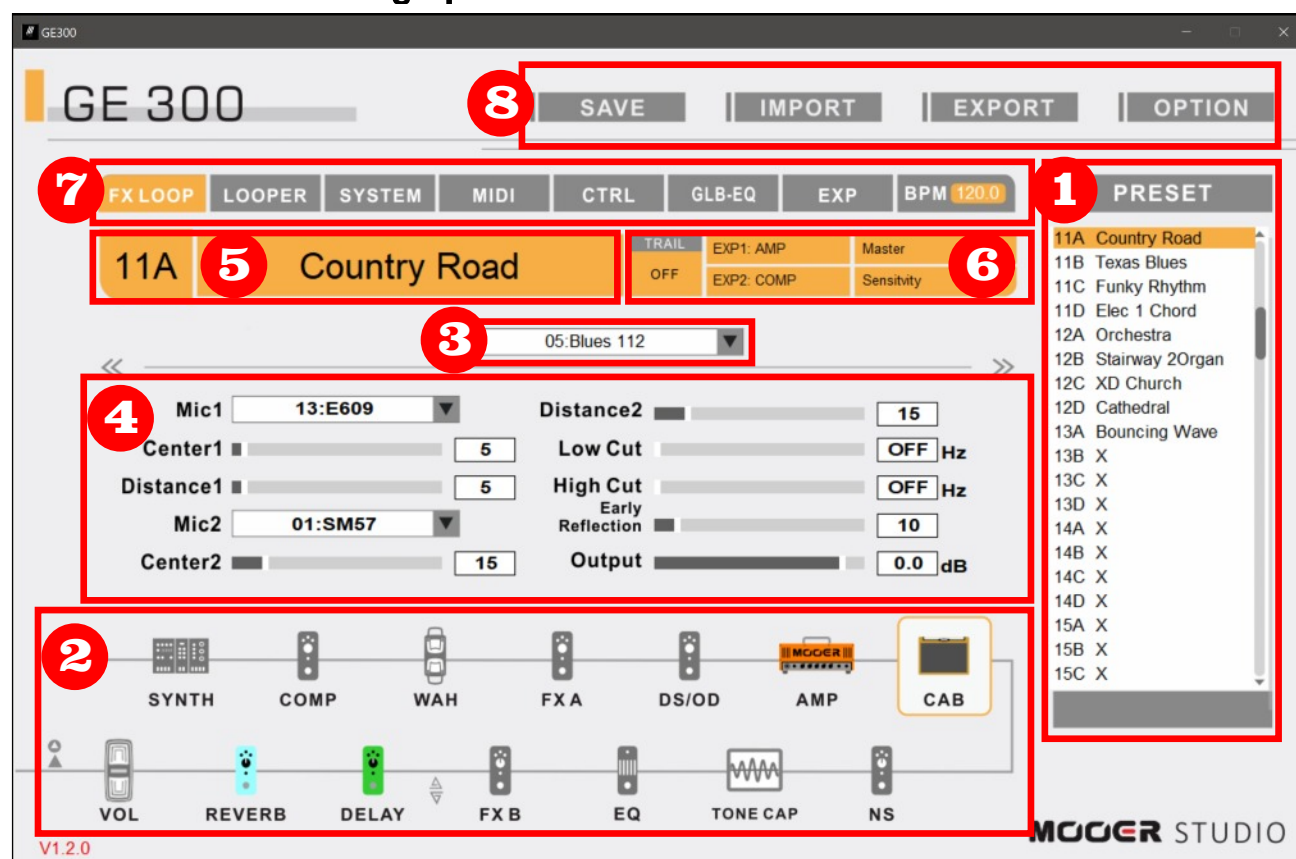
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The main Mooer Studio graphical user interface for the GE300.



Section I

Installing Mooer Studio

Downloading Mooer Studio

As of the date of this publication, the Mooer Studio software V1.2.0 can be found at:

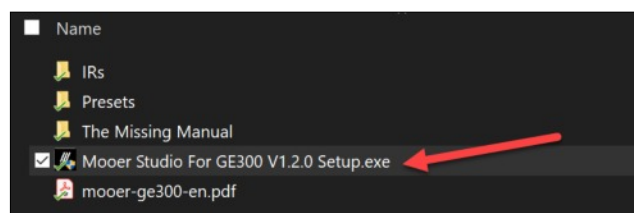
<http://www.mooeraudio.com/download.html>.

Download and save the zip file version suited to your computer (PC or MAC). While you are at it, download the GE300_Manual file in your preferred language. It will contain some helpful instruction on using the physical GE300 unit. Follow the diagrams on the preceding page. Be sure to remember where you saved the files on your computer for future use!

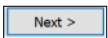
Refer to the figures in the shaded column to the right which illustrate the screen shots to download Mooer Studio software.

Installing Mooer Studio

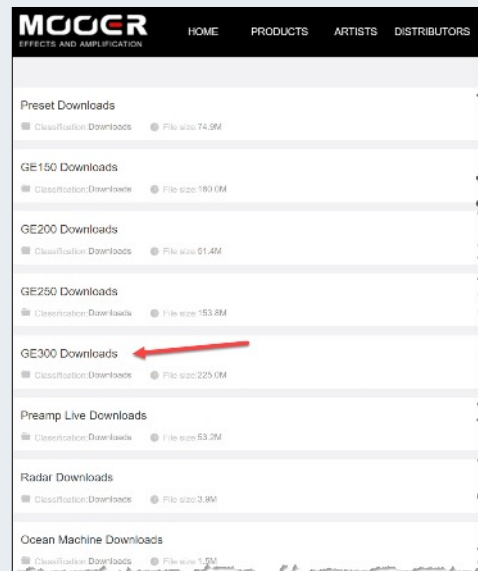
To unzip the Mooer Studio software, locate and double-click the setup file to run it. In this example the file name is pointed out below with a red arrow.



Once the installation file starts, the sequential screen shots on the following page will appear. Follow the prompts on each installation screen to proceed.

(eg: click on each  button to continue the installation.

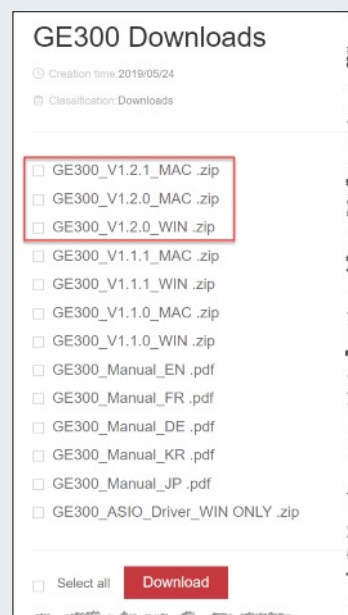
Downloading Mooer Studio Software



ABOVE: Visit

<http://www.mooeraudio.com/download.html> to download the necessary version for your computing platform (PC or MAC).

BELOW: Choose the most current version of the software. At the time of this document, Version 1.2.0 for the PC or version 1.2.1 for MAC.



Installation Sequence



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Connecting the GE300 Unit to a Computer

If you purchased your GE300 unit new, it came with a USB-A to USB-B cable. The USB-A end is the typical USB cable connection the world is familiar with. The USB-B end is the notched



ABOVE LEFT: USB-A connection (to the PC)
ABOVE RIGHT: USB-B connection (to the GE300 Unit)

Figure A - The USB-B connection goes into receptacle **17** on the GE300 unit shown below.



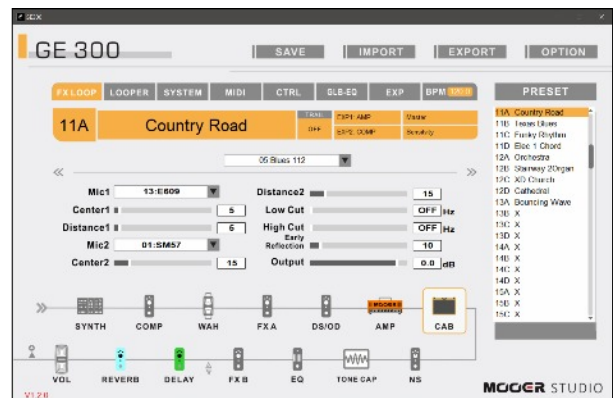
square connection that commonly is used for printers, scanners and external storage devices.

Starting the Mooer Studio Software

1. Turn on the GE300 unit with the rocker switch **20**, shown in *Figure A*. Allow the unit to cycle through its initialization process indicated by a series of flashing lights and dancing colors. **NOTE:** Don't start the Mooer Studio software until the unit has completed its start-up initialization.
2. Ensure your computer and the GE300 unit is connect together via the USB-A/USB-B cable.
3. Double click on the Mooer studio icon. If the computer and the GE300 unit see each other, a connection progress bar should show, like the figure below. It will take a minute or two for the Mooer Studio software and the GE300 unit to sync together. Be patient.



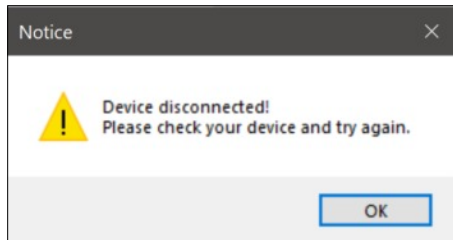
4. Upon a completed synchronization cycle and connection, The Mooer Studio interface should reveal the main interface, shown below.



Troubleshooting Mooer Studio

Start-up

On occasion, you may experience a connection error like the dialogue box below.



Most often it is a physical cable connection error - ensure the USB-A/USB-B cable is securely in seated at both ends.

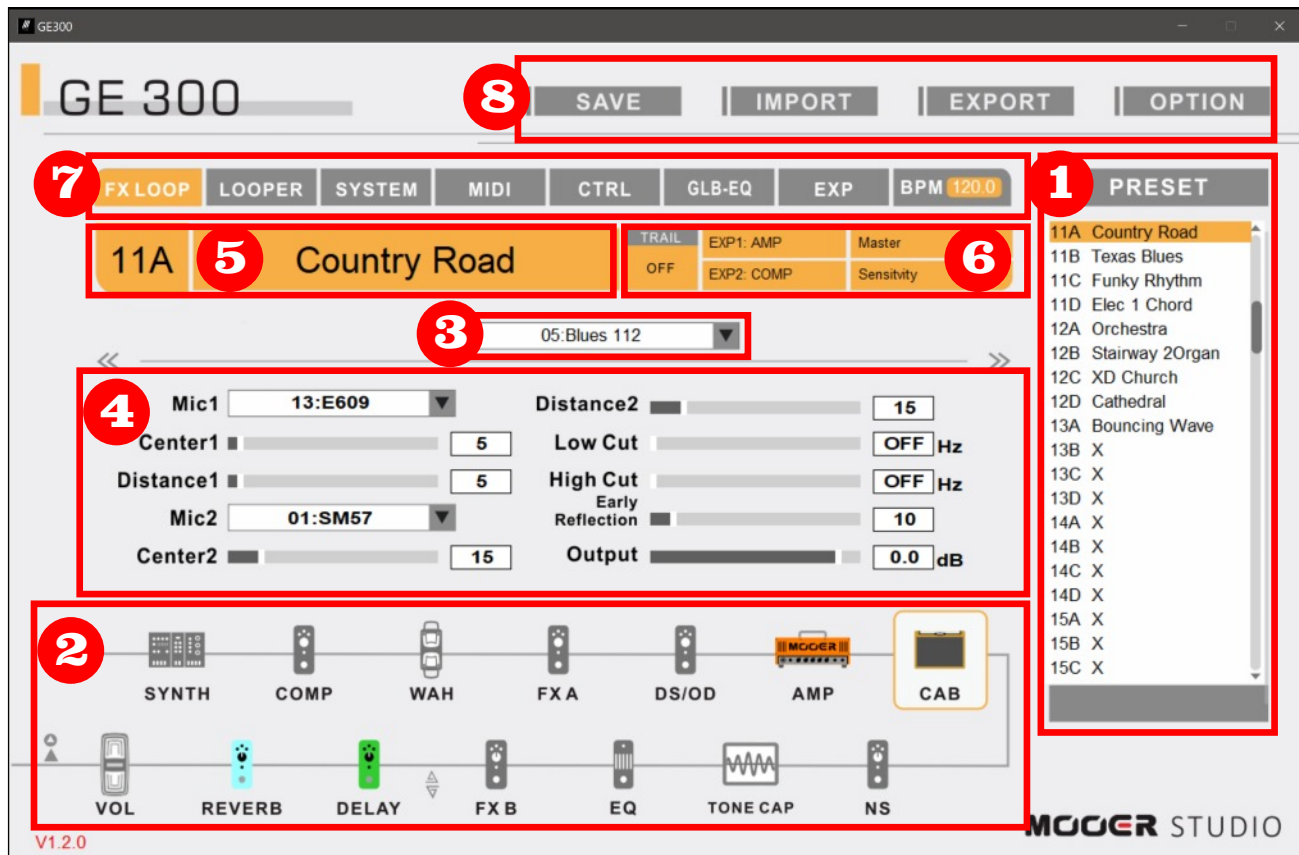
Other issues you may experience:

- Sounds simple, I know, but *check the power on the GE300 unit*. Is it on? Many times I simply forget to turn on the GE300 unit in my mad excitement of playing the guitar.
- *Old version of Mooer Studio software*. Ensure the latest version is installed.
- *Too many resources being used by the PC*. Shut down some of the running applications and retry.

Section II

Using Mooer Studio

Figure 1 - The Mooer Studio Graphical User Interface, illustrated with the eight (8) primary control blocks.



The Mooer Studio Interface

The main graphical-user interface (GUI) of Mooer Studio V1.2.0 is comprised of eight (8) control blocks (see *Figure 1*).

Control Blocks 1-4 are dependent upon each other - meaning if something changes in one block it will affect options in another.

Control Blocks 5-8 are independent of other control blocks. Changes to or usage of these blocks are global in nature and are not reliant upon other control block settings (there are some minor exceptions, covered later).

While the GUI is not the most visually appealing in the world of GUIs these days, it is very functional and highly efficient. The rest of this section will cover each of the control blocks in more detail.

NOTE: *you cannot use Mooer Studio in stand-alone mode. You must be connected to the GE300 unit for Mooer Studio to load and run.*

1 Preset Selection Block

Allows the selection of a single preset at a time, to edit or play. There are 256 Preset locations to use. Sixty-Four (64) of them are pre-populated with sample presets from the factory.

2 Signal Chain Control Block

It all starts here - this block provides the ability to order and re-order the signal chain or to select an individual amp/cab/FX to edit with precise tonal detail. Edits are done via Blocks 3 and 4.

3 Amp/Cab/FX Selector Block

Depending on the amp, cab or effect chosen in Block 2, the corresponding pull-down selection list is provided offering many choices. For example, if the DS/OD effects pedal is selected in Block 2, a list of overdrives, distortions and fuzz stomp boxes is provided.

4 Parameters Block

This is a context-sensitive block depending upon the options selected in Blocks 2 and 3, the corresponding controls are displayed and can be edited and saved. For example, if the DS/OD effects pedal is selected in Block 2, and the pedal selected in Block 3 is DS/OD #2: 808 (clone of the Ibanez Ts808), the corresponding controls for the Ibanez Ts808 clone are displayed in Block 4.

5 Preset Identifier Block

This block simply indicates the preset location and name of the preset being worked upon. *There are no interactive options to select in this Block.*

6 Expression & Trails Control Block

When changes are made to the on-board and external expression pedals, and changes to Trails (on:off) the status is displayed here. *There are no interactive options to select in this Block.*

7 System Controls Block

Options in this block provide global preset and system-wide controls.

8 File Control Block

As the options indicate, this is where you can save, import, export and check for software updates.

1 The Preset Control Block

The simplest task to achieve with Mooer Studio is to select a preset and begin using it. Instead of using the up/down foot switches on the GE300, you can choose a preset by scrolling up and down the list and clicking on a preset to choose it. It's not ideal for live stage performances, but handy in a studio setting.

Organizing Presets

One of the first things I did when I got my new unit was to carefully evaluate each factory preset and decide if I wanted it for future use or delete it. I do not play shredder-style guitar, so I deleted all the ultra-high gain presets and focused on the rest. I then moved them around in an organization method that best suits me. I used the following organizational structure, knowing I have 256 preset locations to work with.

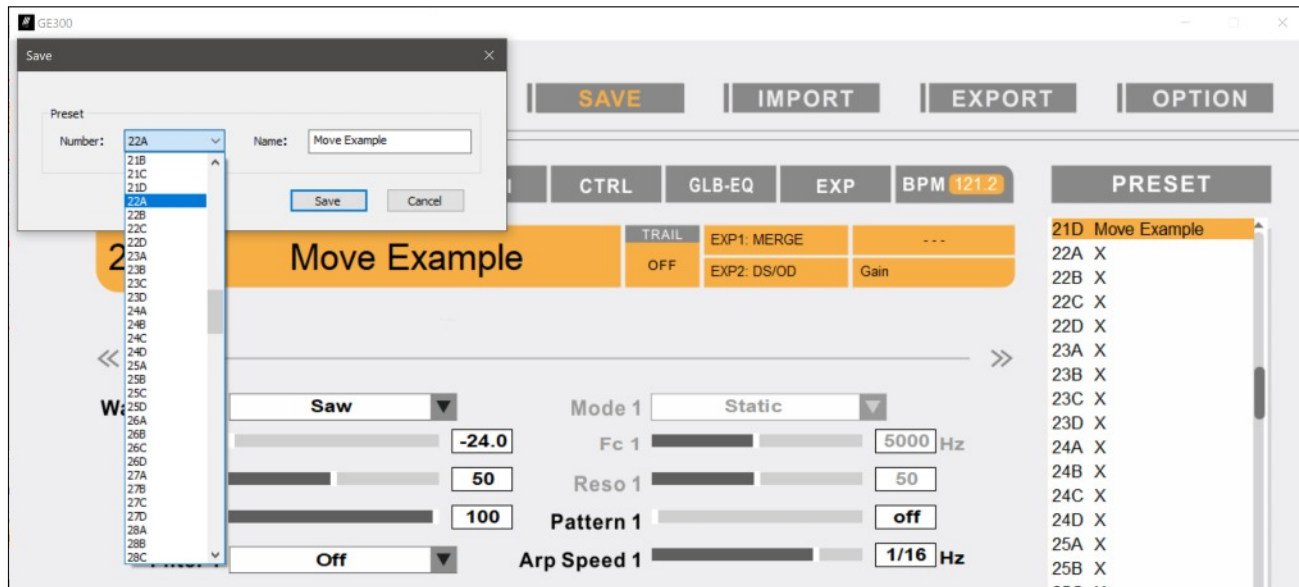
- Bank 0-10 - Amp-based presets
(clean and overdriven tones from various amp/cab combinations that suit my playing style)
- Bank 11-20 - Presets for Live Gigs
(presets which match set lists in order, all in a focused few banks that minimizes the foot switch travel to access them)
- Bank 21-30 - Song-specific presets
(presets for songs which require unique parameters; stored for easy access and I can move around as necessary)
- Bank 31-40 - Song-specific presets
(ditto above)
- Bank 41-50 - Original Patch Storage
(original factory presets which have unique settings I can learn from in the future, or use as a starting point to create my own preset later)
- Bank 51-60 - Original Patch Storage
(ditto above)

Moving Presets Around

You are probably wondering how to move a preset from one location to another. Warning: it's

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Figure 2a - This screen shot illustrates copying Preset #21D (Move Example) from preset location 21D to location 22A.



tedious. This common function is conspicuously absent from the current version of Mooer Studio. So we have to manage presets like ancient computer programmers used to do with storage variables in the first generation native languages like Assembler and Cobol. (This dates me.)

The process to move a preset to a new location is as follows (refer to Figure 2a):

- 1) Locate and ensure a new location has nothing stored in it that you may want later.
- 2) Click on the preset location you wish to move.
- 3) Click the **SAVE** button at the top of the screen.
- 4) In the *Name*: field, enter a new name for the preset, if desired.
- 5) In the *Number*: dropdown field, choose the new location for the preset.
- 6) Click the **Save** button in the “Save” dialog box to save the preset to its new location.

Phew! That’s 6 steps to perform in order to move a preset to a new location. But haven’t we forgot something? What about the old preset location - the preset we just moved is still in the its old location! Nothing happens to it until it is overwritten with a new preset or wiped clean with a ‘blank’ or a ‘default’ preset that contains common effects you may use over and over. Refer

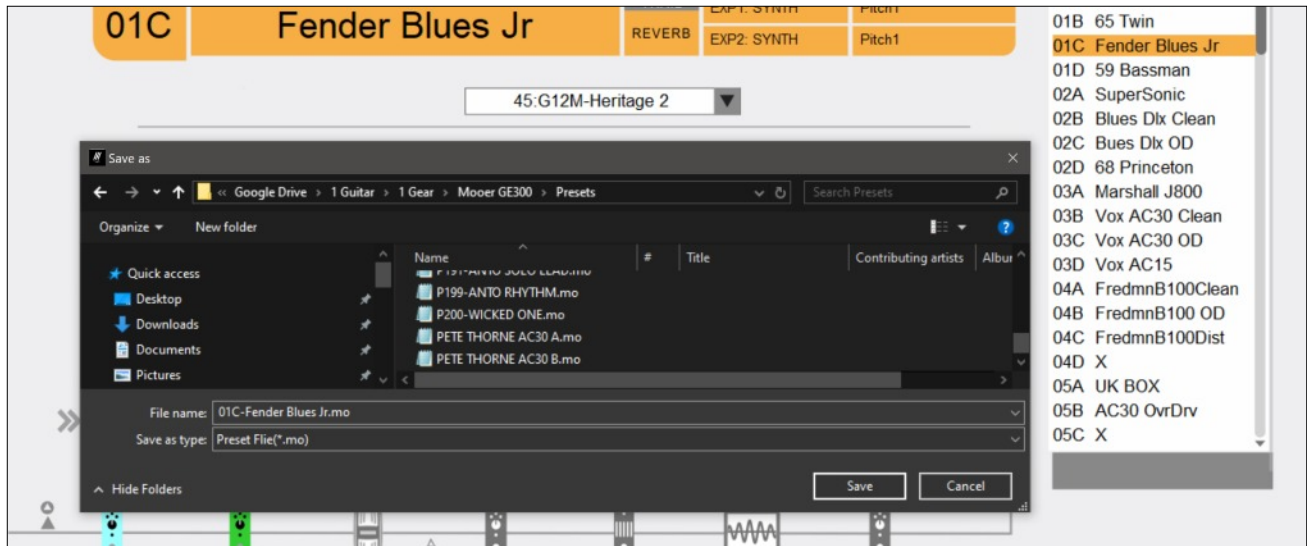
to the section later in this book entitled **Creating A Reusable Preset the Smart Way** for a nifty idea on how to populate unused preset locations with a base preset loaded with all the stuff you like to use on a regular basis.

Backing Up Presets

Mooer Studio allows you to save one preset at a time to your hard-drive as a back-up or to share. Saving one preset at a time can be a time-consuming chore if you want to back-up all your presets at once. (See my wish list to Mooer Audio at the end of this document). For now, there is no way I can find to back-up all presets at once - even by trying to connect into the GE300 from my PC directly. Each preset must be exported to your PC one at a time.

For example, I own a Fender Blues Junior amp. I swapped out the stock Jensen C12N speaker for a Celestion G12H-55 Heritage. I purchased and loaded the IR (impulse response) for the Celestion G12H-55 speaker for the GE300, instead of creating my own with the GE300 unit. (I cover loading IRs later in this document) I then created a custom preset on the GE300 to mimic my

Figure 2b - The save dialog box for saving a preset to your hard-drive.



physical amp and speaker, along with selected effects pedals I like to use.

Figure 2b illustrates the dialogue box shown when I save the preset to my hard-drive. Once saved, it can be shared or archived as a backup. **NOTE:** If I shared my custom Fender Blues Jr preset, the recipient would need the Celestion G12H-55 IR too. Since I purchased the IR, there are redistribution limitations which state I can only use the IR for my personal use. Hence, do not share presets that embed 3rd party IRs, unless of course, you make your own IRs with the GE300.

2 The Signal Chain Control Block

Once you have chosen a preset to work with, the next block to focus on is the Signal Chain Control Block (Figure 3). It is here that you can

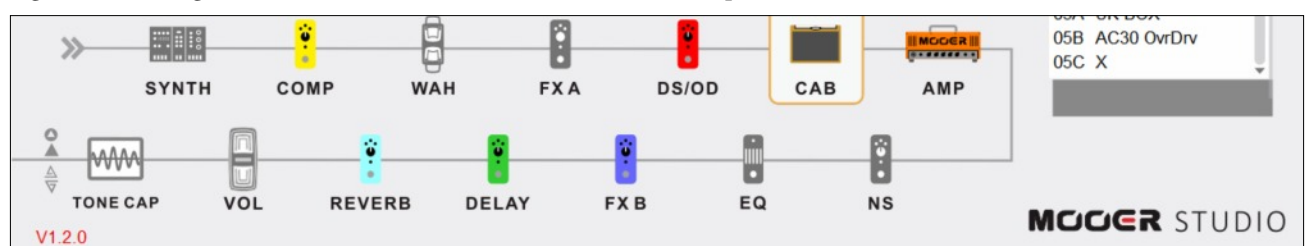
move amps, cabs and effects around to your liking. This is one of the great powers of a modeling and effects box like the GE300.

Re-Ordering the Signal Chain

Its quite easy to reorder the signal chain by clicking, dragging and dropping. Click on an effect, hold down the mouse button and drag the effect to the desired location. The replaced effect will move to the location left vacant by the effect you just moved. There are a few things to note when re-ordering amps, cabs or effects:

- The Synth processor must stay in the very first slot in the signal chain - it cannot be moved
- You can do some crazy things like place the cab before the amp. Sounds silly, doesn't it? In a modeling world you can do that, but in the real world you will get literally nothing out of placing a cab before an amp.

Figure 3 - The Signal Chain Control Block (Block 2) with 14 effect positions.



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- The TONE CAP effect position is rarely used by most GE300 owners, so its best to put it at the end of the signal chain to get it out of the way. For those who use the tone capture for a guitar, for instance, will want to move it somewhere else in the signal chain that makes sense, like nearer the beginning.

Signal Chain Basics

With an amp and effect modeler like the GE300, it is easy to make unconventional changes to the signal chain to hear what the outcome might sound like. To do this with a traditional pedal board would take extraordinary time: unplug the stomp boxes, move them around, re-affix them to the board, re-apply the power supplies and give it a whirl. Don't like the sound? Rinse, repeat.

For this reason, an integrated effects processor like the GE300 is ideal for experimenting. Let's review some signal chain basics to help you design your own signal path.

Conventional Order of Effects

While the list below can be debated, the order as follows is commonly used as a baseline for creating a signal chain path.

(GUITAR IN > CLEAN SIGNAL)

1. TUNER
2. EQ
3. WAH/AUTO-WAH
4. COMPRESSOR
(BOOSTERS and GAIN)
5. BOOST or DRIVE or OVERDRIVE
6. DISTORTION
7. FUZZ
(NOISE SUPPRESSION)
8. NOISE GATE
(MODULATION)
9. FLANGER or PHASER or PITCH SHIFT

10. CHORUS or ENVELOPS or TREMOLO or VIBRATO

(DELAY AND REVERB)

11. DELAY

12. REVERB (VOLUME)

13. VOLUME PEDAL

- Place effects that require a clean signal first
- Then place signal boosters and gain next
- Then use a noise gate to take out some of the "dirty" noise that boosters and gain can give
- Then add in modulation to a cleaned-up driven signal
- Then add delay
- And finally add reverb, as you'll find that some modulation effects and certainly delay will add a hint of reverberation already. Usually not much reverb is needed for a heavily modified signal.
- After all that, place your volume up/down pedal last to control the total level of output without affecting the signal processed in the chain. Well, you might say "that's what I use my volume knob on my guitar for" - that works too - sort of. Volume knobs on guitars can tend to roll-off mids or high frequencies when dialed down, so you are affecting the beginning of the signal chain right away. If that is your preference, which it is for some, then you are all set! Otherwise, using a volume pedal at the end of it all is a clean way to control volume output without affecting tonality.

Order of Effects in Mooer Studio

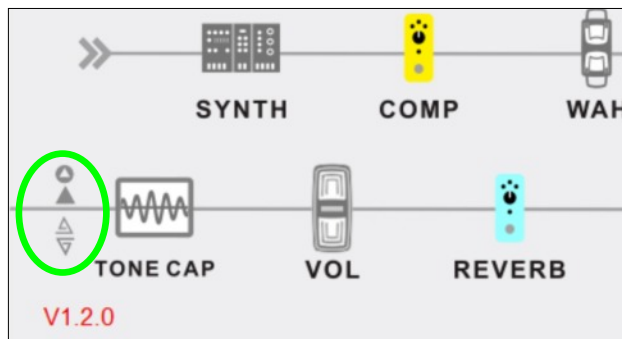
We have to think about the order of effects a little bit differently when using the GE300. There are 14 effects positions to work with (*Figure 5*), but only 8 give us total control. Let's explore...

Since we cannot move the Synth effect, it stays in position #1. That leaves us with 13 positions to

Figure 4 - Effects Send/Return input jacks **23**



Figure 6 - Effects Send/Return, XLR and Output Icons in the Mooer Studio GUI.



work with. The last position is occupied by the Tone Capture feature; now we are left with 12 positions. (*I moved the Tone Capture option to the last position since it is rarely used - more on how to move positions later.*)

With the GE300, two of the remaining 12 positions are used by an Amp simulation and a Cab simulation. That leaves 10 positions remaining. Another two are used by a dedicated wah pedal and a dedicated volume pedal. And yet

another two are used by dedicated noise suppression and EQ. That leaves the final 6 positions to add stomp box effects at discretion. But there are ways around that limitation, as we will explore in a moment.

Effects Loops and XLR Out

One way to get around the perceived limitation of having 6 onboard stomp box locations is to insert your own physical stomp box collection anywhere within the Mooer GE300 signal chain. This can be accomplished by connecting your physical stomp boxes to the effects send/return jacks (**23**) on the backside of the GE300 unit. See Figure 6.

Then, one of the least documented and under-appreciated features of the GE300 can be used: the ability to insert an external effects loop anywhere within the GE300 signal chain. This is done by moving the rather small Effects Send/Return icons anywhere in between the effect positions in the GUI. See Figure 7 for examples of what the circled icons look like.

Figure 7 - Effects Send/Return, XLR and Output Icon descriptions. (Source: Mooer GE300 Owner's Manual)

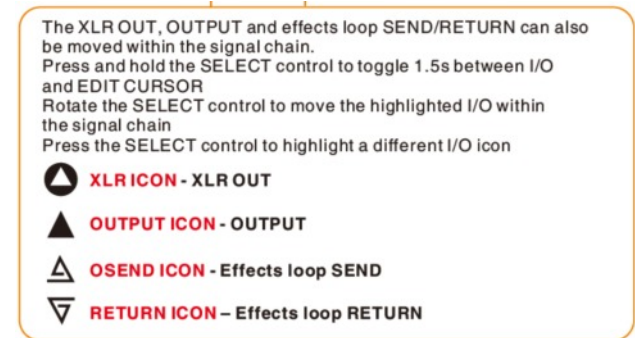
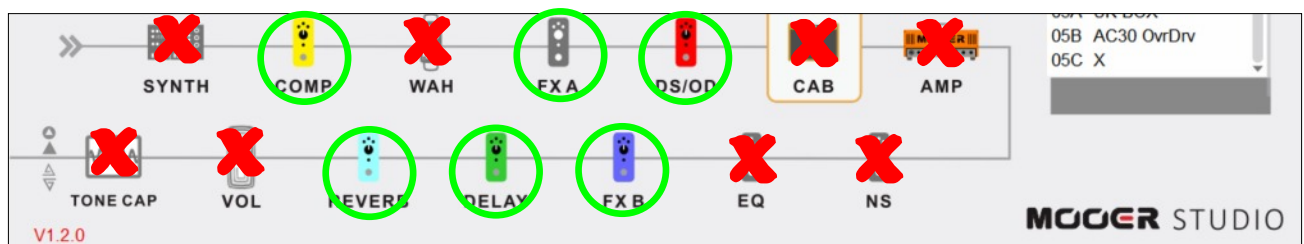
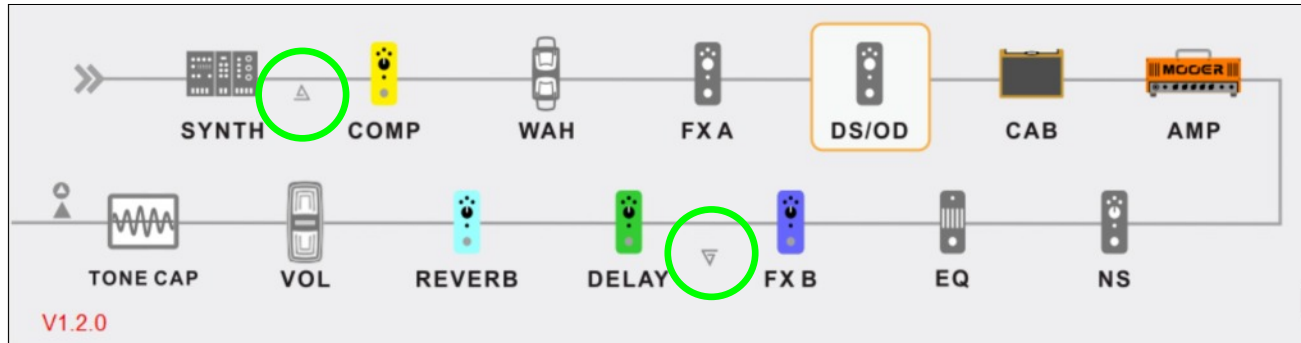


Figure 5 - There are 8 truly assignable stomp box effect positions.



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Figure 8a - The effect send icon has been positioned just after the Synth and before Comp to “send” a clean signal. It is then processed by the external FX loop and received back in after FXB (Modulation, in this case) and before Delay. This will bypass everything in between the two markers, including the amp and cab selections.



For example, let's say you prefer your favorite series of overdrive and distortion pedals that the GE300 cannot replicate. Connect them into the physical effects send/return jacks and with your mouse move the small “curly” triangle icons to anywhere in-between two effects positions within the Mooer Studio GUI. The GE300 will send the signal to your pedal board where you told it to do so, and expect to see the signal return, again, where you told the GE300 to expect it. You don't have to “send” the signal and “return” it to the same location in your signal path on the GE300. See *Figure 8a* for an illustration of placing the send and return icons for effects processing.

Clicking on the **FX LOOP** button in Block 7 - System Controls, turns the effects loop on or off.

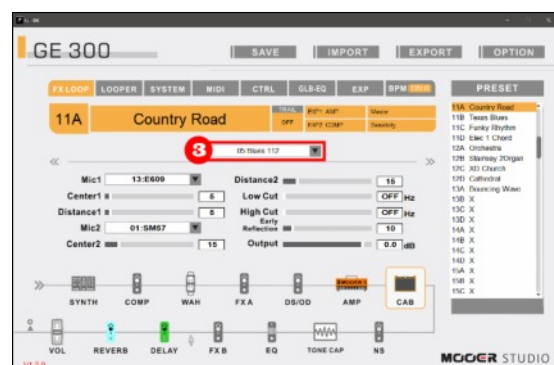
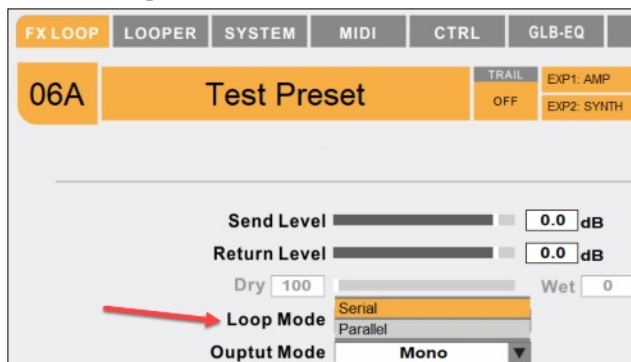
When it is on, the icon turns orange-yellow.

FX Loop

Within the option **Loop Mode**, are two important choices: Serial or Parallel (see *Figure 8b*). Choosing Serial mode sends the signal out to the FX Loop where the Send Icon is placed in the signal chain. The signal is processed by the external effects and sent back into the GE300 signal chain where the Return icon is placed. All effects on the GE300 signal chain are bypassed between the two Send/Return icons. The opposite is true for Parallel. The signal is split at the Send icon and is processed by both the external FX loop and the internal GE300 signal chain, being merged back together at the point of the Return icon. Most likely at this point, you can see the advantages of both.

3 The Amp/Cab/FX Selector Block

Figure 8b - When the FX LOOP option in the System Control Block is selected, the menu options below appear. Loop Mode Serial or Parallel have dramatic effect to how an FX LOOP is processed.



The Amp/Cab/FX selector block requires two inputs to give proper context-sensitive results.

The inputs are: a) a preset must be chosen in Block 1, even if blank, and b) an effects position must be chosen in Block 2, e.g. - the DS/OD effect position.

Once the prerequisites are in place, the drop-down options for the Amp/Cab/FX become context sensitive and only show options relative to the effects position chosen.

For example, if I have selected the DS/OD pedal position to work with, only DS/OD pedal options will show in the drop-down for Block 3. Likewise, if I have chosen the Amp position in Block 2, only amps will show in the drop-down list in Block 3. That's it, pretty simple.

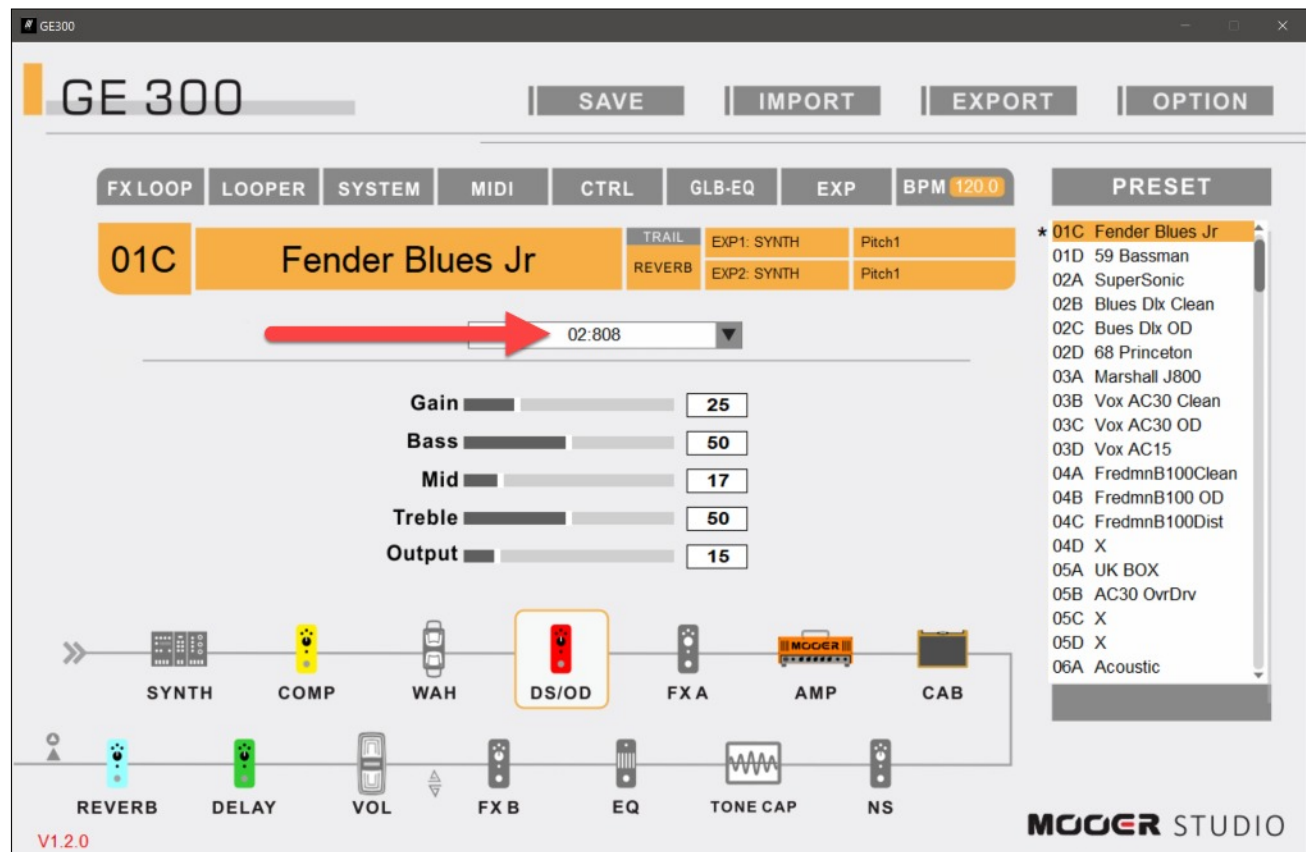
4 Parameters Block

Like Block 3 (Amp/Cab/FX Selector), the Parameters Block is context-sensitive based upon the options selected in Blocks 2 and 3.

Again, for example, if the DS/OD effects pedal is selected in Block 2, and the pedal selected in Block 3 is DS/OD #2: 808 (clone of the Ibanez Ts808), the corresponding controls for the Ibanez Ts808 clone are displayed in the middle of the screen (Block 4). See Figure 9.

This manual will not go into great detail about each parameter for all 272 amps, cabs and effects. That's just too much work! It is assumed you will know about the various parameter controls for the amps, cabs and effects you choose. If not, just experiment with them - there's nothing to loose!

Figure 9 - The DS/OD effects position is selected, indicated by the yellow outline around the position, and the Ibanez Ts808 pedal emulator is chosen in Block 3, indicated by the red arrow. The result is the controls for the 808 are displayed in the middle of the GUI.



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5 Preset Identifier Block

This block simply indicates the preset location and name of the preset being worked upon. *There are no interactive options to select in this Block.*

6 Expression & Trails Control Block



Block 6 is a status block - it indicates the status of trails and what is assigned to the on-board expression pedal (EXP1) and the optional expression pedal (EXP2). Working with expressions pedals are covered later in this document.

For now, let's focus on trails. What are trails? In the old days of time-based multi-effects signal processors, if you were to switch between time-

based effects, presets or patches the signal processing would stop for the current signal flow and begin processing the new signal path. What happened in-between this micro-second lapse between patches was a audible void and stark transition from one to another. Time-based effects are primarily reverb and delay. With the Mooer GE300 and many other leading multi-effects processors today, you can optionally turn on "trails" so that the previous time-based signal chain lingers on as you go to your new preset. Once you generate a signal in your new signal path (by strumming the guitar for example), the trail is replaced as the new signal takes over. Trails "on" creates a seamless audible transition between presets. I typically turn on trails for most all presets that use reverb and delay. Why not?

Finding the Trails Settings

Not all reverb and delay effects on the GE300 offer trails as a setting option.

Delays which offer the trails setting are:

- Digital Delay
- Analog Delay
- Dynamic Delay
- Real Delay
- Tape Delay
- Mod Delay

Figure 10a - The Spring reverb parameters options. The trails setting is included but not readily visible until you click either one of the double arrows on the slide bar.

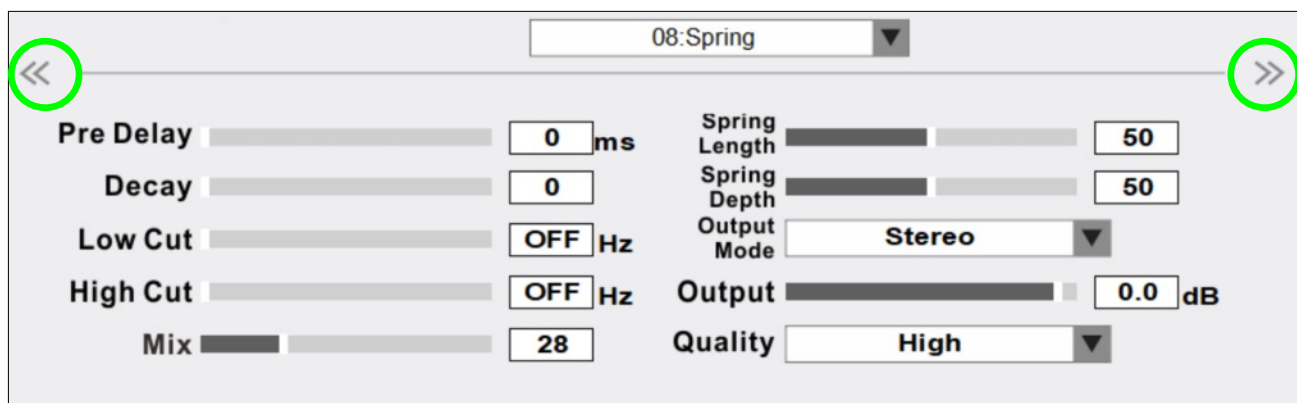
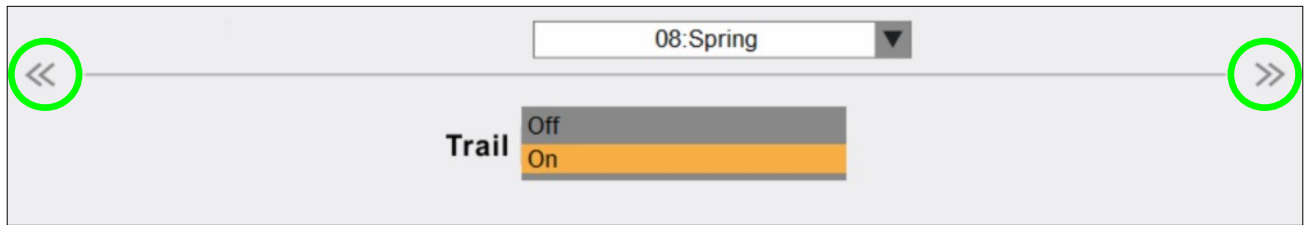


Figure 10b - The Spring reverb parameters options. The trails setting is included but not readily visible until you click either one of the double arrows on the slide bar.



- PingPong Delay

Reverb effects which offer the trails setting are:

- Room
- Hall
- Plate
- FI-Reverb
- Swell Reverb
- Spring
- Mod

2. Looper
3. System
4. MIDI
5. CTRL
6. GLB-EQ
7. EXP
8. BPM

Finding the trails setting can be tricky. Some of the setting parameters for an effect can be extensive, spanning more than what the space in Block 4 - Parameters, will allow in one screen.

Let's look at the Spring Reverb effect, for example - it's a common reverb to use. It offers a trails option, but it isn't readily visible. See Figure 10a. Click on either double arrow on ends of the slide bar to access more options, including the trails option. See Figure 10b.

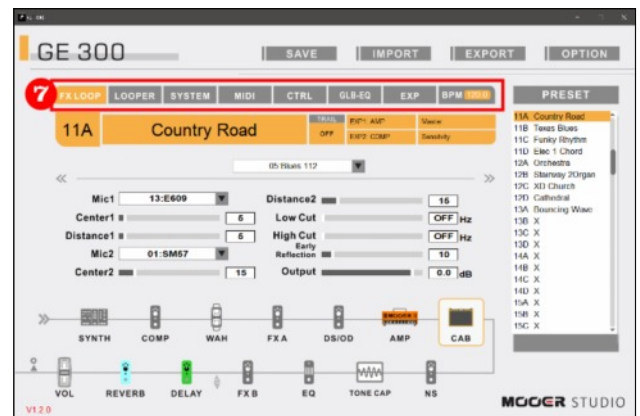
NOTE: if you choose Trails:ON, the effect will be moved to the END of the signal chain by default and you cannot move it from there.

As for the EXP1 and EXP2 settings, we will cover those in the next section, 7 - Systems Controls Block.

7 System Controls Block

The Systems Control Block contains 8 functions:

1. FX Loop



This section will cover all of the above except for the MIDI functions. MIDI functions are highly dependent on your specific midi controller and this topic can be an entire instruction manual in itself.

FX Loop

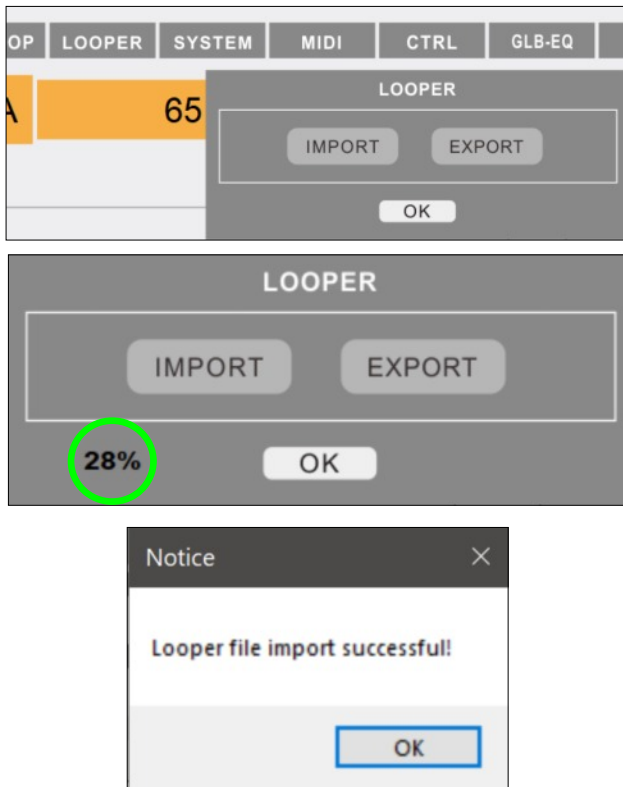
In section *Effects Loops and XLR Out*, we discussed how to connect and use an external pedal board (via an effects loop) with the GE300.

Clicking on the **FX Loop** option turns the effects loop on or off. When it is on, the icon turns orange-yellow **FX Loop**.

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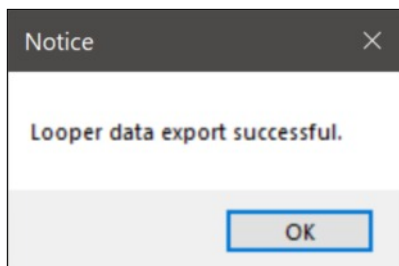
Looper

Figure 11 - Clicking the Looper button on the Systems control bar reveals an import/export option.



The Looper option allows you to save a loop you have created or load a loop for additional play and editing. This option can be handy in saving a loop you have created that isn't entirely complete, so that you can dub and overdub at a later date. See *Figure 11*.

Importing a loop file is as easy as clicking on **LOOPER** then the **IMPORT** button and choosing the file you wish to load. *NOTE: all looper files must be in a .wav file format.* The



import dialogue box will show progress as a percentage.

When the import is finished, a dialogue box will appear indicating the import was successful.

Exporting a loop file is just as easy as importing. Click on **LOOPER** then the **EXPORT** button. A filename dialogue box will open allowing you to name the file and choose the destination. The file export progress will be shown as a percentage complete. Once complete, a dialogue box will appear indicating the export was successful.

The import and export process is not speedy, have patience as the processes work.

System

The **SYSTEM** option allows you to make changes at the preset and global level. See *Figure 12*.

Figure 12 - The SYSTEM control box allows for changes to a preset and for global settings.

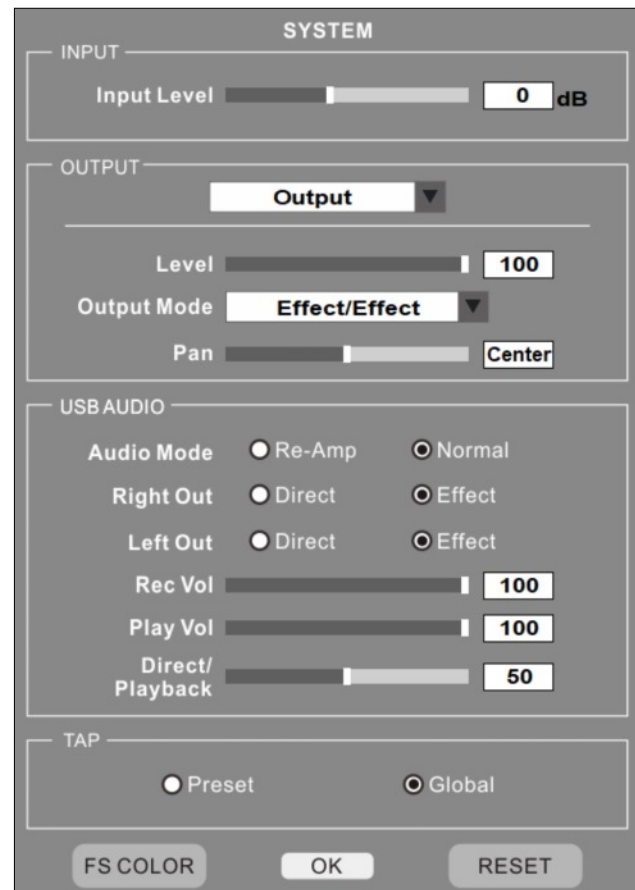
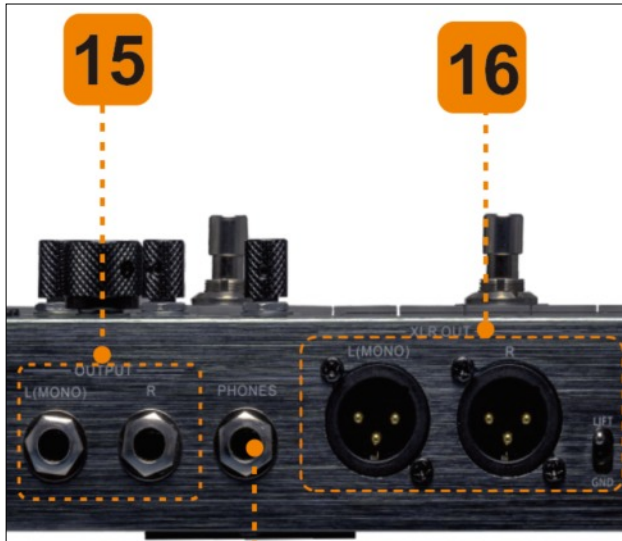


Figure 13 - The Output System menu option offers controls for 1/4" outs (15) and XLR outs (16). Source: Mooer GE300 Owner's Manual.



INPUT Section

The Input Level slider allows you to apply a volume reduction or gain to all of the inputs on the back of the physical GE300 unit. It's best to keep this at the default 0dB unless you have a very weak or strong input signal that requires adjustment.

OUTPUT Section

The Output pull-down menu offers two selections: **XLR** or **Output**. **Output** is selected in Figure 13. Choosing Output controls the 1/4" out levels noted by 15 and choosing **XLR** controls the XLR out levels noted by 16 in Figure 13. **Output** and **XLR** is used to send processed signal to a powered amp or a mixing board. Most hobby musicians would send the signal out to a guitar amp with neutral tone settings for local amplification. In this case, choose **Output** and send the signal to the amp via a 1/4" line cable from the left (mono) output jack 15.

The **Level** option is used to adjust the output gain. The Output Mode has four options to control stereo output for L/R output:

1. Dry/Effect
2. Effect/Dry

3. Dry/Dry
4. Effect/Effect

If you do not use stereo output and send a mono signal to an external amp, you have two choices: send a dry signal (option 1 or 3) or send an effect (wet) signal (option 2 or 4). For mono signal output, the **Pan** option is irrelevant. For stereo signal output, **Pan** allows you to adjust the signal from left to right. Most often, the setting is best kept the center setting.

The GE300 offers simple controls for USB Audio out, used to send signal out to a recording device, like a computer running a DAW (Digital Audio Workstation).

Audio Mode: Re-Amp or **Normal** is used to send a signal that is going to be amplified further or send a signal that is normal, meaning no further amplification will be applied. If you go direct into your DAW, **Normal** should be selected.

Right Out and **Left Out**: similar to the settings in **Output Mode**, you can choose if you want a **Direct** (dry) or **Effect** (wet) signal. *My Opinion: I am not sure why Mooer software engineers chose a pull-down menu selector in the OUTPUT section to select wet/dry mixes and radio buttons in the*

Figure 14 - The USB connection jack (17) is required to connect your PC to the Mooer Studio software and/or a DAW. Source: Mooer GE300 Owner's Manual.



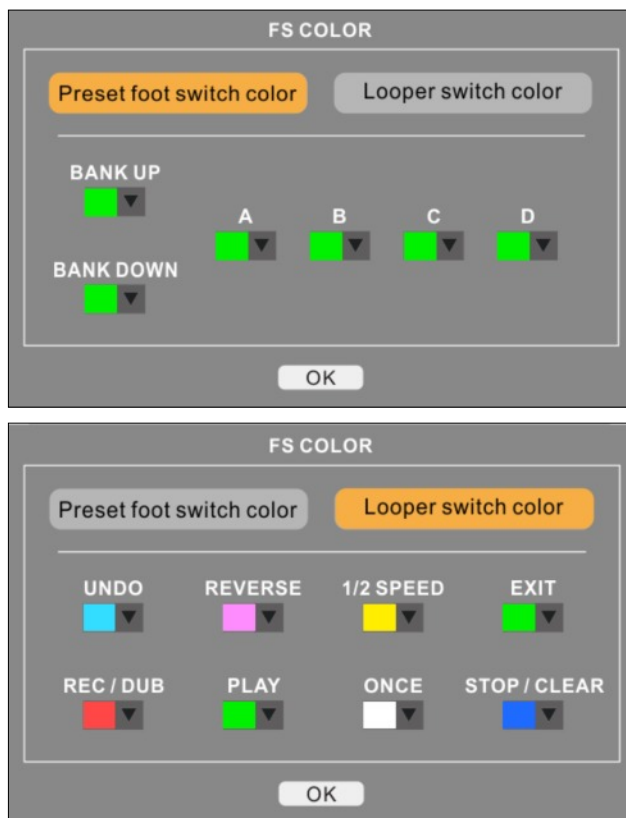
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USB AUDIO menu. I like the radio buttons better, but who am I to say.

Rec Vol, **Play Vol** and **Direct/Playback** volume sliders are straight-forward, allowing you to control each of these volume levels to the USB out. See *Figure 14*.

The final control in the **SYSTEM** menu is **TAP** control. This controls if the temp tap foot switch should control the current preset or all presets. For most gigging situations, if you set the tap control during live play, you'll probably want the tempo to carry-over to other presets, particularly within a single song. Choosing **Global** is a safe bet for most hobby guitarists.

Figure 15 - The **FS COLOR** control box allows you to change the default color for the LED halos around the top row of foot switches for a global Preset color, and for the Looper foot switch colors.



At the bottom of the **SYSTEM** menu is an awkwardly placed selection, **FS COLOR**. This controls the default colors of the foot switch LED halos. See *Figure 15*. I have changed them to all

green for a global Preset color and adjusted the colors for the Looper function to my liking.

You have the option of changing the colors for each foot switch in individual Presets too. This is discussed in the **CTRL** menu option later in this text.

Figure 16 - The **MIDI** control box allows you to map MIDI channels to an external MIDI controller.



MIDI

The **MIDI** option allows you to map MIDI control channels to your specific MIDI controller hardware or software. See *Figure 16*.

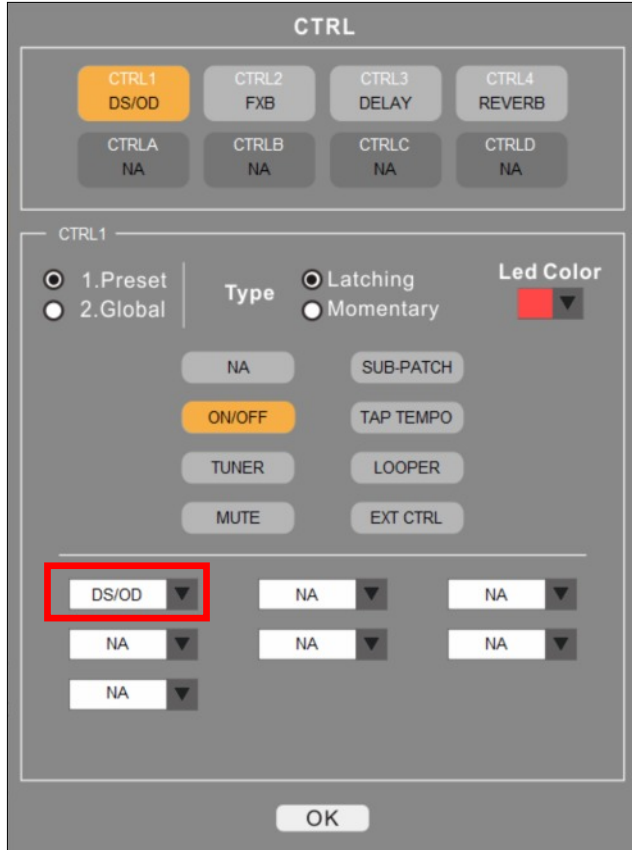
Using the MIDI functions is highly dependent on your midi controller and can be an entire instruction manual in itself, and as such is not covered in this guide. The Mooer GE300 Owner's Guide covers MIDI controls and mapping in sufficient detail to get you started.

CTRL

The **CTRL** menu option contains some incredibly flexible features with regards to assigning one or more sim or effect to a foot switch.

At the top of the **CTRL** dialogue box are 8 rectangles which map directly to the eight foot

Figure 17 - The **CTRL** control box gives you great flexibility in assigning a single or multi-effects signal chain to one foot switch.



switches on the GE300 unit. In the example in *Figure 17* shows the first rectangle **CTRL1** is selected, allowing all the parameters below to change the settings for foot switch 1.

Assigning Effects to Foot Switches

In the *Figure 17* example, I have assigned a DS/OD effect to the first foot switch. I can tell this by the red box outline and the highlighted **CTRL1** rectangle. I have chosen it to be for the current preset only, as indicated by the radio button for **1.Preset**. I have also selected the foot switch action to be **Latching** in the **Type** selection area. **Latching** means the control parameters assigned in this box are turned on or off with each press of the foot switch - consider latching to mean 'on' or 'off'; this is the most common setting to use.

Momentary means the control parameters assigned in this box are only 'on' when the foot

switch is pressed down. When the foot switch is released, the effects are 'off'. This gives you incredible control of your signal.

A common application can be to assign a momentary signal chain for sustain and feedback. For an entire song, you may not want any significant sustain and feedback, but at the end of the song you want to end with sustain and feedback lingering on as you whammy bar vibrato into the sustained signal. You would press down the assigned foot switch for as long as you want the sustain and feedback to linger.

You can also change the Led Color for the selected foot switch, in this case I have chosen **RED** as the color for the **CTRL1** rectangle.

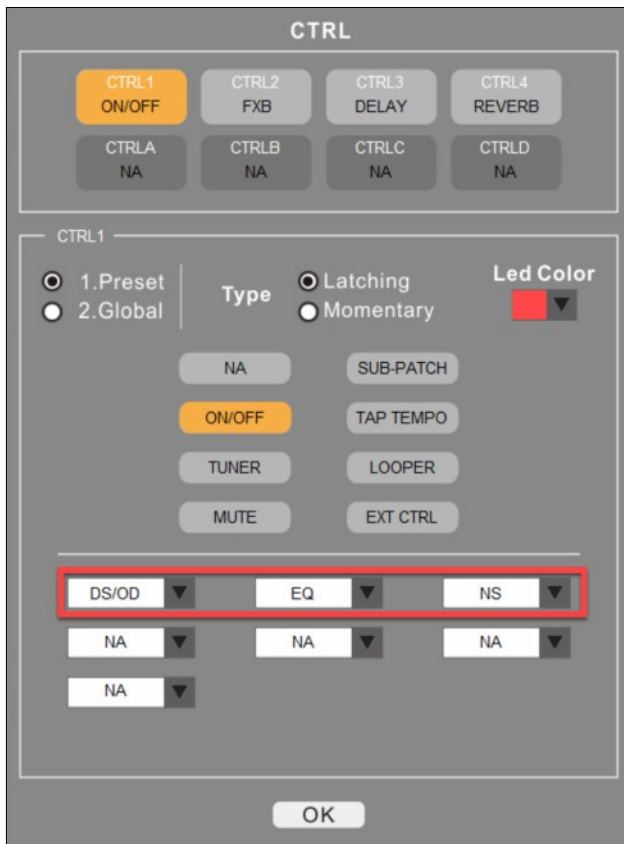
Now, you are probably wondering what are those 8 control buttons in the middle of the screen. These buttons allow you to assign other non-sim and non-effect functions of the GE300 to a single foot switch within a single preset.

- **NA** - choosing this option essentially turns off any assignments to the selected foot switch.
- **ON/OFF** - choosing this option 'activates' the foot switch, which can be further controlled by how it is activated with **Latching** or **Momentary**.
- **TUNER** assigns the tuner to the selected foot switch. So, instead of pressing the two lower left foot switches down to access the tuner, you can assign one foot switch instead, right inside of one preset. For example, this can be handy if you are playing a song which is partially in Drop-D tuning, but changes key midstream requiring you to quickly re-tune between stanzas.
- **MUTE** simply mutes the entire signal chain. You can assign this to be **Latching** or **Momentary**, as with any other effect.
- **SUB-PATCH** can be viewed as an 'over-ride' button. It's a way to switch between all of your foot switch settings whether on or off, and return to a 'clean' base setting quickly.

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- **TAP TEMPO** assigns the on-board tap tempo feature to any foot switch you choose.
- **LOOPER** assigns the on-board tap tempo

Figure 18 - In this example, 3 effects (DS/OD, EQ and NS) have been assigned to a single foot switch (foot switch 1).



feature to any foot switch you choose.

- **EXT CTRL** assigns control to the external expression pedal, if you use one.

Assigning Multiple Effects to a Single Foot Switch

Another powerful feature of the GE300 is the ability to assign several effects to one foot switch. You can assign amps and cabs to a single foot switch, or turn on/off an external FX Loop, for example. Up to 7 Amp/Cab/FXs can be assigned to a single foot switch, in any combination and order.

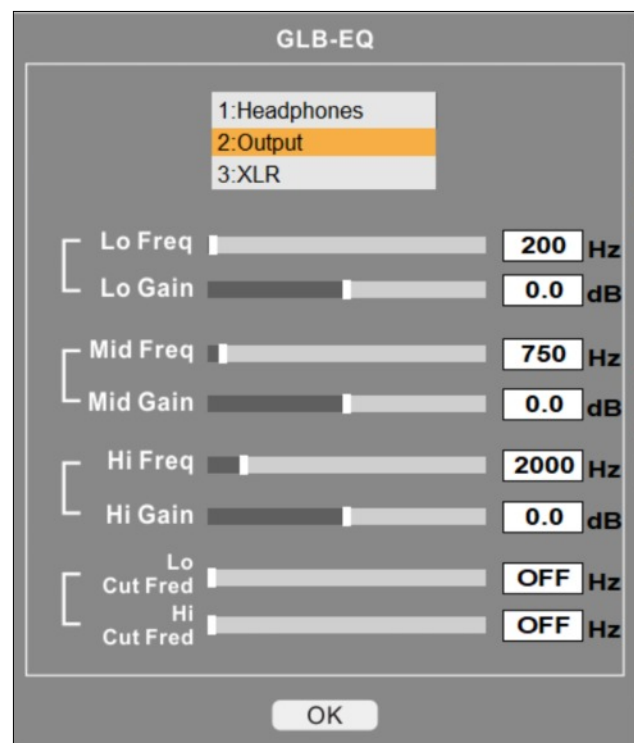
Illustrated in *Figure 18*, I have assigned three effects to the first foot switch: a DS/OD pedal, an

EQ pedal and a noise suppression pedal, indicated by the **red rectangle**. So now every time I press foot switch #1 I turn the effects all on or off at the same time. This frees up the other three top foot switches to assign a singular or multiple effects in the same manner.

I suppose if you really wanted to be efficient, you could have one preset serve up to 8 entirely different signal paths, each having up to 7 amp/cab/FXs assigned. I could see this being advantageous in limiting the amount of searching you would need to do to find the correct preset to use. Just stay on one preset and select the 'patch' you have pre-designed to one of the foot switches. You could set up a base amp and cab and have a foot switch for heavy metal, one for clean vibrato, one for slapback delay, one for 70's pop chorus and so on. The downside is that you cannot turn on/off individual effects within each foot-switchable 'patch'.

GLB-EQ

Figure 19 - **GLB-EQ** settings for a 3-band EQ and hi/lo frequency bracket.



The **GLB-EQ** menu option displays an editable 3-band EQ and frequency bracketing setting. The EQ settings can be unique for **Headphones**, **Output** and **XLR**. See *Figure 19*.

Typically the mixing board of a PA system handles the EQ role, so its best to send an

Figure 20 - **EXP** settings provide control for the on-board and external expression pedals.



unchanged signal through **Output** or **XLR**.

However, some **Headphones** may require sound shaping to get the best sound - it's here where you can tweak the sound accordingly.

For me, I leave these settings unchanged and tweak the sound within the signal chain for greater control. Remember that changes in this control box affect ALL signal processing, hence global in nature.

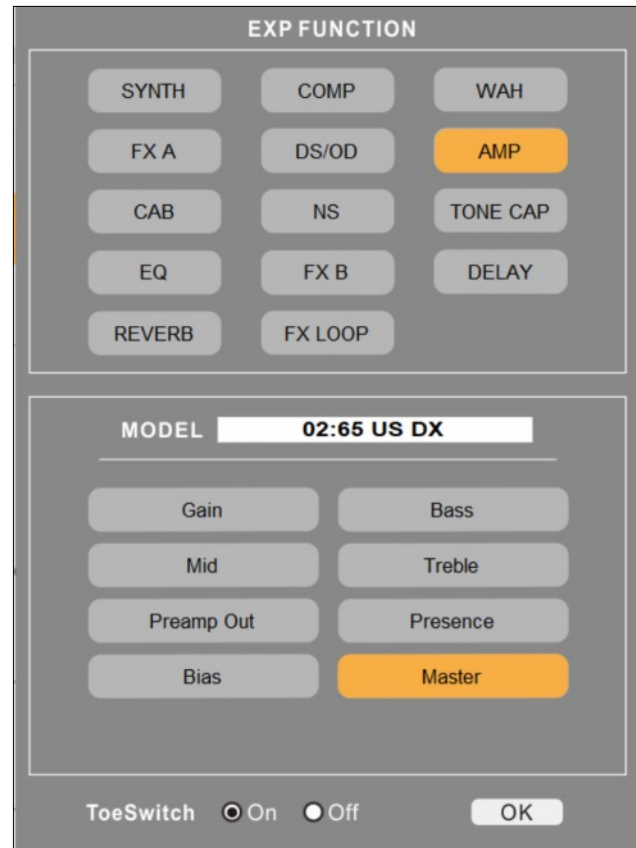
EXP

The **EXP** menu provides control options for the on-board and external expression pedals. See *Figure 20*.

Once you choose to edit either **EXP1** or **EXP2**, clicking the **FUNCTION** reveals all the effects you can assign to the expression pedal. See *Figure 21*.

The top section of the **FUNCTION** menu (*Figure 21*), labeled **EXP FUNCTION**, you can assign an

Figure 21 - **EXP** settings cover all the amp, cab and effects offered in the GE300.



expression pedal to on-board effects and even the external effects loop, if you use one.

The bottom section of the **FUNCTION** menu (*Figure 21*) is context sensitive. If you choose DS/OD in the top section, DS/OD options are shown in the bottom section. If you choose DELAY in the top section, commensurate delay controls are shown in the bottom section. In this section, you cannot choose which specific effect you want to control, e.g. - the type of DS/OD for example. The effects already assigned to the preset are the ones shown here. If you wish to change the type of effect shown here, you need to change it using Block 2 - the **Signal Chain Control block**.

In the example shown in *Figure 21*, I have assigned **EXP1** to control the amp's master volume. I have also turned the **ToeSwitch** on, meaning that before I can control the amp's master volume, I must press the toe of the expression pedal down

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all the way to turn the expression pedal 'on'. I do the same to turn it 'off'. Using the **ToeSwitch** on/off option prevents the volume to be altered accidentally by bumping the expression pedal. Just turn the expression pedal off with a toe tap until you need to use it - then turn it on with another toe tap.

Outside of volume control, using an expression pedal to control wah effects is the most common use. Essentially, you can control any effect in the top **EXP FUNCTION** menu. Try getting crazy by controlling the **DELAY** repeats to get a repeat loop into infinity!

MERGE

The **MERGE** function on the **EXP** menu is truly an experimenter's tool. Essentially, it allows you to assign specific parameters of an effect to an expression pedal, as many as you wish. AND, you can control the effects change to the direction of travel on the expression pedal. It gets complicated

Figure 22-1. **EXAMPLE STEP 1** - How to set the distortion reduction as the **EXP1** pedal's heel is pressed down. Click the **blue EXP1 SET TOE** button, then move the **Gain** slider where you wish the toe level to be. A **circled blue T marker** will be placed where you set it. Likewise, click on the **blue EXP1 SET HEEL** button and move the **Gain** slider where you wish the heel level to be. A **circled blue T marker** will be placed where you set it.

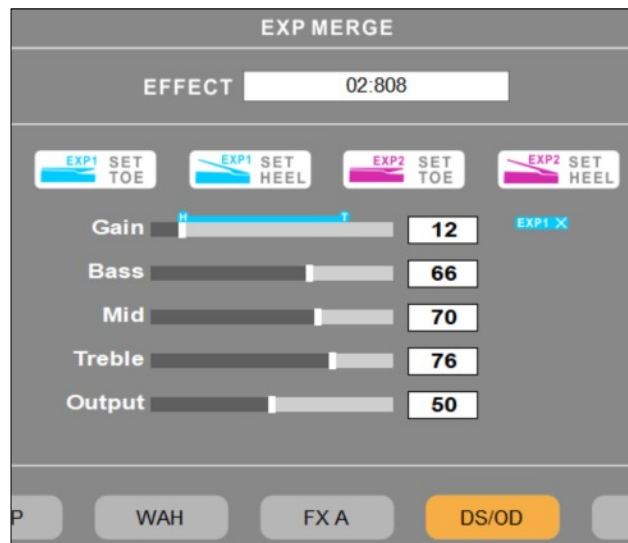
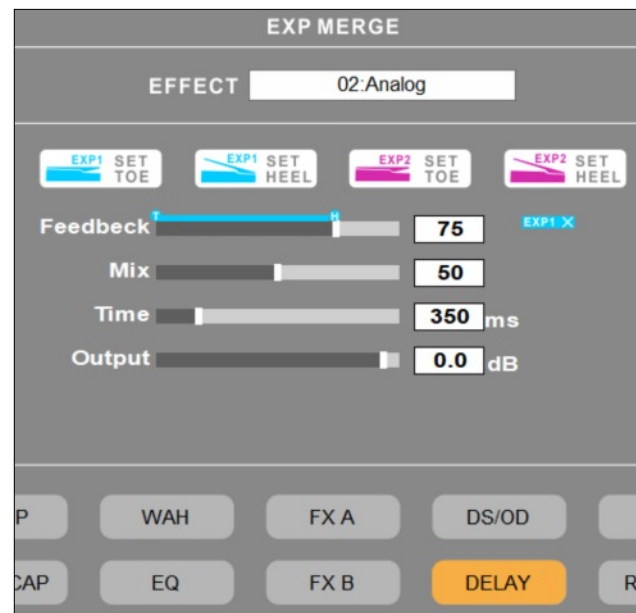


Figure 22-2. **EXAMPLE STEP 2** - Remember, we wanted the delay repeats to increase at the same time as the distortion decreases. Note, I am still working with **EXP1**. Click the **blue EXP1 SET TOE** button, then move the **Gain** slider where you wish the toe level to be. A **circled blue T marker** will be placed where you set it. Likewise, click on the **blue EXP1 SET HEEL** button and move the **Gain** slider where you wish the heel level to be. A **circled blue T marker** will be placed where you set it. Note that the feedback level is 0 (toe down) and when the heel is pressed down, the feedback (repeats) increase. At this point, I've assigned two controls to **EXP1**: pressing the heel of **EXP1** down will decrease the distortion and increase the delay repeats.



A close-up of the toe (**T**) and heel (**H**) markers from the image above.



Figure 22-3. **EXAMPLE STEP 3** - By now, you get the gist of how to assign multiple effect controls to one single sweep of an expression pedal. In this step, the level of **Ana-Chorus** is increased as the **EXP1** heel is pressed down.

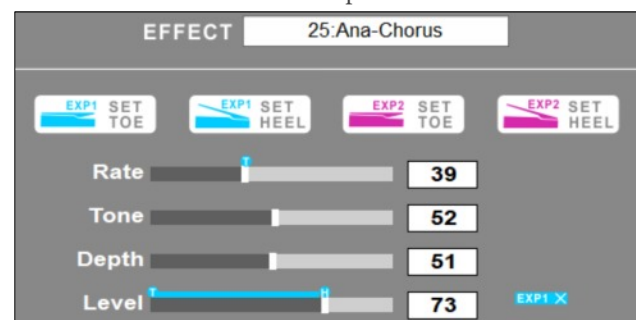
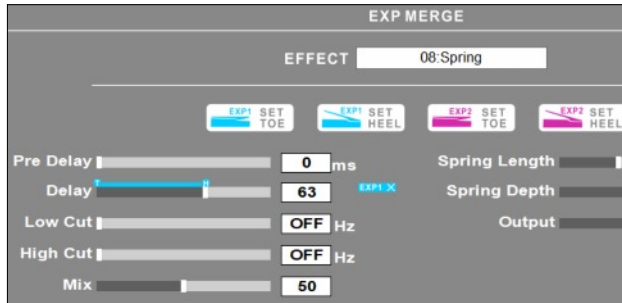


Figure 22-4. **EXAMPLE STEP 4** - in the same way I assigned the previous 3 effects simultaneously to **EXP1**, I assigned an increase in Reverb.



quickly! (And unfortunately, the Mooer GE300 Owner's Manual doesn't do much to clear things up).

It's difficult to write the instructions without visuals and an example to work through. So, let's design an example.

I want the heel down on the **EXP1** to reduce distortion and increase the delay repeats. Let's make this more complicated - let's also make the reverb more intense and chorus kick in. So we have 4 effects independently reducing and increasing by pressing the heel of **EXP1** down. We can do this with the merge function. And you can add as many effects to the expression pedal as you wish, to the point of making the signal path sound downright muddled. To make things even more complicated, you can assign these controls, as many as you want, across expression pedals. The following figures illustrate setting up the example above.

Wow! Now you can see how complicated it can get in a hurry. Remember, the advantage of a digital modeler is akin to a digital camera - experiment as much as you want, you can always delete unwanted results and try again!

BPM

The **BPM** function is a global setting. Simply click on the digits to the right of the **BPM** identifier and enter the beats per minute you require.

8 File Control Block

SAVE

The **SAVE** function simply lets you save a preset to any one of the 256 preset locations. The **SAVE** function is covered in detail in the section found earlier in this guide called **Moving Presets Around**.

IMPORT

The **IMPORT** function allows you import or load a preset to a pre-determined preset location. *NOTE: Before invoking the **IMPORT** option, be sure to choose and highlight an empty or unwanted preset location.* Once you start the **IMPORT** function, a file selection dialogue box appears, allowing you to locate and select a preset to import. When the file is loaded, a confirmation dialogue box will appear, click **OK** to continue.

There are a few things to note when importing a preset:

- Only Mooer files, designated by a '.mo' extension are permitted to import.
- Not all files with the '.mo' extension can be loaded into the GE300. Preset versions for the PE100, GE100, GE150, GE200 and GE250 are all named with the ".mo" extension. If you try to load a file format not designed for your unit, a generic error dialogue box will appear.

EXPORT

The **EXPORT** function simply lets you export one preset at a time to your hard drive. Remember, the filename has the '.mo' extension and is only shareable to other GE300 owners.

OPTION

At the time of writing this document, clicking the **OPTION** menu item takes you directly to the URL <http://www.mooeraudio.com/?FirmwareUpdate.html>. At this URL, you can navigate around to find software and firmware updates.

Section III

Smart Ways to Use Your GE300

Creating Custom Presets - A Suggested Workflow

Assuming you've read this far, you have a good understanding on how to navigate the GUI to get to the GE300 features and drive the results you want. Let's explore the basic workflow in creating a new preset.

NOTE: *The GE300 Owner's manual contains detailed tables which describe each of the options for amps, cabs and effects. Refer to the Owner's Manual for these descriptions.*

Step 1 - locate and choose an empty preset location.

Step 2 - Choose an amp simulation to be at the core of your preset sound

Step 3 - Choose a cab simulation to reproduce the sound you desire. Do you want an American tone? British tone? Hard driving tone?

Step 4 - Assign effects to the signal chain. Don't worry about the effects parameters for now, just assign the effects.

Step 5 - Organize the signal chain according to how you want the signal processed. Refer to the section entitled "Conventional Order of Effects" for guidance on how to order your own signal chain.

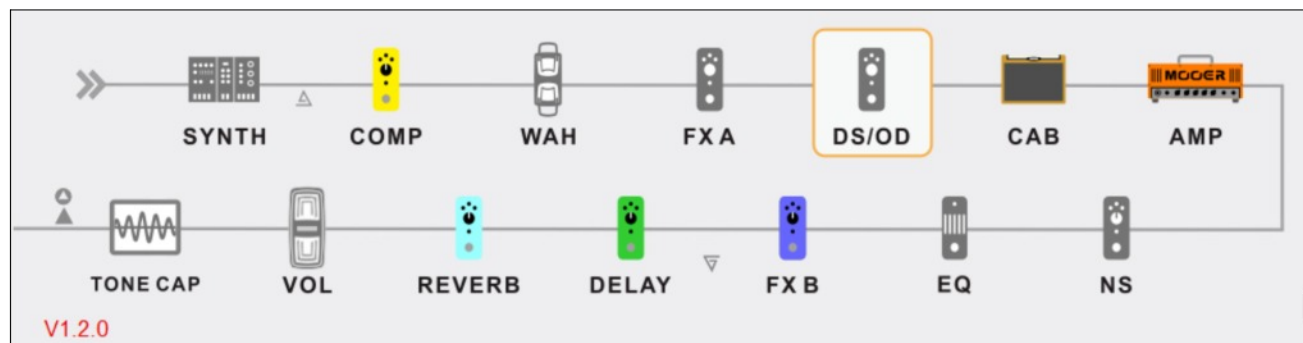
Step 6 - Now it's time to tweak each of the sim and effects to your liking. Start with the amp and cab, then follow your signal chain.

For example in *Figure 23*, I have selected the following sims and effects, in order:

1. Compressor (S-Comp)
2. DS/OD (Ibanez Ts808 - with mild breakup parameters)
3. Fender Blues Jr amp (with the tube parameters tweaked to my liking)
4. A custom IR for my speaker/cab (Celestion G12H-55)
5. A delay effect (Dual Delay)
6. A reverb effect (Spring)

That's it. It's not hard at all to create a custom preset!

Figure 23 - The effect send icon has been positioned just after the Synth and before Comp to "send" a clean signal. It is then processed by the external FX loop and received back in after FXB (Modulation, in this case) and before Delay. This will bypass everything in between the two markers, including the amp and cab selections.



Creating A Reusable Preset the Smart Way

There's an efficient way and a laborious way to creating a "base" preset which can be used over and over. Let's skip the laborious way and go straight to the efficient method.

The efficient way is to create a blank "base" preset that contains your *primary* favorite amp, cab and effects in the order you prefer.

For me, I have assigned the following, which suits my style of playing, in order:

1. Simple Compressor
2. DS/OD - Black Rat - just for an OD effect (*assigned to foot switch #1*)
3. Fender '65 Deluxe Reverb Amp
4. Fender 1x12 Deluxe Reverb cab or a custom IR for one of my Celestion speaker IRs
5. Analog Chorus - not too thick (*assigned to foot switch #2*)
6. Analog Delay set for slapback - 113ms (*assigned to foot switch #3*)
7. Spring Reverb - just a touch (*assigned to foot switch #4*)
8. Volume Pedal - assigned to EXP 1, controlling the master volume on the amp

I name this preset "X", as you can see in many of the screen shots in this document. Why? Because the factory preset name of 'Empty' can look like another similarly short-named preset, and thus requires me to visually study the preset name more intently when playing live - maybe it's time I do not have.

On the other hand, a preset with the name of 'X' is visually quick to scan. I simply know that X is my base rig anywhere in my preset library. There are numerous advantages of creating and naming a base preset 'X' (or any other name that means something to you):

- Saves significant time in setting up a preset from scratch; use your base and tweak it from there

- In a live performance mode, if you accidentally stumble on a blank preset, it is assured to be loaded with your favorite or primary base rig, so at least you can play through it until you have a moment between songs to find a preset you were looking for.
- Saves time paging up and down with the foot switches to get back to your base rig location. Just look for the nearest 'X' and your set.

Making Your Foot Switch Colors Mean Something

When I design a preset and assign certain effects to foot switches, I am consistent in the colors I use for the foot switch LED halos. I assign colors in this manner:

RED	halo is for OD/DS effects
PURPLE	halo is for chorus/vibrato/tremolo
GREEN	halo is for Delay
BLUE	halo is for Reverb

So, no matter the preset, I always know that a red halo means some sort of gain pedal is assigned to the foot switch, or blue means reverb is assigned, and so on.

I also place them in the same order on most all presets. The order just happens to be the order presented above.

Using consistent colors and order helps me build presets that I can visually use rather quickly without having to read the small screen when playing live.

How to Import a Custom Speaker Cab IR

One effective way to create custom presets is to assign unique IRs (impulse responses) to an amplifier choice. The speaker cabinet options that come with the GE300 are nothing more than Mooer's IRs loaded into the GE300.

Many prominent speaker manufacturers offer IRs (impulse responses) for the speakers they

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make. Some are free, some are for sale for a nominal cost each. For example, at Celestion.com, one can buy 5 different speaker IRs of choice for under \$25 USD. Considering that buying the real speakers can cost around \$100 each and up, \$5 per IR doesn't seem like a bad deal at all.

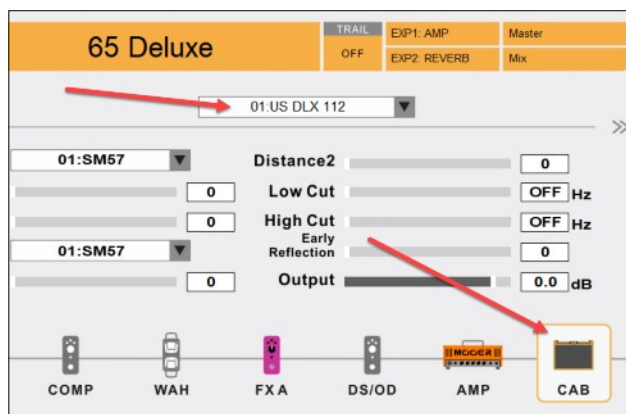
I just so happened to purchase a few Celestion IRs to load into my GE300. The process is somewhat hidden but very easy to use once you know the where to look. You would think **IMPORT** would be the option to use, but no!

Instead, you'll add new speaker IRs in the speaker cabinet selection drop down list. Access this list by following the steps in *Figure 24*.

Scroll down the list of existing speaker cabs to find the next open user-definable slot. There are 16 user-definable slots to store your own IRs within.

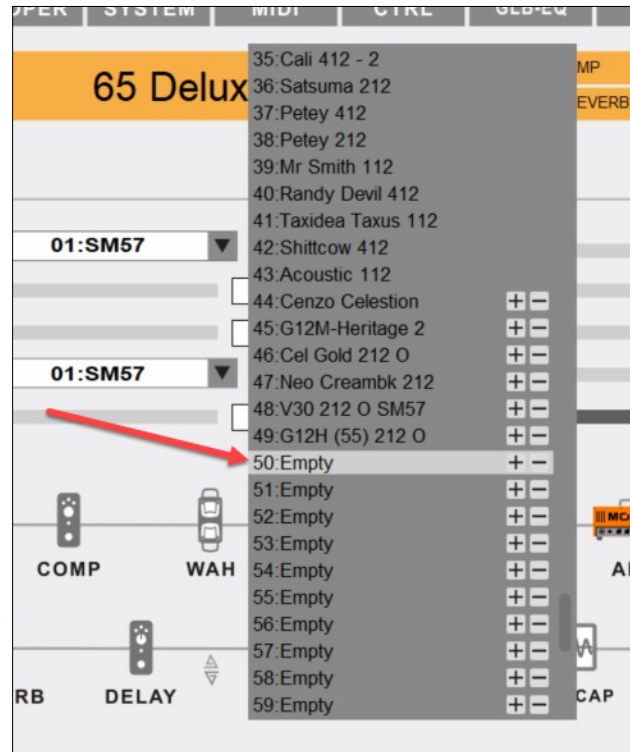
As you can see in *Figure 25*, I have loaded 6 custom IRs for Celestion speakers. Slot 50 is the next available open slot to import an IR. Clicking the "+" plus sign next to the open slot will open a dialogue box to find and choose an IR file. Deleting an existing user-definable IR slot is as

Figure 24. The first step to importing a custom speaker IR is to select the CAB effect position and then click on the Amp/Cab/FX Selector pull-down to access an empty slot for importing a new speaker IR.



easy as clicking the minus "-" sign next to the IR you wish to remove.

Figure 25. Scroll down the list of existing speaker cabs to find the next open user-definable slot. Then click on the "+" plus sign to add a new speaker IR.



NOTE: IR files for the Mooer GE300 should meet these criteria:

- Saved in the '.wav' format.
- A sampling rate of 44.1 kHz.
- A sample time of 500ms or less.

There's More Than One AUX-IN!

A common way to make practice time more effective is to plug in an iPad, cellphone or mp3 player into the **AUX IN** connection to play backing tracks or songs through the GE300, allowing you to jam along with them.

But did you know that when you connect your PC (or MAC) to the GE300 via the **USB-B** connection, you are effectively making a play-through connection just like the **AUX-IN**?

Here's the advantage: When connected to the GE300, you can play a YouTube instruction video or backing track straight from your PC. You'll most likely have a larger screen on your PC than

an iPad or cellphone and there's one less gadget to connect and manage.

So, in essence, you have TWO Aux in connections; one labeled **AUX-IN** and the other is the **USB** connection from your PC.

Suggestions for Future Releases of Mooer Studio

- **My #1 request:** Allow whatever is played in the **AUX-IN** to be recorded in the looper. I have backing tracks played through my iPad into the AUX-IN as I practice to them. It would be GREAT to be able to record them in the looper via the AUX-IN and be able to add layers of loops on top of them.
- **Allow Mooer Studio to be run in stand-alone mode without connecting to a GE300 unit.** Allow the user to make modifications on a laptop and upon re-connection to the GE300 unit, perform a quick sync. This permits the user to manage presets sitting down at a desk, using a mouse, without having to be tethered to the GE300. Maybe this requires a complete back-up of the required system files and presets to the computer to do so. If this is the case, then it solves another request below.
- **Allow the user to manually backup ALL system files and presets; or set up as an auto-backup as a background process every time the GE300 unit is connected to a PC.** Too many hours are spent by a musician tinkering to get the perfect sound. I had a GE300 completely freeze on me during a firmware upgrade, never to recover - I had to get a replacement unit. This suggestion would solve many situations like this request and more.
- **Allow the user to drag-n-drop presets to help organize them more expediently.** The current method of saving a preset to a different location, then clearing out the old location with a blank preset is tedious.
- **Make *trails on/off* a global preset** with the ability of individual presets to over-ride the global setting.
- Provide a **global setting to control the brightness of the LED halos** for each foot switch. The on/off brightness levels are still too bright for dark stage use.
- **Design a utility that can tell what version of Mooer multi-effects pedal board a preset is designed for.** Since all presets have the '.mo' extension, there is no way to tell which hardware the preset file is designed.
- **Design a utility to convert versions of '.mo' preset files to the version desired.** Essentially, make all '.mo' presets universally compatible. I know this can be difficult since not all multi-effects boards have the same sims and effects.
- **Accept higher sampling rates of IRs** - 44.1kHz is kind of old school these days - 96kHz is today's new standard.
- Include a metronome that can be heard but not recorded when using the looper. Allow the first beat of the metronome to be assignable to a different sound than the remaining beats of the measure, such as a woodblock as beat 1 and the rest are clicks.