

## Uses of MIDI for the Reverb

The layout can be helpful in putting many of the Reverb's controls at your fingertips, letting you dial in sounds without needing to kneel down if your pedals is mounted to a pedalboard. If you're a "tweaker" this is convenient, and friendly on your back.

The layout and help you program the various MIDI CCs into a MIDI controller such as an ES-8, a Selah Quartz Timer, a Behringer FCB-1010, or hundreds of others. The layout will give you the numbers you need to program your physical MIDI controller for later recall. This can expand the utility of the pedal. The Reverb has 35 on-board presets; however, you can program many more settings than that by adding CC messages to a MIDI stack. For example, in the Boss ES-8 you can send a MIDI stack of one PC and two CC messages on a single channel. You could send a PC to bring up a Reverb preset, and then send two MIDI CC messages to change two parameters from the preset. This lets you have an initial preset, which can be modified by CCs effectively giving you as many presets as your MIDI controller has available settings.

One other thing I built into this layout is the role of Thing 1 and Thing 2 for each engine: in the reverb mode selector, there is a parenthetical showing the function of Thing 1 and Thing 2 – info that's hard to remember for every available delay engine.

## CONCLUSION

Hopefully you find all this useful. And of course, this MIDI layout is just a start point. Layouts are just pre-existing templates, and in "Design Mode" of MDP2 you can modify them as you see fit. For example, you can move or re-size controls if you prefer them in a different orientation. You can also edit the name of any item in here; this can be useful, for example, if you want to title a preset after saving it. For info on how to do all that refer to the MDP2 documentation.

If you have any questions, you can reach the designer at [midiforthemasses@gmail.com](mailto:midiforthemasses@gmail.com) or via Instagram message to @therealpigpen. But please be patient if you do... I'm not a fully staffed customer service center, I'm just a guy who likes MIDI.

Rawk on....  
The Real Pigpen

has 35 on-board presets; however, you can program many more settings than that by adding CC messages to a MIDI stack. For example, in the Boss ES-8 you can send a MIDI stack of one PC and two CC messages on a single channel. You could send a PC to bring up a Echosystem preset, and then send two MIDI CC messages to change two parameters from the preset. This lets you have an initial preset, which can be modified by CCs effectively giving you as many presets as your MIDI controller has available settings.

One other thing I built into this layout is the role of Thing 1 and Thing 2 for each engine: in each delay engine selector, there is a parenthetical showing the function of Thing 1 and Thing 2 – info that's hard to remember for every available delay engine.

## **REVERB**

All of the parameters of the Reverb can be controlled with MIDI.

The colored squares at the left of the layout represent the 35 on-board presets the Echosystem can hold. The numbers are the associated MIDI PC message. (It begins at 2 because PC1 brings up the current setting of the pedal's knobs). The MIDI CC for all sliders is shown by the layout based on current setting.

The MIDI CC numbers for reverb engine selector and MIDI clock listen would not customarily be needed for programming an external MIDI controller... these functions are used for dialing in sounds for current user, or to be saved as one of the Reverb's 35 presets.

The MIDI CC numbers for all sliders and crossfaders are listed at the bottom of the layout.

Note that there are two sliders for Mix: I found the Reverb to be most useful with the Mix no more than 50%, and this was easier to control in the layout via a slider that only represented the first 50% of the Mix range. The most recent of the Mix controls used (half range, or full range) governs.

On the ADMIN tab is one other MIDI function of the Reverb: you can save the pedal's current setting to any of the 35 presets; this can be done by a single tap of the associated preset color/number on the left side of the Reverb tab. I've parked this function on the ADMIN tab to minimize the risk of accidentally overwriting existing presets. NOTE: saving a preset on the Reverb cannot be undone.

At the bottom of the layout are buttons representing tap/hold for each of the pedals three footswitches, and the small "save" switch. I've programmed these here, as I think they may be useful for the looper mode in the reverb, but I have not tested their function with the looper. (This requires an SDHC card I don't have). If you do, let me know how they work!

adding CC messages to a MIDI stack. For example, in the Boss ES-8 you can send a MIDI stack of one PC and two CC messages on a single channel. You could send a PC to bring up a Tremolo2 preset, and then send two MIDI CC messages to change two parameters from the preset. This lets you have an initial preset, which can be modified by CCs effectively giving you as many presets as your MIDI controller has available settings.

## **ECHOSYSTEM**

All of the parameters of the Echosystem can be controlled with MIDI.

The colored squares at the center of the layout represent the 35 on-board presets the Echosystem can hold. The numbers are the associated MIDI PC message. (It begins at 2 because PC1 brings up the current setting of the pedal's knobs). The MIDI CC for all sliders is shown by the layout based on current setting.

The MIDI CC values for Delay Source are Local=0, Knob=2, Global=3.

The MIDI CC numbers for delay engine selector, MIDI clock listen, routing, engine order, and engine solo are not listed as these would not customarily be needed for programming an external MIDI controller... these functions are used for dialing in sounds for current user, or to be saved as one of the Echosystem's 35 presets.

The MIDI CC numbers for Mix, Feedback, Volume, Tone, Thing 1, and Thing 2 (for each engine) are listed at the bottom of the layout.

The MIDI CC value for Engage is 0 for bypass and 127 for engage.

On the ADMIN tab is one other MIDI function of the Echosystem: you can save the pedal's current setting to any of the 35 presets; this can be done by a single tap of the associated preset color/number on the left side of the Echosystem tab. I've parked this function on the ADMIN tab to minimize the risk of accidentally overwriting existing presets. NOTE: saving a preset on the Echosystem cannot be undone.

### **Uses of MIDI for the Echosystem**

The layout can be helpful in putting many of the Echosystem's controls at your fingertips, letting you dial in sounds without needing to kneel down if your pedals is mounted to a pedalboard. If you're a "tweaker" this is convenient, and friendly on your back. This layout is especially useful for dialing in dual delays, because you can have a single view of all the applicable parameters that you have adjusted.

The layout and help you program the various MIDI CCs into a MIDI controller such as an ES-8, a Selah Quartz Timer, a Behringer FCB-1010, or hundreds of others. The layout will give you the numbers you need to program your physical MIDI controller for later recall. This can expand the utility of the pedal. The Echosystem

pedal movement to MIDI CC (such as the Source Audio Reflect, or the Boss ES-8). If you do this, once you enter direct mode you must manually exit direct mode (there is a button for this in the layout) for the LFO to return to its normal operation.

## **TREMOLO2**

All of the parameters of the Tremolo2 can be controlled with MIDI, and two parameters (Wave Phase & Downbeat) are only accessible via MIDI. I actually first built this layout specifically to harness the power of the Wave Phase function which is massively useful in a MIDI-clock synched tremolo.

The colored squares near the top of the layout represent the 8 on-board presets the Tremolo2 can hold. The numbers are the associated MIDI PC message.

The MIDI CC value for all sliders is shown by the layout based on current setting.

The MIDI CC value for Rhythm is 1-8 (top to bottom). The layout conveniently notes what each rhythm pattern is.

The MIDI CC value for Wave and Mode is 1-3 (left to right)

The MIDI CC value for MIDI Clock Listen is 127; the value for MIDI Clock Ignore is 0.

The MIDI CC value for DownBeat is the number selected.

The MIDI CC value for Ratio is the value shown for speed. On the pedal itself, these parameters are controlled by the same physical knob, but have different function in Tap and Knob mode. Note that when you activate either the Ratio or Speed control, the other will move in tandem, reflecting this union.

The MIDI CC value for Engage is 0 for bypass and 127 for engage.

The Tremolo2 has a “Direct Mode” function accessible by MIDI, but in a manually controlled layout this is essentially just a volume control; this function is really only useful inside a Digital Audio Workstation, where you could draw your own tremolo waveform... that’s not a control form MDP2 currently supports so its not included herte.

### **Uses of MIDI for the Tremolo2**

The layout can be helpful in putting many of the Tremolo2’s controls at your fingertips, letting you dial in sounds without needing to kneel down if your pedals is mounted to a pedalboard. If you’re a “tweaker” this is convenient, and friendly on your back.

The layout and help you program the various MIDI CCs into a MIDI controller such as an ES-8, a Selah Quartz Timer, a Behringer FCB-1010, or hundreds of others. The layout will give you the numbers you need to program your physical MIDI controller for later recall. This can expand the utility of the pedal. The Tremolo2 has 8 on-board presets; however, you can program many more settings than that by

with that command. For sliders, the number at the top of the slider (that changes as you move the slider) is the MIDI CC value. The PC or CC number of some of the buttons is not specified in some of the layouts: in these cases, the associated message value should be intuitive from the layout. I've specified most of them below just in case.

## **PHASER**

Most of the parameters of the Phaser can be controlled with MIDI: those that cannot are listed at the bottom of the Phaser tab of the layout. The buttons and sliders are labeled the same way they are on the pedal.

Two functions cannot be controlled with on-board physical controls of the Phaser: Direct Mode and MIDI Clock Listen/Ignore. These have no corresponding control on the pedal and require either MIDI, or (for Direct Control) an expression pedal connected directly to the Phaser (this would preclude the use of MIDI, as the control port is limited to one function at a time).

The MIDI CC value for all sliders is shown by the layout based on current setting.

The MIDI CC value for Wave (or Auto Mode) is 1-8 (top to bottom). The layout conveniently lists which each Wave form is inside the associated button. (The Auto Mode for that setting when in "Auto" is listed as a parenthetical to the right).

The MIDI CC value for Speed Range is 1-3 (left to right)

The MIDI CC value for MIDI Clock Listen is 127; the value for MIDI Clock Ignore is 0.

The MIDI CC value for Engage is 0 for bypass and 127 for engage.

Uses of MIDI for the Phaser:

The layout can be helpful in putting many of the Phaser's controls at your fingertips, letting you dial in sounds without needing to kneel down if your pedals is mounted to a pedalboard. If you're a "tweaker" this is convenient, and friendly on your back.

While the Phaser does not have on-board presets, you can program the various MIDI CCs into a MIDI controller such as an ES-8, a Selah Quartz Timer, a Behringer FCB-1010, or others. The layout will give you the numbers you need to program your physical MIDI controller for later recall.

For Direct Mode, it's cumbersome to operate the slider in this layout while playing the guitar. You may find the phase level at a certain fixed spot is desirable in its own right. Or, you may have a bandmate or tech operate the slider while you play. Or, you might program a MIDI controller capable of converting expression

Once you're in MIDI Designer Pro 2 on your tablet and you have the layout loaded, you'll see eight tabs across the top: four on the left, and four on the right.

The first Tab has the controls for Phaser on the left, and Tremolo2 on the right.  
The second tab (spanning both sides) has the controls for the Echosystem.  
The third tab (spanning both sides) has the controls for the Reverb. ,  
And the fourth tab has some admin controls.

Start at the admin tab: (go there by touching the tab name at the top of the page).

\*\*\* DO NOT TOUCH THE MULTI-COLORED SQUARES ON A RED FIELD YET. \*\*\*  
More on them later.....

For now, go to the four channel selector sliders at the bottom of the page: swipe each to select the correct MIDI channel for each of your Empress effects.

After selecting the correct channel, you can go back to the tab for your Empress Effect(s). Below is some information common to all of the pedals, followed by some information specific to each one.

## **INFORMATION FOR ALL PEDALS**

When you touch one of the buttons, or slide one of the sliders, its just like turning the corresponding knob or toggling the corresponding switch on the associated pedal. Sometimes the pedal will give you a visual indication something has happened (as when you select a preset, or when you change the delay/tremolo/phase rate). Other times, you will have no visual indication (but you will hear the effect change).

Be aware that when you use the MIDI layout to change pedal parameters, the physical knobs on-board the pedal will no longer reflect the pedals' current setting. This phenomenon should be familiar to anyone who has used pedals capable of storing presets.

Note that the layout is not a "Heads-Up Display." Until you activate a control in the layout, the settings on the layout have no association to the current settings of the pedal. Once you to activate a control in the layout, then the layout's control shows you the most recent command sent. This is the same as the pedal's state (for that parameter) unless and until you either physically adjust the pedals' controls, you recall a preset, or you send another MIDI command from another controller. In that case, the value indicators in the MDP2 layout will again be dissociated from the pedals' current state.

Most of the controls in this layout are labeled. If there is a number in parenthesis next to a control name, that indicates the MIDI CC number associated

To use this layout, you need a few things:

- 1) First you need one or more of the pedals this layout is built for (the Empress Phaser, Empress Tremolo2, Empress Echosystem, and/or the Empress Reverb).
- 2) An iPad or other tablet capable of running MIDI Designer Pro 2, with MDP2 loaded to the tablet. MDP2 is available in the iTunes App Store; I think there's an Android version as well.
  - A. I've tested this layout for iPad, but not for Android.
  - B. I have not shared any Empress layouts for iPhone, though I intend to develop a few. These will be stripped down layouts, not exhaustive like this one.
- 3) A MIDI converter box: This is something that converts normal 5-DIN MIDI cable plug to a ¼ inch TS or TRS plug. Empress makes something called the MIDIBox for this. Chase Bliss and Disaster Area make similar boxes. Some MIDI clocks (like Disaster Area's SmartClock Gen 3 and the Selah Quartz v3) have multijacks that can be configured to pass MIDI to Empress pedals as well.
- 4) A MIDI interface: This is like an adapter cable (usually with a small box in the middle) that connects your iPad to your MIDI converter box. I use the iConnectdMIDI1 from a company called iConnectivity because it is the only MIDI interface I've found compatible with the lightning jacks on iPhones. It also draws power from the USB port, rather than the "MIDI in" connection, which is useful for the most typical ways you would use this layout (the "MIDI In" connection is not needed for this layout to work). You can also use a normal USB MIDI interface and a USB Camera Adapter compatible with iOS to connect your iPad to the MIDI converter box.

So your "MIDI signal path" will go like this: iPad >> MIDI interface >> MIDI converter Box >> Empress pedal(s). When connecting the MIDI interface, be sure that the "MIDI out" of your USB interface is connected to the "MIDI in" of the MIDI converter.

(Do not plug the "MIDI in" connection of your interface into the "MIDI out" of the MIDI converter.... This will cause an error. Leave the MIDI in connection of the interface unplugged or if you use it, connect it only to "upstream" controllers).

After you have all the kit you need, you need:

- 1) Load the Master Empress Effects MDP2 Layout in "Play" mode within the app (check the support Wiki on the MIDI Designer Pro website for how to do this.) Do not go to "Design" mode yet.
- 2) Set the MIDI Channel on your Empress Effects, preferably all to different channels. If your Empress Effects absolutely must share a MIDI channel, be advised there will be some cross-talk of commands across the pedals and you may get unexpected results. Refer to your Empress pedals user manual (the "advanced configuration" section) for how to set the MIDI channel.

## Master Empress Effects Layout for MIDI Designer Pro 2 (MDP2)

Hi there. Here's some info to help you use @therealpigpen's MDP2 layout for Empress Effects pedals.

### BACKGROUND:

Empress Effects: Empress makes great kit for guitar players and other musicians. As of today, four of their pedals in production are MIDI-capable: the Phaser, the Tremolo2, the Echosystem, and the Reverb. (A pedal in development – the ZOIA – is a MIDI-charged synth superpower. It will defy any single MIDI layout. If I ever attempt to build a ZOIA layout... it'll be a while).

MIDI: What is MIDI? It's the "Musican Instrument Digital Interface." Basically a very basic computer protocol that enables digital control of some musical instruments. MIDI can do a lot of things, but for purposes of using MIDI with the Empress Effects devices covered in this layout, you only need to know three of them:

- "Program Change" (PC) is a type of MIDI message that tells a pedal to go to a specified preset saved on that pedal. The Tremolo2 is capable of storing 8 presets; the Echosystem and Reverb are capable of storing 35 each. You can get to these presets using the pedal's on-board controls, or you can use a MIDI Program Change command to bring up any of those presets immediately. There are two parts to a PC message for an Empress pedal: the MIDI Channel (1-16) and the PC message number (1-127).
- "Control Change" (CC) is a type of MIDI message that specifies a particular parameter for the pedal. Basically, its like digitally turning the knobs or toggling the switches. All of the Empress pedals covered by this layout accept control change commands. There are three parts to a CC message for an Empress pedal: the MIDI Channel (1-16), the CC message number (1-127), and the CC message value (1-127).
- "MIDI Clock" is a type of MIDI message that transmits a tempo either in beats per minute (BPM) or milliseconds between beats. All of the Empress pedals covered by this layout accept MIDI clock, and by default listen for MIDI clock (which means the delay engine or LFO will oscillate in time with the MIDI clock signal). If this is not desired, you can tell the pedal to "Ignore MIDI clock" with this layout.

MIDI Designer Pro 2: MDP2 is an app for smartphones and tablets. It lets you easily build customized MIDI controllers for your gear. To send MIDI commands, you need a MIDI controller. There are many physical MIDI controllers on the market, including a lot of devices that are both audio loop controllers and MIDI controllers in one. With MDP2, you can turn your iPad into a MIDI controller. Layouts for MDP2 can be shared online in the MIDI Designer Pro forum. This guide is posted alongside the layout; that's where I intend to post updates as well, as necessary.