

Using Mainstage in the Marching Arts

By: Cristian Good

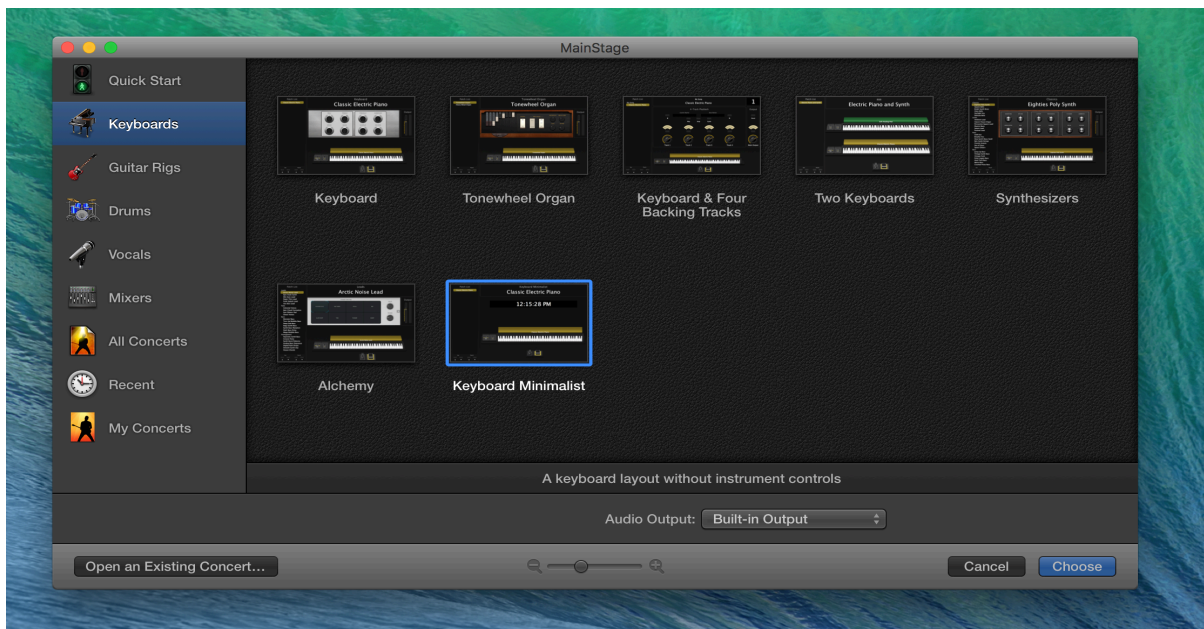
One of the reasons that Mainstage is a great option for the marching arts is the accessibility that schools have to Macbooks. Many schools have a Macbook, which can be a lot easier to get than an expensive synthesizer. It's also easier for your students to learn one, simple interface instead of several different ones. All you need is a Macbook, Mainstage, and a MIDI controller of some kind! This article will explore Mainstage and its use in the Marching Arts. This article will address basic setup, tips/tricks, and common problems. Please note that at the time of this article the current version of Mainstage is 3.2.1.

Organizing a Layout

When you start up Mainstage you should be able to plug your MIDI controller straight into a usb port and get in to trigger no problem.¹

Also you CAN have multiple devices on the same computer, just keep in mind that your computer has to have enough RAM and CPU to handle the extra load. As a general rule 2 MIDI controllers are good.

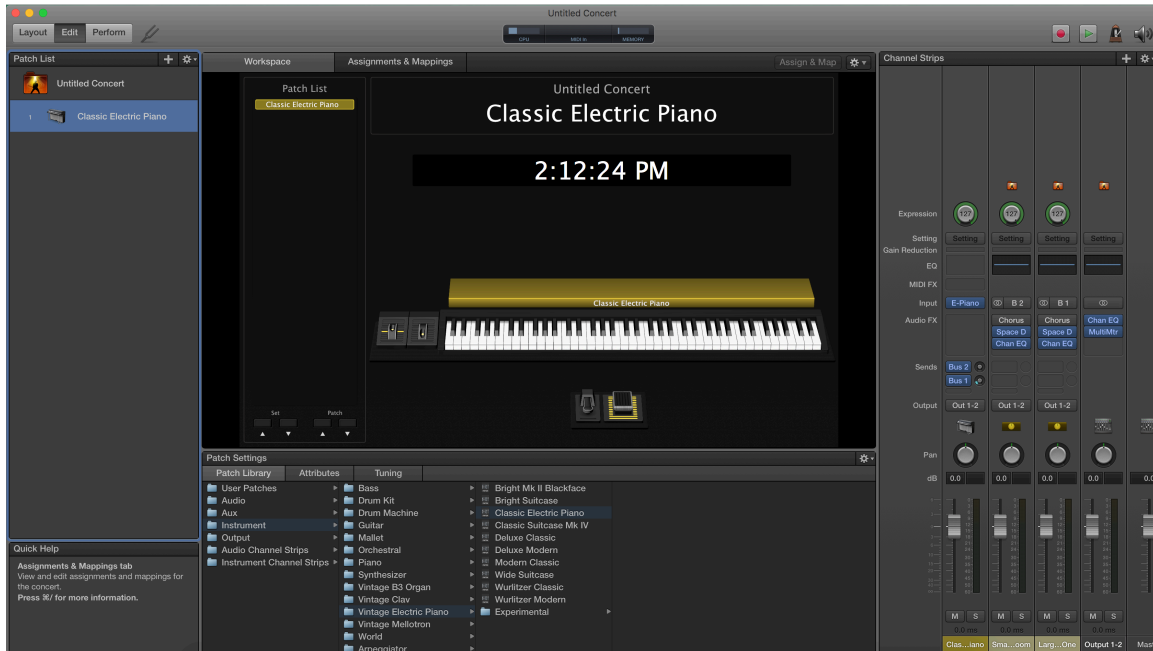
This should be the first screen you see when you open Mainstage for the first time.



¹ If you are having problems, read the controller's manual to see if there is an extra step or additional software that you need to install.

Let's start with the Keyboard Minimalist Layout. It gives us a basic keyboard and has basic parameters that will be easy to use and get around.

After we've selected this option, the main window should appear.



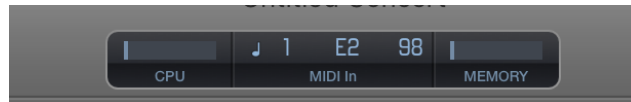
As you can see from the upper left hand corner, there are three modes you can view: Layout, Edit, and Perform. We will start in Layout mode and then talk about Edit and Performance mode later.

The layout of your MIDI controllers is important for several reasons. Editing the layout not only will help maximize the efficiency of the computer's processing power but also make the performance window look clean, so your students won't get confused with unnecessary controls. It should be noted that the Layout mode should be left alone most of the time.

The Keyboard Minimalist gives us a pretty clean layout that the performers can understand and get around easily. Keep in mind the Layout section is probably something that you don't want your performers messing with if they are inexperienced.²

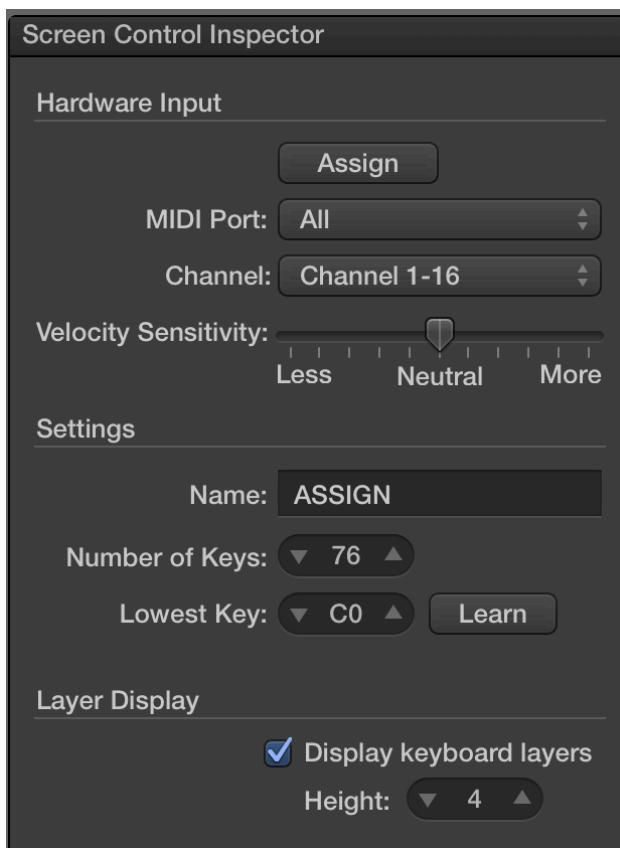
Now let's talk about assigning our MIDI signals. The first thing that we need to do is make sure that our controllers are working. To do this press some keys on the keyboard and look at the top to see if it is registering in the MIDI window as shown below.

² You may need to go back into the layout menu if something is not working.



Since there is no sound in the layout menu, it's a good sign if you see something triggering. If you don't see anything, you might have to go through several other steps to get it working, which might be different depending on the type of controller you have.³

Now it's time to assign the controller to Mainstage! To do this, click on the keyboard in the layout menu so that it is selected and then select the midi controller from the drop down menu under Devices from the Screen Control Inspector on the left.



You can also use the Assign button. Select the Keyboard on the layout and then click the assign button so it flashes red.

Then press a key on your controller until you see the keys moving on the screen. Then unclick the Assign button.

I would recommend renaming the device the name of your player, especially if you have multiple devices, because it will be important for assigning sounds later.

I would also recommend changing the number of keys and lowest key to the device you have. We want everything in Mainstage to be as close as it is to real life for the performer!

Now that we are done in the Layout Menu, let's head back over to the edit menu so we can start making some sounds!⁴

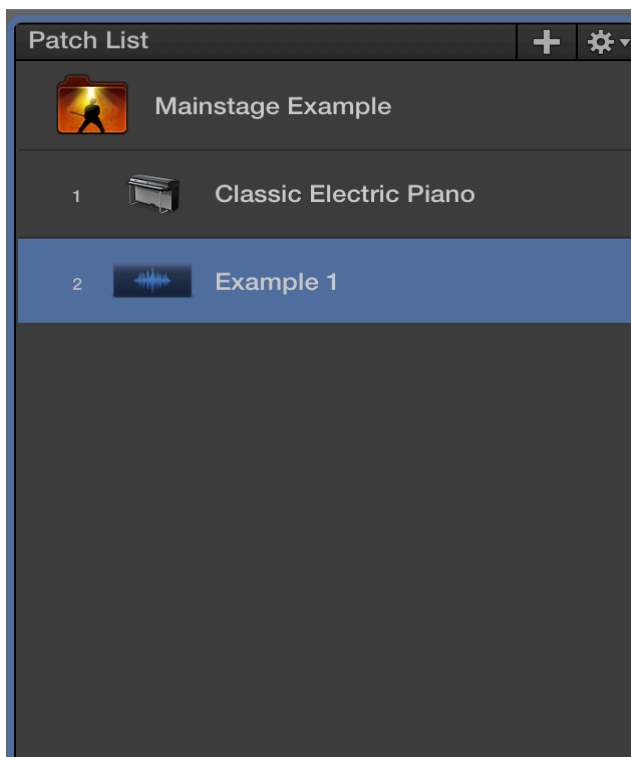
³ Check the manual of whatever device you are using to make sure the MIDI/USB option is turned on and selected. Also for the DTX please see the supplementary document about using your DTX with Mainstage.

⁴ You can use the Assign function for ANY device or parameter. For example I would use it to Assign the DTX pads, the Sustain Pedal, or any knobs/faders you choose to use! The Assign function is one of the many hidden benefits of Mainstage.

Creating and Editing Sounds

The number one thing that we need to go over is the difference between the Patch List on the left and the Channel Strips on the right. Patches are used as “Scenes”⁵ where we can easily switch from certain parts of the show to the next part. These are what your performers will be switching throughout the show. Channel Strips are single instruments/effects that are assigned to specific controllers and parameters. A good way to think about this is that there can be multiple Channel Strips layered in one patch.

Let’s go ahead and create a new patch. We can do this by either clicking on the plus at the top of the patch section, or by double-clicking the blank space in the patch section. This should bring up an Untitled Patch. You can double-click the Untitled Patch to rename it or change the icon by selecting a different one in the Attributes tab in Patch Settings at the bottom of the screen. Notice that we don’t have any channel strips yet so you can’t make a sound.

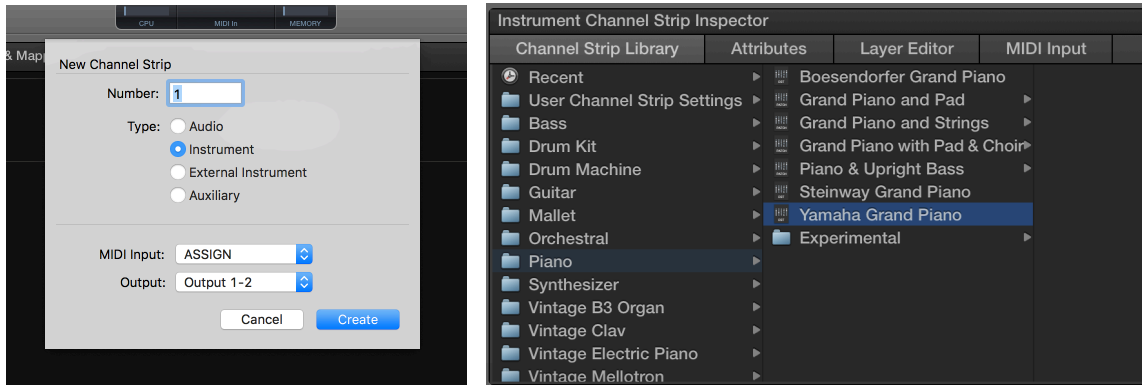


To add a channel strip click the plus sign at the top of the channel strip column. That will bring up New Channel Strip Window. You will almost always select Software Instrument. If you have multiple controllers select which one you want to assign it to from the drop down box next to MIDI Input.^{5.5} Once you have the correct information hit create and an empty channel strip should appear along with a colored layer above the keyboard.

⁵ You may be familiar with using scenes if you have ever used them with a digital mixer.

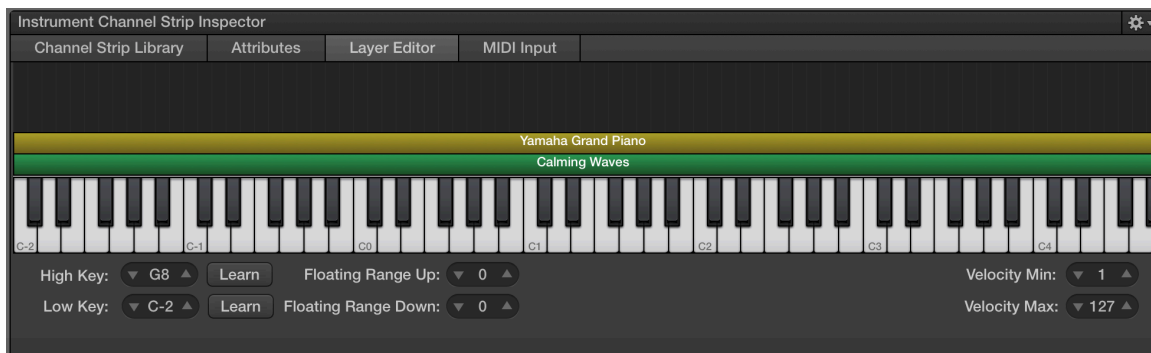
^{5.5} This is where naming your controllers becomes important, because if you have your students do this they can get easily confused and assign the wrong controller to the wrong channel.

To add a channel strip click the plus sign at the top of the channel strip column. That will bring up New Strip Window. You will almost always select Instrument. If you have multiple controllers select which one you want to assign it to from the drop down box next to MIDI Input. Once you have the correct information hit create and an empty channel strip should appear along with a colored layer above the keyboard. From here you can select the channel strip you've just created and then select the sound you want from the options below.



Now you should be good to go! Keep in mind you can edit the volume of your channels via the green gain dial near the top or the channel fader. One of the nice things about Mainstage is that with just about any parameter you can click the number and then input the specific value that you want to achieve specific levels.

If you have multiple channels on the same keyboard, you can edit their ranges by selecting the channel and then clicking on the Layer Editor down below. This brings up simple color coordinated layers of which you can click the end and drag to desired ranges. This way we can add more layers to our sound such as a Pad on top of a Piano as seen below. Keep in mind that you can always change the name, color, and icon of your channels under the Attributes tab as well as MIDI velocity and transposition in the MIDI Input tab.

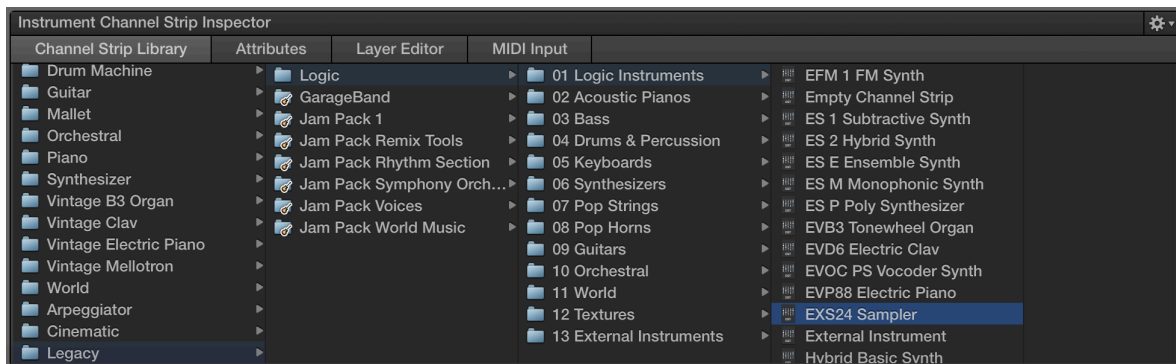


Triggering Samples in Mainstage

There are many different devices used for sampling in the marching activity that can be used independently or with Mainstage. One of the perks of Mainstage is that you can use any MIDI device to sample audio files using the Logic EXS24 Sampler which is a powerful Logic Instrument that comes free with Mainstage.

For this example let's say that we have an 88 key MIDI controller and want to trigger a sample (subkiller.wav) on one of the keys. The first thing that we need to do is create a new empty instrument channel strip, described above.

The next step would be to find the EXS24 Sampler under the Logic Instruments tab in the Channel Strip Library. If you don't have a Logic Instruments folder, you will need to download the additional content.⁶



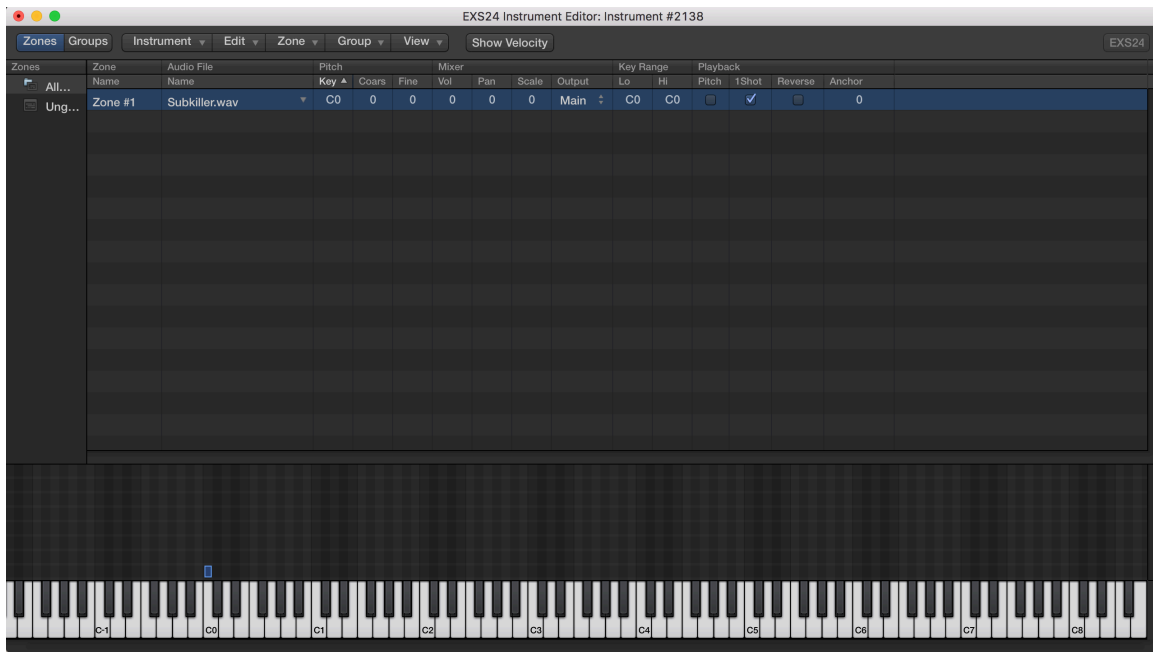
Now we need to input the sample. To do this, double click on the **EXS24** logo above in the channel strip. This should bring up the green instrument window with the controls for the sampler.

It probably looks overwhelming at first, but we won't need to use a lot of these parameters. For now, we just need the edit window. To get to this, click the **edit** button next to options in the upper right hand corner of the sampler. This should bring a new window as seen below.

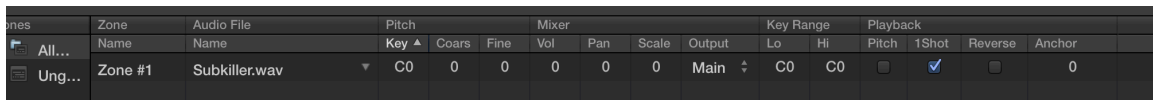


⁶ This can be found by clicking Mainstage in the upper left and then selecting "Download additional content." Make sure "Legacy and Compatibility" is selected and then click install. You will need an Internet connection for this.

Once again, don't worry about whatever is in there already. We will be creating a new instrument for our samples. To do this, select New from the dropdown menu. We don't need to save whatever was there before. Then your screen should look nice and clean. Now we can import our sample! The easiest way to do this is to open the folder with the sample and then just drag and drop the audio file on to the note you want to trigger it with.⁷ Since we're putting it on a keyboard, we should put it on a note that our synth player never plays, such as C-0. Also keep in mind that you can stack multiple samples on one note so you can trigger them simultaneously.



The next step is to edit some parameters. Whenever a new sample is imported the pitch box will always be checked which means that it will be relative to the pitch that it is assigned. **It's important to always uncheck this after any sample is imported.** However leave the 1Shot box checked which would allow the sample to be triggered just by pressing the note once.⁸

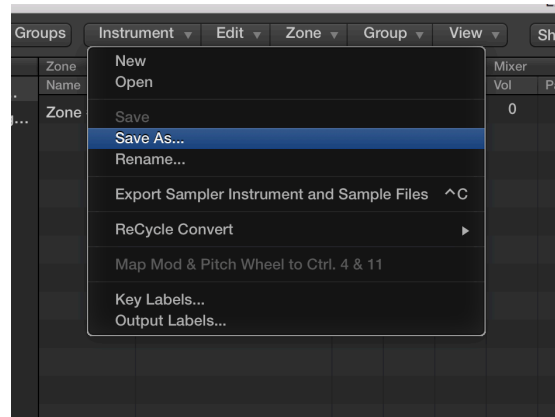


Let's say that we have multiple samples our new instrument we created. The best way to adjust the volume of these individually is in the volume column. The volume of the sample can be raised or lowered individually by clicking on the box and inputting a number. Keep in mind that these are **decibels** so go slowly to start. You can also adjust other parameters as seen.

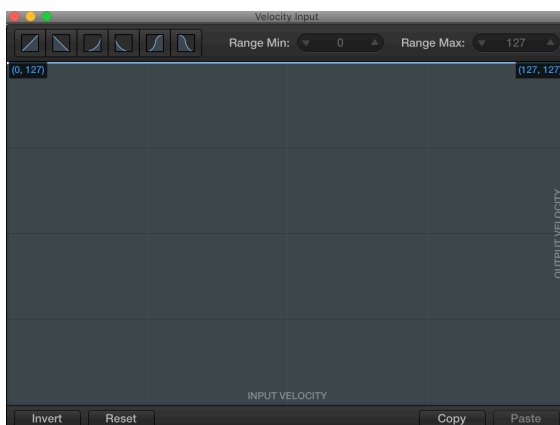
⁷ You can add multiple samples by selecting "Load Multiple Samples" from the Zone dropdown menu.

⁸ If you uncheck this box you need to hold the note for the duration of the sample, or else it will stop. This could be used for risers or other things you need to end in a specific place.

Now that we've put our sample into our new instrument, we need to save it. To do this, go up to the instrument dropdown menu and select Save As like you would do in other common programs. Name your instrument and hit save. Then exit out of the edit window, and the sampler so that you are back in the workspace section.

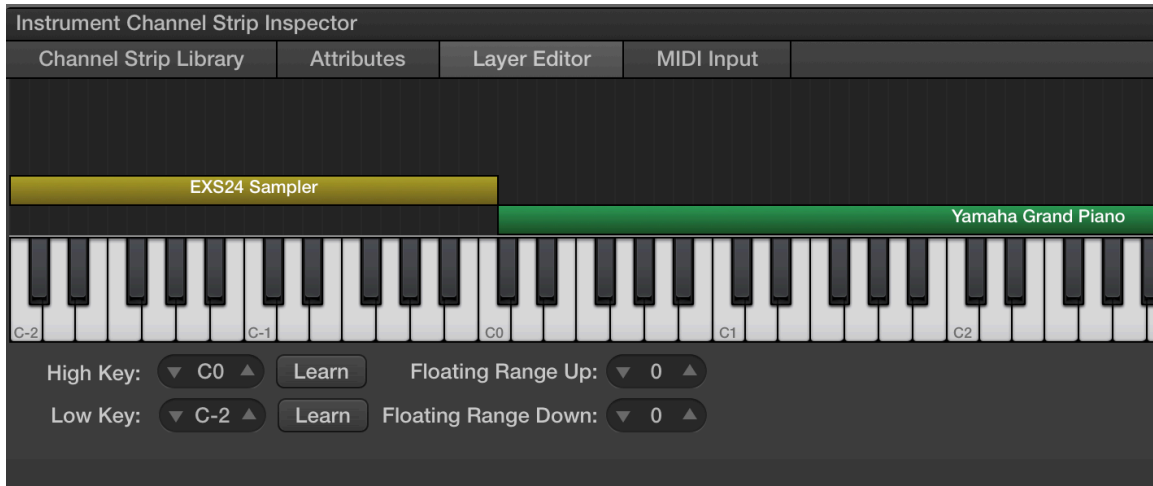


One of the last things we need to check is to make sure that the velocity is always consistent. To do this click on the EXS channel in the channel strip to the right so it is selected. Next select the MIDI Input tab under the Workspace area.



In the velocity input box, click on the lower left-hand corner and drag it up so that the entire area is blue, like the image to the left. This ensures that your samples will always be played at the maximum velocity. If you are using a sampler make sure the max velocity is set internally.

The last thing that we need to take care of is making sure that our sampler is not also triggering the synth sound since they are both on the same controller. To do this, we will use the layer editor tool as described previously to make sure they don't overlap.



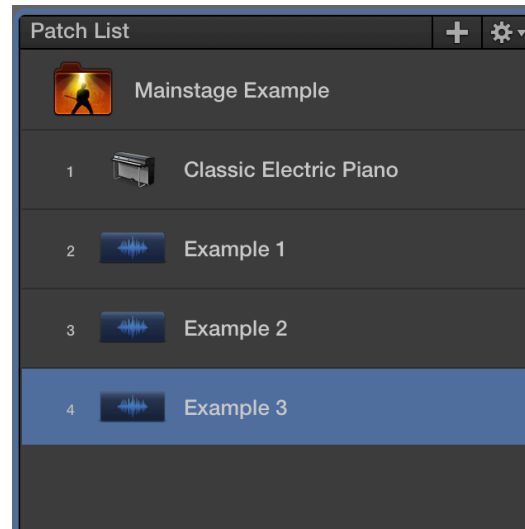
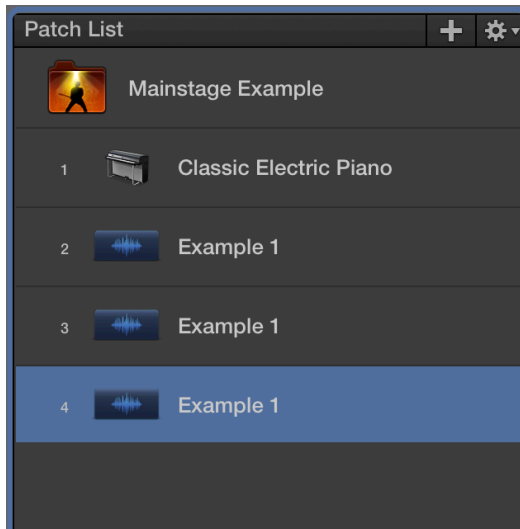
Now your sample should trigger perfectly! To conclude, we have set up a sampler to trigger a sample on C-0 at maximum velocity while the rest of the controller is still a synth with normal velocity. Pretty cool stuff! Keep in mind if your synth player does need to use this note, the sample can always be reassigned to another unused note. Just make sure the layers don't overlap!

Setting up Your Show

Since you are probably going to have a lot of different sounds and samples in your show, let's look at the best way to create some different patches for the different parts of the show. One of the many benefits of Mainstage is that you can use cut/copy/paste functions almost anywhere like many other programs that you are already used to using.

The easiest way to do this is to use a template scene that we've created and duplicate it. Select the patch so that it is blue and then use the Duplicate tool in the Edit menu to create as many as you like. Make sure to immediately rename the patches so that there isn't confusion later. Depending on how many patches you have I would consider using chart number or measure numbers so that your players always know where to change with the music.⁹ All this can be seen in the following images.

⁹ If you want to take it to the next level, put the patch changes in the score so that you and the rest of the staff always know what patch the synth is on at every part.



Now you can individually edit the sounds and their levels in each patch while all of the basic functions stay the same. Also if you decide later in the season that you need to insert another patch, you can just use the duplicate tool to copy a patch, rename it, and change whatever parameters you need to change!

Congratulations! You've made it through the basic functions of Mainstage in the marching arts. Keep in mind that there are many other ways to do things and the ways described above are what have worked best for me. The biggest thing is to just play around with it and discover new things and options that you can do!

Conclusion

In conclusion, Mainstage can be a useful tool in the marching arts due to its cost effectiveness and easy of use. If you have students who are interested in performing or other areas of music technology, this program will help them get familiar with similar programs they might see later on and introduce them to new ways to approach music. Also by using Dropbox and screen sharer, Mainstage becomes an easy tool to access from just about anywhere while at the same time allowing your kids to learn and experiment while keeping a watchful eye on them. I hope you've found this helpful and remember there are lots of great resources online to learn more about Mainstage and it's functions. Thanks and happy playing!