

Setting up Native Instrument's Massive for use with EWI (or other wind controllers).

FACTS YOU NEED: There are some basic facts that you need to know in order to program a synth like Massive to work with your wind controller. I'm just going to list facts in no particular order.

- MIDI is a standard language that modern electronic instruments and computers use to communicate with each other.
- When you play a MIDI instrument, MIDI information is created by the MIDI controller and sent to the computer, or whatever is making sounds for you.
- When you play back recorded MIDI files from your sequencer or computer, the information is sent from the computer to whatever is making sounds for you.
- The same piece of gear can generate the MIDI information and play the sounds, like the EWI 4000s when you plug it directly into an amp, a standard electronic keyboard, or a computer playing a MIDI file in a sequencer.
- MIDI breaks information down into different types of data, and sends each type of data down its own channel. All pitch information, note on/note off, pitch bend, etc. gets its own channel.
- The MIDI control channel (MIDI cc) for breath control, is channel 2 (MIDI cc#2).
- MIDI data works on a scale of 0-127. If you use a volume knob on a MIDI keyboard, the lowest (mute) volume you could get would be 0, and the highest would be 127.
- "Velocity" is the data that is traditionally used to tell the synth how loud to play a note. If you hit a key on your keyboard as hard as possible, then the velocity value would be 127. However, and this is important, VELOCITY DOES NOT HAVE TO CONTROL VOLUME. Matter of fact, you don't have to use it at all.
- A "patch" is a sound in your synth. The patch consists of all the settings that make up that sound, like a saved file.

PREPARATION: You need to plug your EWI into the computer so that it can transmit MIDI data. If you have EWI USB, just plug the USB cord in. If you have EWI 4000s, get some kind of MIDI to USB converter. I run mine through my keyboard controller (M-Audio Axiom 61) or my drum machine (Native Instruments Maschine). Plug the MIDI cable into the OUT jack on the EWI, and the IN jack on whatever is going into your computer.

Let's get into the tutorial.

BASICS:

The main reason your EWI sucks as a controller for most synths is that most synths are set up to use velocity data to control volume. Good synths will often have other things controlled by velocity as well. If you want to take the easy way out, you can simply set up Massive to make breath control operate the Master

volume knob. Assigning controls is very easy, just right-click on the Master knob hit MIDI learn and blow into the EWI. Now, any time you blow into the EWI, you will see the Master Volume knob turn up and go down. You will also see your audio levels hit the red line very quickly, and will find very little of the expressiveness you want out of the EWI. So. Let's do it the hard way.

As luck would have it, Massive makes it ridiculously easy to assign MIDI control data to ANYTHING, just like we did with the volume knob. Let's start a fresh patch by clicking into the File menu and selecting "New Sound."



There's a lot to look at here, but you will see that all the little boxes next to the knobs are empty. Hit some keys on your keyboard, and blow through the EWI. You will notice that you have a basic sawtooth wave sound, with no expression or dynamics other than vibrato on the EWI (because the sensor on the breath controller sends the same MIDI data as the pitch bend wheel on your keyboard). Looking down towards the bottom right of Massive, you will see the Macro Control section.



This is where we get to start our EWI fun. Assign breath control to one of the knobs. It doesn't matter which one, but it's a good idea to think about creating a standardized set of assignments so you can use your EWI with any sounds you create without having to redo the MIDI control assignments. I use Macro knob 5 for breath control, just because I happened to do that the first time I tweaked a patch.

It is a good idea to save your MIDI settings so you can go back and forth between testing/playing sounds on your keyboard and on your EWI. Once you have set up your EWI to control the Amp with breath control, your keyboard will no longer sound notes in that patch. Click back on the File menu, and select "Options..." to open the "Massive options" window. Click on the MIDI tab in the center and click "New" to save your EWI control settings to a new template. I've saved two templates, one called "EWI," and the other called "Keyboard," so I can quickly switch between them.

Now when you blow into the EWI, you will see the little knob #5 (I'm just gonna call that "#5" from now on) move. You can label it if you want to by double clicking on the number. You still hear no difference in the sound when you blow, because #5 is not assigned to anything. We don't just assign the EWI to the knob, but we assign the knob to control various parameters in the synth. We do this by clicking on the little cross shape next to #5 and then clicking on whatever box we want it to manipulate. Let's start with volume. Once you've clicked on the little cross thing, you'll see a little yellow "5" appear next to your mouse cursor. Go click in the box next to the "Pan" knob, in the "Amp" section of Massive.



Now blow in the EWI again. Now we have something that's about on par with most of the stock EWI sounds. Plain, but nicely expressive because of our dynamics and vibrato. We can also growl successfully, though it sounds horrible.

IMPROVEMENTS:

So, the meat and potatoes of making these patches sound good WITH THE EWI is in getting the dynamics to work right. As it is, we don't have the same kind of satisfying attack to our notes that we can get from a sax, flute or clarinet because no matter how fast we tongue, our breath data ramps the knob up from 0 to wherever -- quickly, but still it's a slow attack. That means we have to get the synth to help us create a better attack.

Right on top of the box where we assigned our #5 to control the Amp, we see another controller has been sitting there also controlling the Amp. That blue number 4 corresponds to Envelope number 4 in the so-called Center Window. Click where it says "4 Env" to see the envelope controls.



The funky parallelogram-looking thing in the middle is a visual representation of the dynamics of your sound. The linear slope on the left is the "attack," which controls the dynamics of the initial sound, the flat part at the top is the "decay," or what's happening to the sound while you are playing, and the last concave slope is the "release," or what happens to the sound after we stop generating it.

These are all important when playing a synth keyboard, but we've effectively eliminated the need for the release portion by controlling volume with breath control. As soon as we stop blowing, we don't hear anything else. If you have set up your synth to be monophonic, that's the end of the story. If not, a long release will cause your slurred notes to bleed into each other. In general, I keep the release knob at 0 for my EWI sounds.

Attack and decay make a big difference, though. By lowering the level of the decay, we are increasing the relative volume of the attack, giving it a nice percussive sound. Play around with a fairly low decay level, and medium decay time, coupled with a low attack time and high attack level for some satisfying sounds. Here's a setting that sounds ok to me.



This is an area where a majority of synth sounds are made or broken. In some classic vintage synths, the only controls you had were attack, delay, sustain and release, with a choice of a few waveforms, filters and oscillators to create your sound.

MASSIVE DEEPNESS:

Massive gives you a ton of control over almost everything. With what you know now, you can tweak many preset patches to sound good with the EWI. Reading the manual is a good idea to get into the specifics of this particular synth. I've only really covered the stuff that is particular to the EWI. I will say that assigning your breath control knob to control your filter cutoff is a good idea. Without doing anything too extreme, let's try this with your tutorial patch.

First, let's select a basic low pass filter. A low pass filter filters out the higher

frequencies while allowing the lower ones to pass through uninhibited. Click where it says "None," next to "FILTER 1."



Select "Lowpass 2." Blow the EWI. See how the sound is now muffled? If we can assign the breath control to ramp up the cutoff dial a bit when we blow harder, not only will our sound get louder, but now it will get brighter, too. This is what happens when we play woodwind instruments, so it is only natural to make our synths behave the same way.

In fact, we can even make our filter envelope control the cutoff a bit, too, so our sound is even more expressive. Try assigning filter 4 to the rightmost of the 3 Cutoff boxes, and macro 5 to the center box. Now click on the little 5 in the center box and drag up and down. You will see a yellow semi-circle form around the cutoff filter. This represents HOW macro 5 effects the cutoff. If you turn the dial all the way down, and click/drag up all the way on the #5, your yellow line will go all the way around the cutoff dial's range, meaning that your breath controls 100% of the cutoff dial's range. If, however, we roll the pointer on our dial up a bit, and make the yellow line go up only a little past there, we have made it so our breath keeps the filter cutoff in a range of our choosing.



We can do the same with Envelope 4, dragging up and down and seeing a blue line appear. The sum of the effects of our 2 controls will dictate the sound. Ergo, if the dial is pointed to the center, the yellow control line is all the way to the right, and the blue line goes all the way to the left, that means when you blow hard, you

will hear the cutoff move quickly from about the center (as the two controls negate one another) to further right, as the envelope has less negative effect on the breath control's command.

Alternatively, you can click the little "SC" under the box to the right, which means that Envelope 4 has a multiplicative effect on the signal from Macro 5. Therefore, the envelope shape that controls your volume will have exactly the same effect on the cutoff dial, within the range of your choosing.

Try setting your cutoff settings to match the ones in the last picture. Now you have a sound that is easily on par with any of the stock EWI sounds, and better than most in my humble opinion. Now look back at Massive. We used only 1 oscillator out of 3, no modulation LFO, 1 out of 4 envelopes, 0 of 4 LFOs, 0 of 4 effects, no feedback, 1 of 2 filters, didn't touch the noise generator, left the EQ off, and only used 1 of 8 Macros. Now click in the box to the right of "OSC1" and have a look at all the wave forms available to us. As a matter of fact, just moving the "Wt-position" dial gives us a range of possible waveforms even with the initial selection.

This synth is a powerhouse, capable of FAR more than your basic EWI. And don't even get me started on Absynth, Omnisphere, Reaktor Prism, etc. Check out ewireasonsounds.com if you use Reason. They've got some free stuff that sounds good. Software synthesis with your EWI is the way to go. The learning curve is steep, but it's fun, and I've only been at this a few months. I'm sure you will do well!